

**NATIONAL DROUGHT MANAGEMENT AUTHORITY
LAMU COUNTY
DROUGHT EARLY WARNING BULLETING FOR AUGUST 2021**



A Vision 2030 Flagship Project



AUGUST 2021: EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The County received below average rainfall during the Month of August.
- The vegetation condition Index (VCI-3Month) showed decrease of 26 percent when compared to previous month of July.
- The VCI indicated moderate vegetation greenness. The overall drought phase in the county was at Alert.
- Forage condition was moderate across all livelihood zones during the month but on worsening trend.

Socio Economic Indicators

Production indicators

- All livestock species exhibited fair to poor body condition.
- Crops farmers are currently on land preparation.
- Milk production decreased and above the LