



National Drought Management Authority
ISIOLO COUNTY
DROUGHT EARLY WARNING BULLETIN FOR MARCH 2020

March 2020 EW Phase

Drought Cycle Stage: Normal



Drought Situation & EW Phase Classification

Biophysical Indicators

- March was characterized by mild cloud cover, irregular sunny intervals and mild to heavy showers. Rains were received in the last week of the month.
- The county Vegetation Condition was above normal. The above normal greenness was slightly eroded by short dry spell.
- Condition and availability of pasture and browse was good with majority of grass dry in all grazing areas.
- Water availability was good in all the sources following the heavy rains in all parts of the county.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Body condition of camel, small stock and cattle was good in all livelihood zones.
- Overall milk production slightly declined in all livelihood zones.

Access Indicators

- Livestock prices reduced slightly as an impact of market interruptions following outbreak of COVID-19. Food prices stabilized over the period under review. Vegetable prices stabilized prices due to a steady supply.
- Household milk consumption was good over the period under review due to improved production.

Utilization Indicators

- Proportion of households with acceptable food consumption stabilized as well as those with a poor food consumption.
- Malnutrition status among children under five years worsened slightly.

Early Warning Phase Classification

Livelihood Zone	EW PHASE	TRENDS
Pastoral-All Species	Normal	Improving
Agro-Pastoral	Normal	Improving
Casual Waged Labour /Charcoal burning	Normal	Improving
County	Normal	Improving
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	35.5mm	>46.5mm
VCI-3month (Isiolo)	77.9	>75
Water Sources	6	6
Production Indicators	Value	Normal
Livestock Body Condition	Good	Fair to Good
Milk Production	2.2 Litres	>1.63 Litres
Livestock deaths (from drought)	None	No deaths
Livestock Migration Pattern	No migration	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	69	>47
Milk Consumption	1.4 Litres	>1.30 Litres
Return distance to water households	2.1 km	<8.0 km
Cost of water at source (20 litres)	Ksh 2.00	<Ksh. 5.00
Utilization indicators	Value	Range/Value
MUAC	11.2 percent	<13.1 percent
Coping Strategy Index (CSI)	9.2	<15.4
Food Consumption	80.0 Percent Acceptable	>90 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

- Onset of the long rains season was experienced in several parts of the county during the last week of the month under review with heavy to moderate showers. The county was characterized by a mix of cloudy and sunny weather conditions.
- Rainfall performance in the period under review was 20 percent below the long-term average amount of 46.5mm.
- The impact of the above normal short rains season continued to be felt in all livelihood zones and for that reason, the expected rains would build on the ongoing livelihoods recovery.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- The county received an average rainfall of 35.5mm of rain.
- Much of the rains were received in Bulapesa, Burat, Oldonyiro and Kinna. Merti and Garbatulla also received some rains.
- Other parts of the county are expected to receive rains in the first to second week of April. However, above normal performance of the short rains season influenced current water availability for crop production and animal watering.

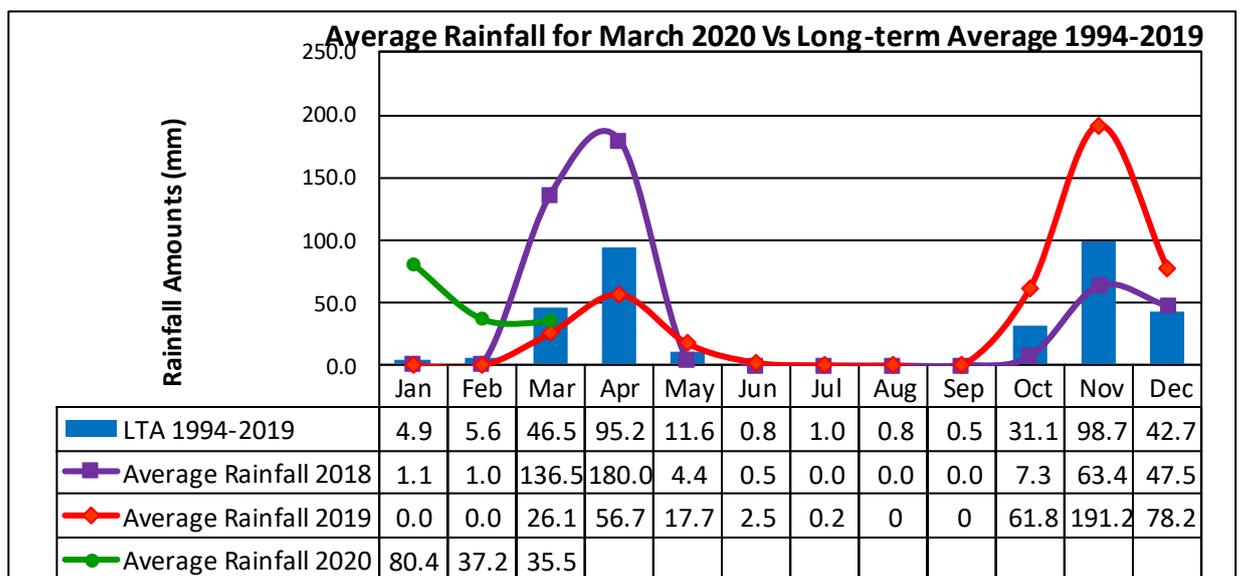


Figure 1a: A graph showing station rainfall performance for Isiolo County

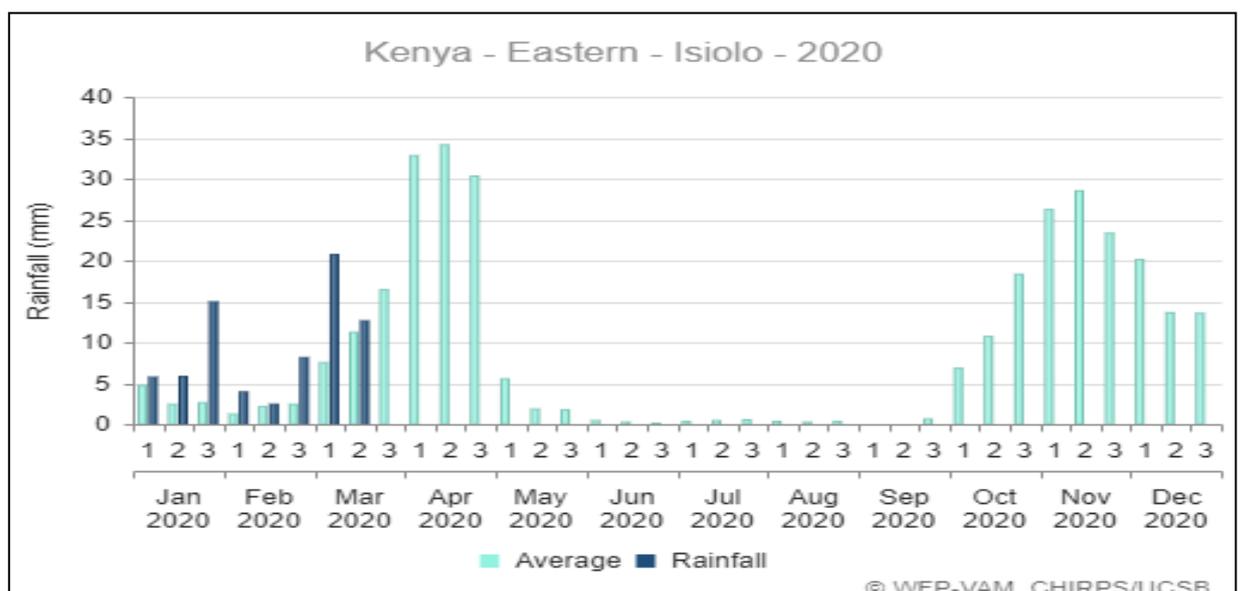


Figure 1b: A graph showing decadal rainfall performance for the current year compared to the long-term average. Source WFP-VAM, CHIRPS

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The matrix below illustrates March 2020 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.

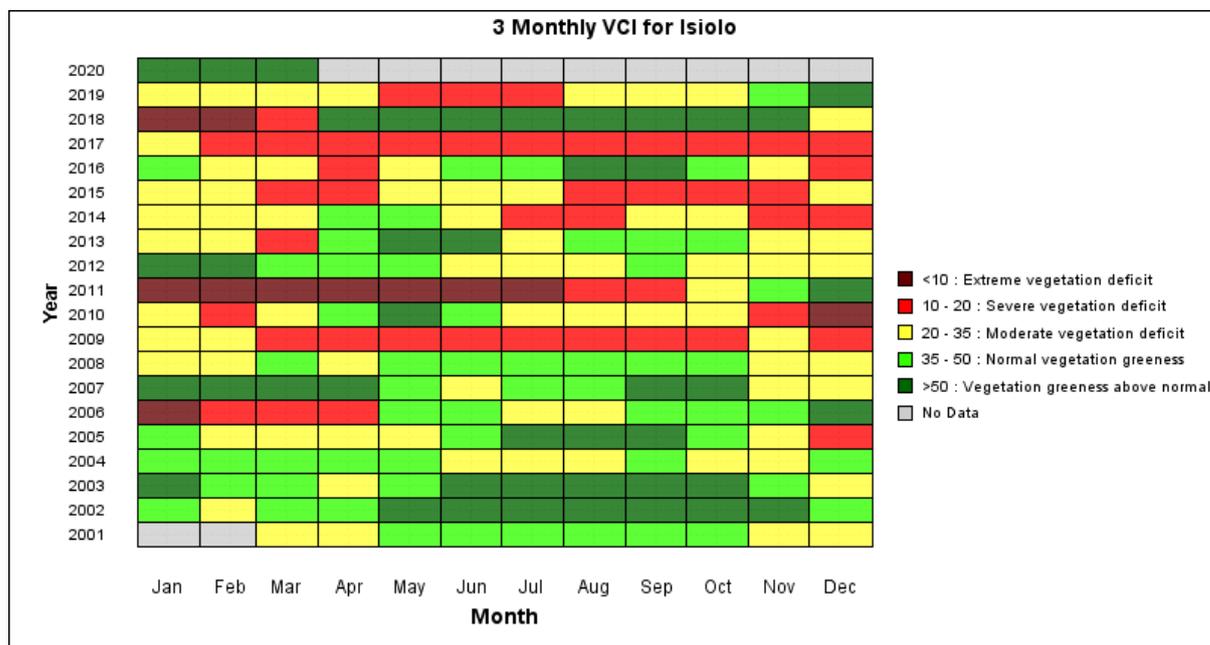


Figure 2: A chart of 3-Monthly Vegetation Condition Index

- The 3-month vegetation condition index increased significantly to 78 from 85.6 an improvement that signifies improved vegetation condition to above normal vegetation greenness in the entire county.
- The two sub-counties constituting the county had their vegetation greenness above normal vegetation condition which signifies that the rainfall was well distributed spatially.
- The decline in the vegetation condition status was attributed to the drying of vegetation during triggered by the short dry spell. However, the vegetation greenness remained above normal.
- The declining trend is expected to be reversed following onset of the ongoing long rains season.

2.1.2 Pasture

- The general condition of pasture in majority of grazing areas was good in both pastoral and agro-pastoral livelihood zones.
- This was attributed to regeneration and full development of grass and herbaceous plants whose growth was supported by the above normal performance of the short rains season.
- The quantity of grass cover had a tremendous improvement over the short rains season following successful maturation of regenerated grass and the freshly germinated ones.
- However, there is a considerable proportion of grazing areas where pasture available was poor due to poor regeneration and destruction by desert locusts that invaded the county from January.
- Quality of available pasture was however low as majority was dry thereby retaining very little moisture content and nutrients after the short dry spell.
- The regenerated natural vegetation in traditional grazing areas has enabled majority of herders to utilize forage within their traditional grazing zones.
- Overall pasture condition was good and was at a better state compared to a similar period in the previous year and in the long-term.

2.1.3 Browse

- The general condition of browse in the pastoral and agro-pastoral livelihood zones was good in the pastoral and agro-pastoral livelihood zones.

- This was attributed to the significant regeneration that was triggered by the above normal performance of the short rains season.
- The regenerated natural vegetation in the traditional grazing areas enabled herders to utilize browse resources within their traditional grazing fields.
- The browse condition in the month under review was good but on a deteriorating trend as many deciduous tree species shed their leaves.
- The deteriorating of browse in some grazing areas has been contributed by the invasion of desert locusts which are feeding on selected tree species.
- Browse availability was better compared to the long-term condition in a similar period of the year.

2.1.4 Water Sources

- Main water sources included rivers, boreholes, sand dams, roof catchments, shallow wells, water pans and dams.
- Aquifers that replenish shallow wells and boreholes throughout the county recharged considerably thus improving yield in most of the sources.
- There was normal use for seven out of ten boreholes spread across the county.
- Households in established settlements accessed water from boreholes that are supplied via household taps and/or community water kiosks.
- Water supply for Isiolo town residents was stable with minimal repair and maintenance of pipelines. Water volumes in most rivers are moderate and relatively better when compared to the state in short-term average.

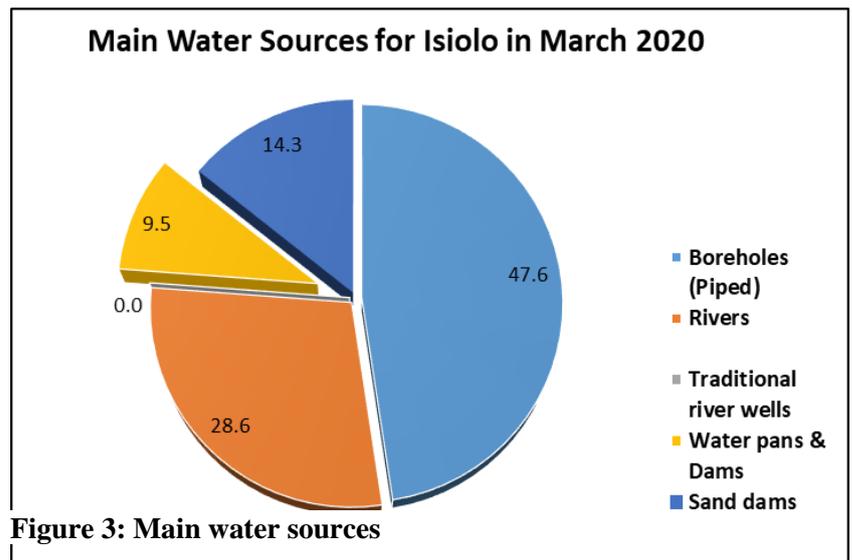


Figure 3: Main water sources

2.1.5 Household access and Utilization

- Household water access distance to main sources increased slightly to 2.1km over the period under review from 1.0km in the previous month.
- Majority of households accessed water from sand dams, community distribution points and household taps sourced from rivers and boreholes.
- Pressure on boreholes was low as there was good amount of water in rivers, springs and water pans following substantial recharge during the short rains season.
- Water availability in majority of semi-permanent sources such as rivers, sand dams, traditional river wells and shallow wells is expected to reduce in the month of March which is expected to be the seasons' cessation period.
- The average cost of water from piped distribution points (*kiosks*) was Ksh. 2.00 per 20 litre jerrican while in some settlement households were charged an average of Ksh.200.00 for an entire month.
- Waiting time at main sources in the pastoral livelihood zones settlements stabilized 5 and 10 minutes though it is expected that it would increase for a short period.
- The longest return distance was 4.5km in Cherab ward where household fetched water from River Ewaso Nyiro. The lowest average distance of about 0.1km was recorded in the casual-waged labour livelihood zone.

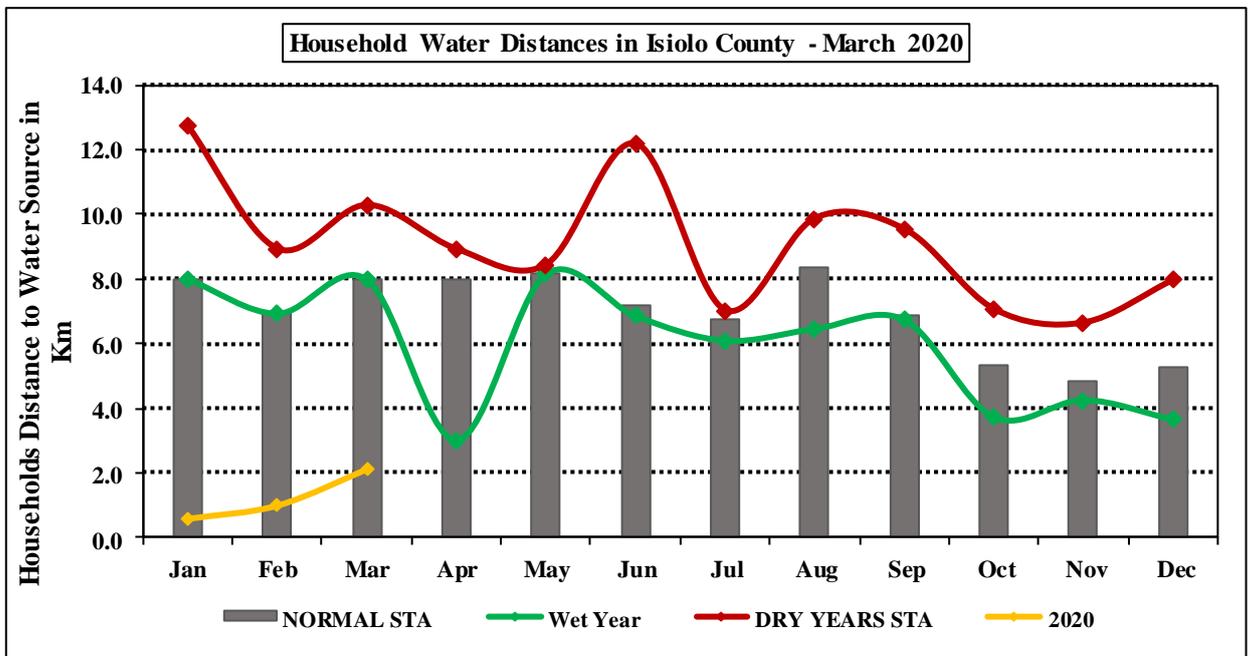
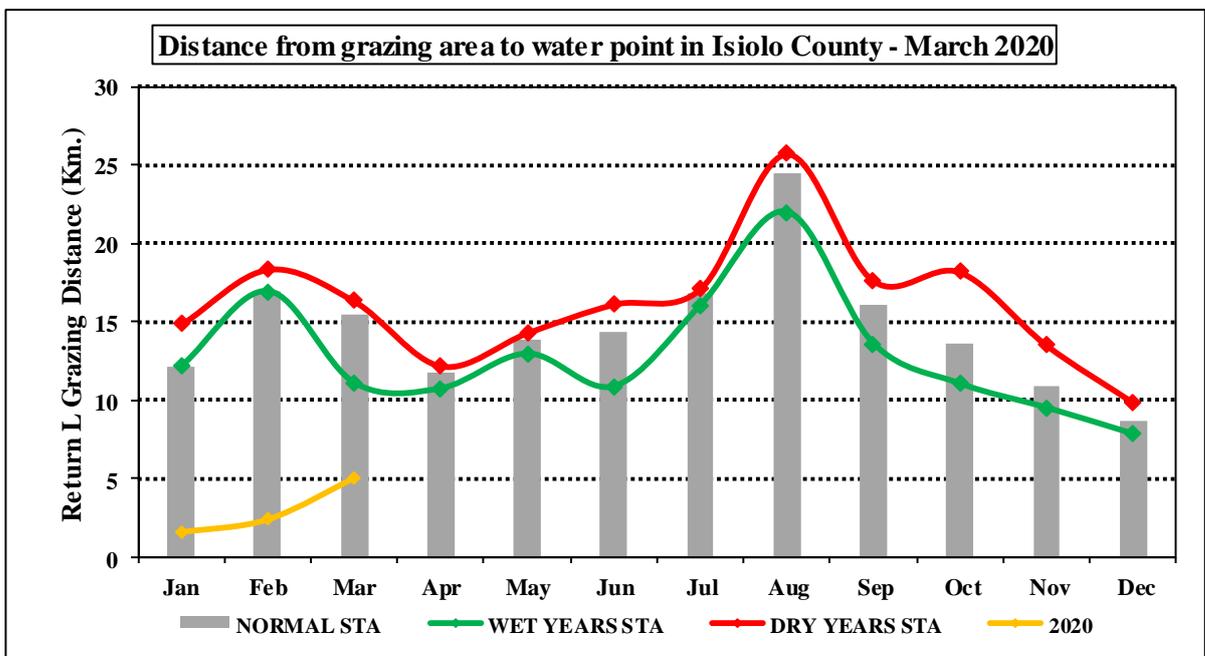


Figure 4: Household distance to water sources

2.1.6 Livestock access



- The average distance to water sources from the grazing areas recorded a significant increase from 2.4km to 3.8km in February.
- The increase depicted there were minimal movements in search of pasture as majority of herders accessed forage from traditional grazing areas available in good amounts and quality attributed to the above normal performance of the short rains season.
- The months average livestock watering distance was 68 percent below the long-term average at a similar period of the year.
- Livestock were mainly watered with water from open water sources such as rivers and water pans that was readily available throughout the county.
- Watering distance from grazing areas has a likelihood of decreasing in the following month where a further recharge of temporary water sources is expected.
- Livestock watering interval was daily from an interval for all species across the livelihood zone.

2.3 IMPLICATION TO FOOD SECURITY

- The short rains season performed exceedingly well with good spatial and temporal distribution and greatly contributed to the ongoing recovery in all livelihoods. The long rains season is expected to be above normal and will therefore build onto the environmental productivity.
- The above normal rains led to improved household water access attributed to the increased quantity of water in rivers, water pans and other sources as well as reduced distances. Good performance of the long rains will imply that there will be an uninterrupted access to water in good amounts and higher quality to support household food consumption.
- The rains led to significant improvement of rangeland resources following the enhanced regeneration of forage as well as recharge of water sources in all livelihood zones leading better livestock productivity. The long rains that are expected to perform well to enable a further development of forage and recharge to water sources hence result into an uninterrupted access.
- The above normal rains in the short rains created a good environment for crop production which enabled full development of crops from germination to maturation. Good performance of the ongoing long rains is expected to enable an enhanced cultivation of food crops as well as vegetables in rain fed and irrigated cropping systems.
- The long rains season will enable maintenance of vegetation at above normal condition and recharge into water sources. These will ensure a there is a conducive environment in terms of water and forage to boost animal and crop production for the next three to six months.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Body condition for all livestock species was good in the pastoral and agro-pastoral livelihood zones.
- This is attributed to the recovery prompted by enhanced availability of forage and water thus providing a favourable environment for livestock production.
- The livestock body condition is expected to improve further due to a consistent availability of livestock feed from the previous season to the current one.
- The current livestock body condition was good, comparable to the situation at a similar time in the long term.

3.1.2 Livestock Diseases

- There were reported cases of Lumpy Skin Disease and Foot and mouth disease across the county. Vaccinations against the diseases was carried out in all areas cases were reported and those at a potential of outbreak.
- Other livestock diseases reported during the month under review were the endemic diseases such as CCPP and PPR in Garbatulla, Kinna and Oldonyiro wards.

3.1.3 Milk Production

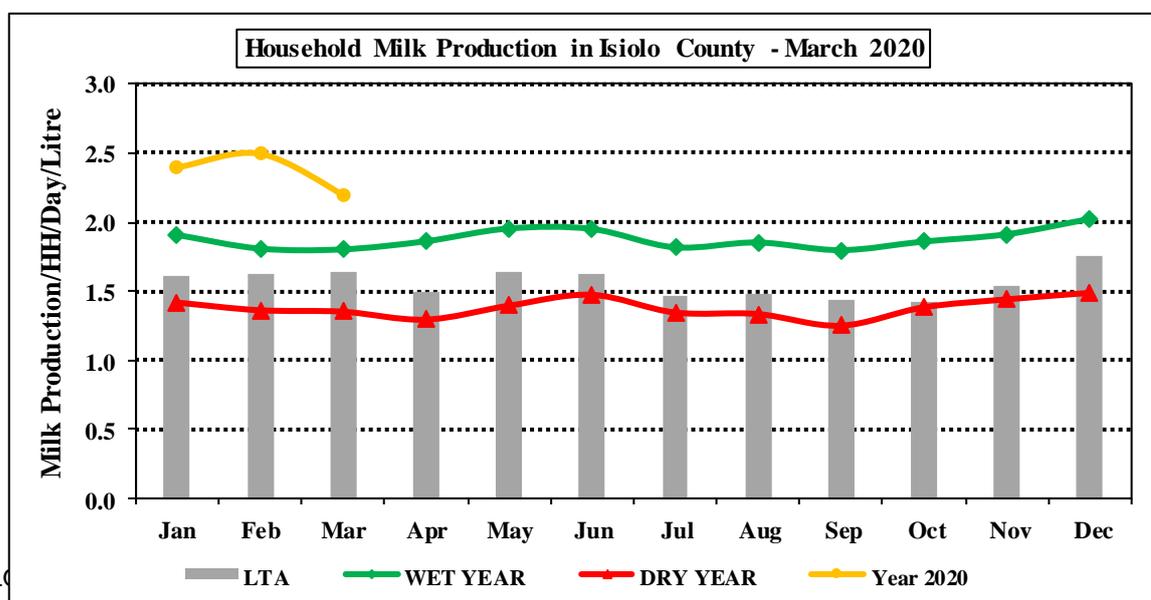


Figure 5: A graph of average milk production in litres

- Milk production in milking households reduced slightly to an average of 2.2 litres from 2.4 litres in February.
- The recorded decrease in milk production was attributed to the slight deterioration of quality of forage as majority of palatable forage has dried up. There was also a normal birth rate among cattle and small stock.
- Most of the milk was produced in Kinna, Burat and Garbatulla wards where camel population is high when compared to other sites.
- The amount produced is expected to stabilize in the following month and afterwards increase due to improvement of quality following onset of the March-April-May long rains.
- Milk production per household was 34 per cent higher than the long-term average amount of 1.63 litres.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- Farmers planted their crops between the second and fourth week of the month under review.
- All crops planted are at germination stages after the onset of the long rains was received in the fourth week of the month under review.
- Small-scale irrigation where fruits, green maize and vegetable crops such as onions, tomatoes, and kales are developing well with adequate water after a significant recharge of rivers.

3.3 IMPLICATION OF THE ABOVE INDICATORS TO FOOD SECURITY

- There was an improved productivity of livestock and crops which have boosted household food availability as an impact of the above normal short rains season. Production in both livestock and crop is expected to be good during the long rains season.
- Livestock productivity was good with all species in good body condition in all livelihood zones. This implies that livestock animals are heavier and able to give more meat and income. In addition, amount of milk produced was significantly above the long-term average. Normal performance of the long rains season is expected to build onto the current livestock body condition a factor that will enable more food availability for pastoral households.
- Crop development was enhanced through support of the above normal rains which led to above normal harvests for cereals enabling a better availability of food by agro-pastoral household. The ongoing long rains are expected to lead to an average production and therefore enable agro-pastoral households replenish their food stocks.
- The current level of food availability for pastoral and agro-pastoral households is good and is expected to be boosted by an expected average production during the long rains and enable a consistent household food availability.

4.0 MARKET PERFORMANCE

4.1 Livestock Marketing

Cattle Prices

- Average cattle price dropped significantly to Ksh 27,100 from Ksh 30,000 in the previous month.
- The price reduction was attributed to market interruptions triggered by outbreak of COVID-19 which necessitated markets closure to control spread of the contagious disease.
- The decline in cattle price is expected to be affected for a while when the control measures to fight spread of the contagious disease are being enforced. This will affect pastoral households' income significantly.
- The highest average price was recorded in Isiolo market at Ksh 31,200 while the least was Ksh.28,300 in Oldonyiro and Modogashe markets.
- The period's price was four percent above the long-term average of Ksh.25,600.

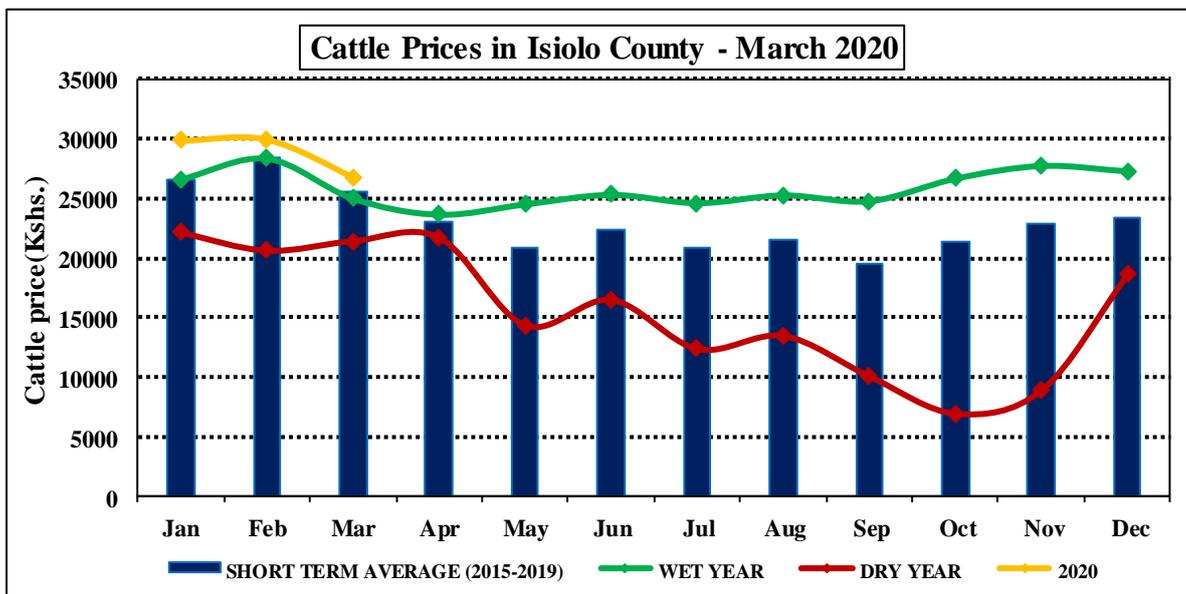


Figure 6: A graph of average market price of cattle

Small Ruminants Prices (Goat)

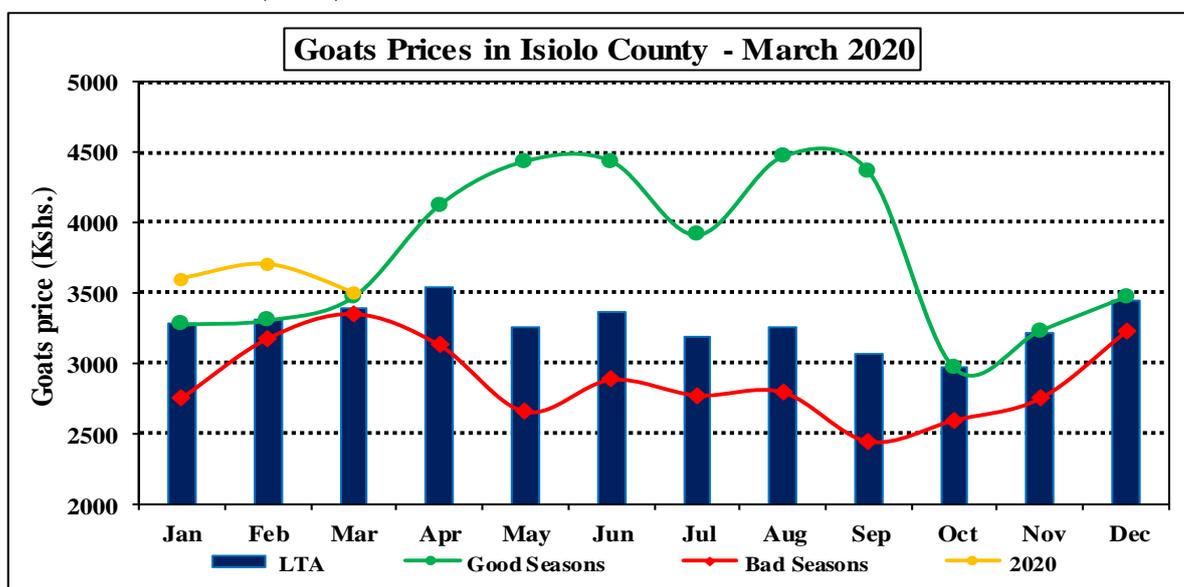


Figure 7: Monthly average market price of goats

- Average goat price decreased slightly to Ksh.3,500.00 in the month under review from Ksh.3,700.00 in the previous month marking a three percent decline from the previous months price.
- The decrease is attributed to the interruption of county markets to control the possible spread of coronavirus in the country. The closures have led to a countrywide impediment of livestock and food commodity marketing.
- There is high likelihood the impact of the closure will affect livestock marketing in the following month as the disease's control measures continue to be enforced in the county and entire country.
- The least and highest market prices recorded were Ksh.2,500.00 and Ksh.4,000 in Oldonyiro and Isiolo town markets respectively.
- Average goat price was three percent lower than the long-term average of Ksh.3,400.00 during the same period of the year.

4.2 CROP PRICES

Maize

- The market price of a kilogram stabilized at Ksh. 51.00 in the month under review.

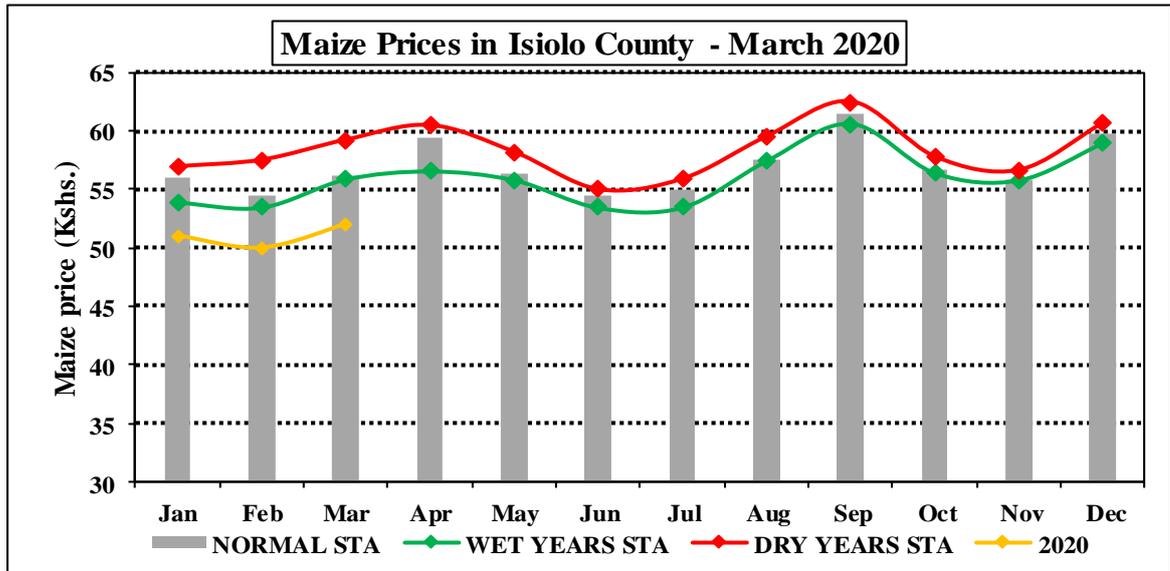


Figure 8: A graph of average maize (cereal) market price in the county

- The reduction is attributed to the stable supply of the cereals in the market from local production and other counties such as Meru and Uasin Gishu.
- Cereals lowest price was Ksh.40.00 in Isiolo town and Oldonyiro markets and highest in Merti at Ksh 60. The cereal’s price in rural markets including Merti, Bisan Biliqo and Sericho was relatively high as supplies were not consistent attributed to the long distances and community cereal preferences.
- The price is expected to stabilize in the next two months as there are sufficient stocks held by traders and farmers for a consistent supply in a normally operating market.
- Average price of maize was nine percent lower than the long-term average of Ksh.56.00.

Beans

- The average price of beans stabilized at Ksh. 101.
- The stability was attributed to a consistent supply from farmers and a stable demand for the pulse.
- The price is expected to stabilize for a while mid of the long rains season after which a rise would be expected.
- Stocks with traders are expected to remain high due to increased supply of the pulses following good yields realized from the OND short rains season.
- The highest price was recorded in Merti market, Merti sub-county in the pastoral livelihood zone at an average of Ksh 120.00 while the lowest price was in Isiolo at Ksh. 80.00.
- The price was seven percent lower than the long-term average price of Ksh. 108.00 during a similar period of the year.

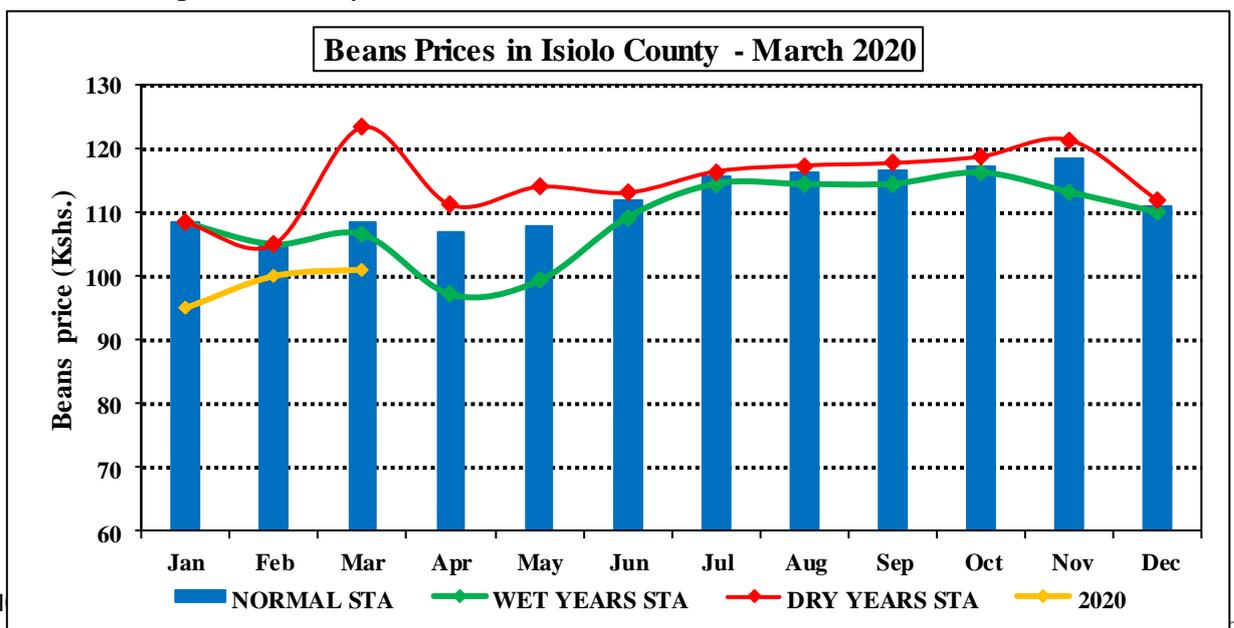


Figure 9: A graph showing average market price for pulses (beans)

4.3 Livestock Price Ratio/Terms of Trade

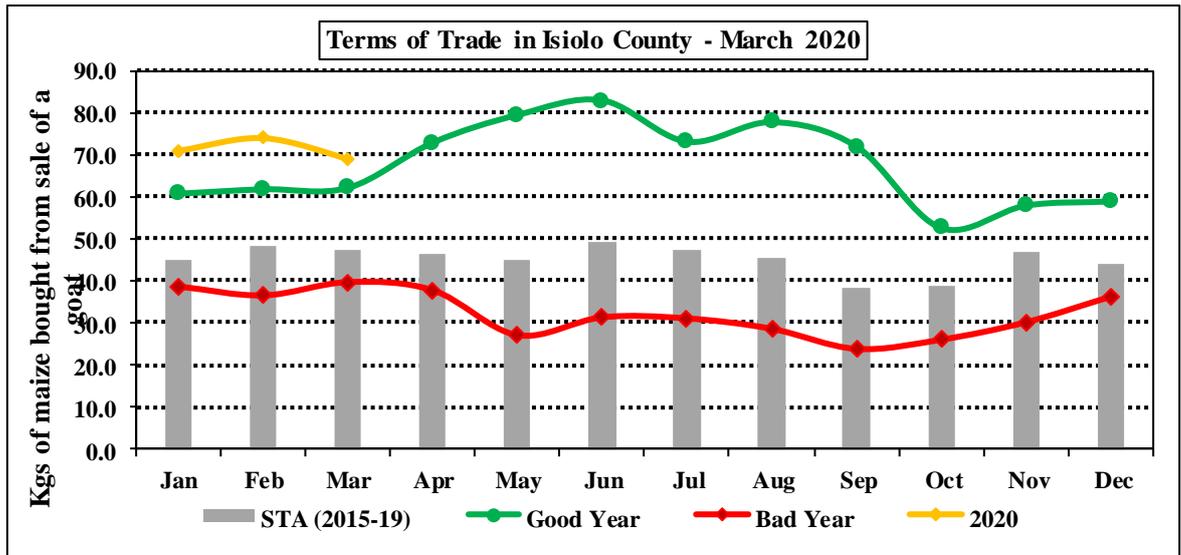


Figure 10: A graph showing the typical pastoralist households Terms of Trade in the county

- Terms of Trade (the number of kilograms of maize a pastoralist would purchase after a sale of one goat) decreased slightly to 69kg/goat in the period under review from 74kg/goat .
- The ratio was 45 percent higher than the long-term average of 47 at a similar period of time in a year.
- The recorded decline in the ratio reflecting the household purchasing power could be attributed to the slight decrease prices in livestock prices and stabilizing cereal’s price.
- Purchasing power of pastoral households is expected to decline significantly due to the ongoing marketing interruptions following outbreak of COVID-19.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

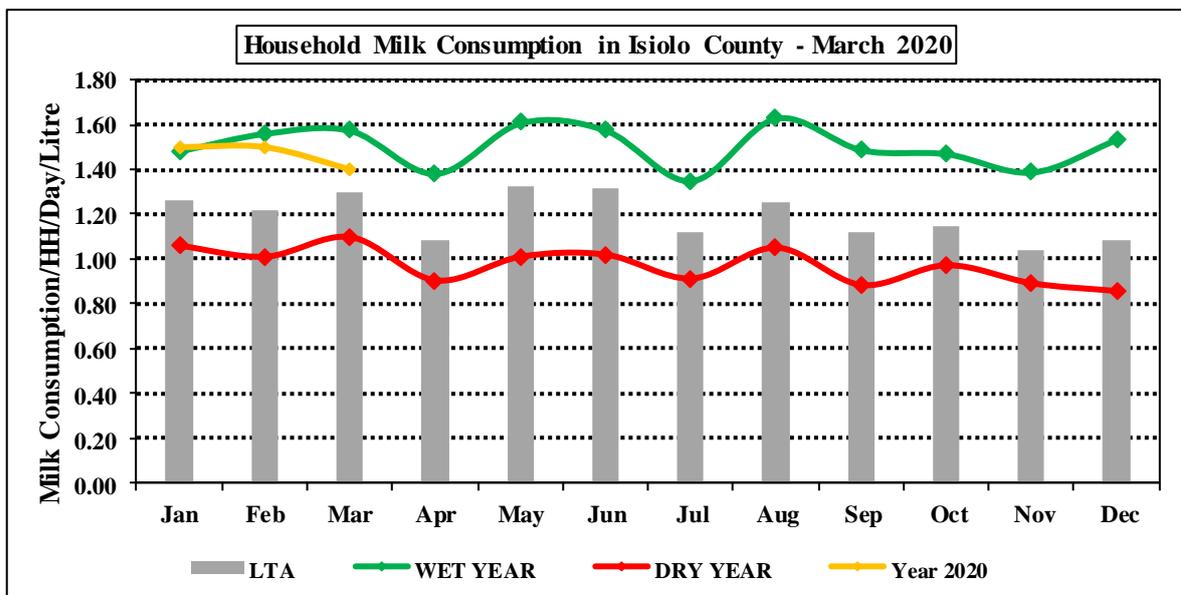


Figure 11: Average milk consumption in litres

- Average milk consumption per household reduced slightly to 1.4 litres from 1.5 litres in the previous month.
- The slight reduction in the amount consumed at the household level was attributed to a reduction of the amount produced.
- The average consumption was 8 percent higher than the short-term average of 1.30 litres.

- Consumption was higher in the pastoral livelihood zone when compared to the agro-pastoral and casual-waged labour/employment livelihood zones.

5.2 FOOD CONSUMPTION SCORE

- Household food consumption improved significantly as shown in figure 13 where 79 percent had acceptable food consumption. 3 percent and 18 percent had poor and borderline food consumption respectively.

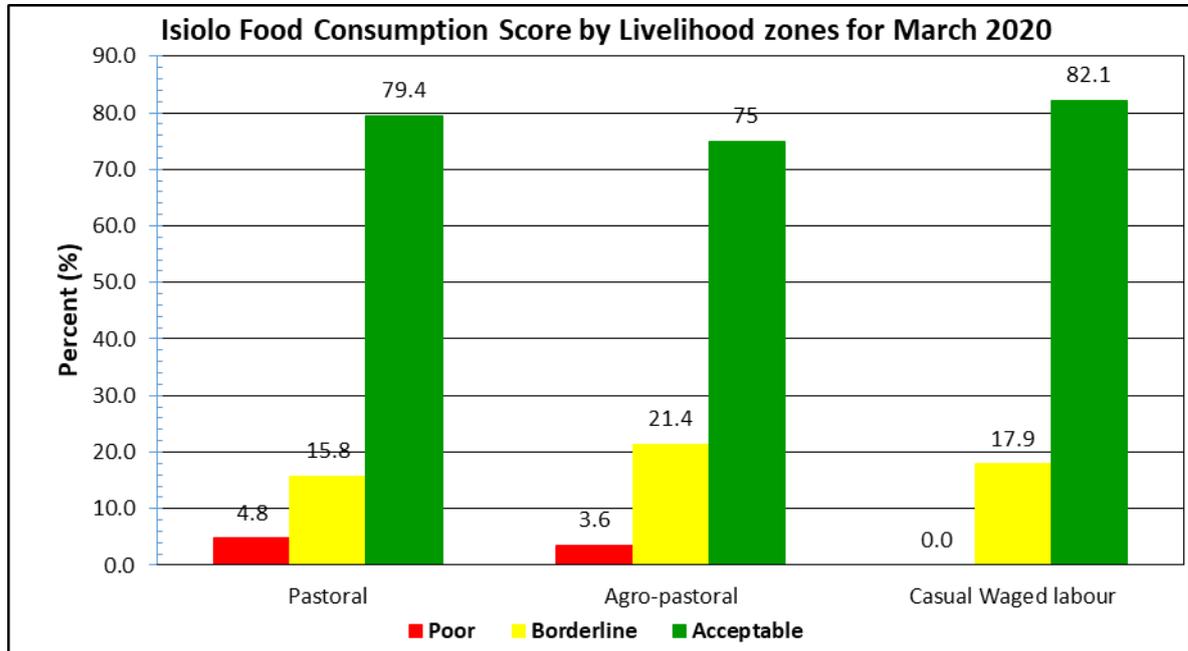


Figure 12: A graph showing the overall households' food consumption score

- There was stability in the proportion of households who had acceptable food consumption mainly attributed to the considerable availability of food in all livelihood zones.
- However, dietary diversity was considerably poor in the pastoral livelihood zone where markets are scarcely provisioned with a variety of important food groups such as fruits and vegetables.
- Food consumption pattern is expected to stabilize as livelihoods recovery continues following the above normal performance of the short rains season.
- *“A poor score implies households consumed staples and vegetables every day and rarely consumed protein rich food while borderline FCS imply that households consumed staples and vegetables every day accompanied by oil and pulses 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) increased marginally to 11.2 percent.
- The proportion of children who were in the moderate acute malnutrition category was 1.7 percent.
- The prevailing rate of children at risk of malnutrition is attributed to poor young children nutrition among pastoral households as well as high prevalence of endemic diseases such as rising cases of intestinal worms, upper respiratory tract infections and diarrheal ailments among the under-fives.
- The proportion of moderate acute malnourished and those at risk of malnutrition is likely to worsen due to change of weather during the rainy season.
- The proportion of children at risk of malnutrition was 12 percent lower than the long-term average of 13.1 percent suggesting that the situation has improved.

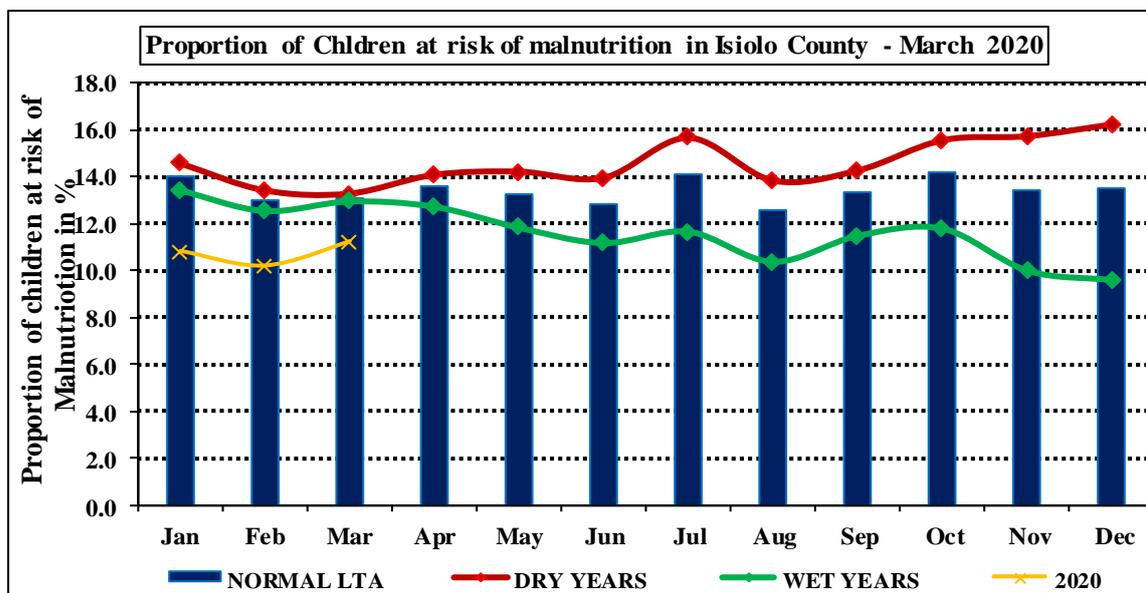


Figure 13: A graph showing the Mid-Upper Arm Circumference for children under 5 years of age

5.3.2 Health

- The general populations' most prevalent diseases included acute upper respiratory tract infections (URTI), malaria, skin disease, urinary tract infections and rheumatism.
- Children under five years' most prevalent diseases included the acute respiratory tract infections, pneumonia, diarrheal, intestinal worms and skin disease.
- The rate of infections of acute respiratory tract infections is expected to rise due to change of weather during the rainy season in April and May.

5.4 COPING STRATEGIES

- Coping Strategy Index (CSI) increased slightly to 9.2 in the month under review from 8.3 in the previous month.
- The slight increment in the coping strategies index was attributed to an increase in the frequency of employing food-based coping strategies by the existing segment of food insecure households.
- The most commonly employed coping mechanisms over the period was reliance on less preferred and/or 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.

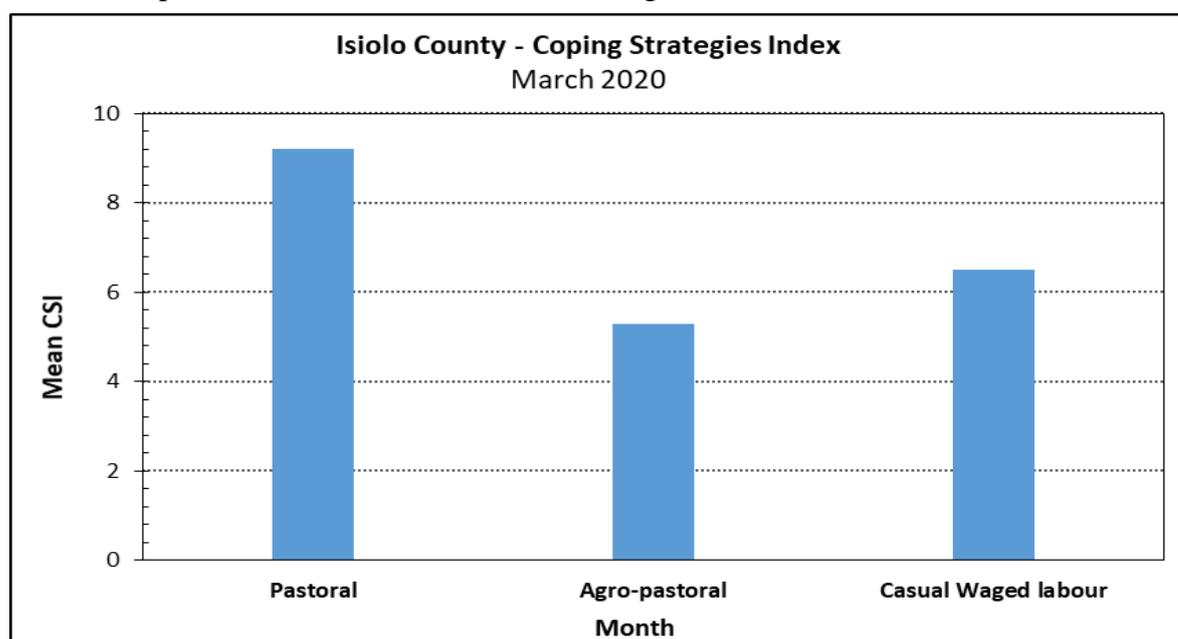


Figure 14: A graph showing the monthly reduced Coping Strategies Index

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
Ground and aerial spraying of the desert locust control	Oldonyiro, Burat	Isiolo	KDF, County Govt of Isiolo	Kipsing, Ngaramara, Oldonyiro
Cash Transfer programmes	Oldonyiro, Kinna, Burat and Ngaramara	Isiolo North and Isiolo South	WFP (under SFSP)	6,600 Households
Cash Transfer to HHS affected by locust invasion	Oldonyiro (Kipsing and Lenguruma location)	Isiolo North	World vision Isiolo Kenya	150HHS
Provision of insect treated mosquito nets and non-food items (NFIs)	Sericho	Isiolo South	County Government KRCS K-Rapid ACF LVIA	5,000 ITNs
Prepositioning of drugs and medical equipment in health institutions	All wards	Isiolo North and Isiolo South	County Government	36 health facilities
Provision of 20lt water Jerricans , Buckets and Bar soaps and water purifiers	All wards	Isiolo North and Isiolo South	UNICEF	3000 Jerrican 4,000 Buckets 3,000 Bar soaps
Support vulnerable household with drought tolerant seed	Burat	Isiolo North	World vision	150HH

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Desert locusts breeding sites are hatched with hoppers in Kipsing, Oldonyiro and Burat were reported during the month under review. The locusts entered the county from Wajir and Garissa counties.
- There was fear of spread of corona virus (COVID-19) in to the county following the global and nationwide disease outbreak.

7.2 Migration

- No incidences of migration were reported during the month under review.

7.3 FOOD SECURITY PROGNOSIS

- Food availability was good in the county mainly driven by the above normal performance of the short rains season mainly attributed to the improved productivity of livestock and crop farms in all livelihood zones.
- Livestock production directly contributed much of the food requirements in the pastoral and agro-pastoral livelihood zones. The economic activity also contributed indirectly to food availability to the casual-waged labor especially to much of the youthful population. Majority of animals are in a good body condition with above normal milk production was normal that is expected to improve during the long rains season.
- There was minimal competition over rangeland resources as majority of the grazing areas have adequately regenerated. This situation has led to a moment of tranquility among the pastoral communities which is key in sustainable livestock and crop production and attainment of food security.
- Crop production in farms relying on rains was good leading to farmers reaping above normal yields and hence household stocks. The above normal stocks improved household food availability for agro-pastoral households and are expected to last for one to two months. The long rains season whose onset came in the fourth week of the month under review are expected to support crop production to maturity and fill the food availability gap that may emerge at the end of the season.
- Market performance was normal with a relatively strong term of trade and played a key role in ensuring household access to food commodities. However, the market systems were interrupted by the outbreak of novel corona virus (COVID-19) disease with more impact on livestock marketing when compared to food commodities. Its expected that markets will be more affected in the following month and if the situation will not be contained in the course of April, then the situation will get worse in May and will severely dwarf food security and livelihoods.
- Utilization was greatly supported by the good water availability hence boosting food consumption where majority of households had an acceptable food consumption. Water availability is expected to be normal with relatively short distances to main water sources. It's expected that the long rains season whose onset was experienced in the last week of March will lead to a further recharge of all temporary and permanent water sources.
- The rains will support a further livelihoods recovery and therefore boost their productivity. This will improve food availability and boost consumption in the event that access and utilization dimensions are not affected by weather changes.
- The overall food security situation remains in the stressed phase (IPC 3) and on an improving trend.

8. RECOMMENDATIONS

- Initiate cash transfers programs to protect vulnerable households against impact of the livelihood losses following the nationwide imposition of restrictions aimed at controlling the spread of coronavirus disease (COVID-19). This will protect loss of lives.
- Sensitize the community on the safety precaution measures against corona virus (COVID-19).
- Provision of early maturing varieties of crops to farmers in the agro-pastoral zones.
- Harvesting of dried grass and packaging it to bales for storage in hay stores across the county.
- Mass screening in the entire county to establish the hot spots where the levels of malnutrition (global acute malnutrition) are high as established by the SMART survey 2020. This will help formulate specific and appropriate nutrition interventions.
- The veterinary department should create awareness to the farmers so that they be alert on contagious Rift Valley Fever (RVF). Active surveillance of such a disease is also important at this point where rains continue to be received in the county.
- Engage and support grazing committees to enable them come up with appropriate communities grazing patterns so as to ensure the available grass is utilized efficiently.
- Provide support for an active and continuous human and livestock disease surveillance for all possible disease pandemics.

- Promotion of hygiene and sanitation practices especially the Community Led Total Sanitation (CLTS).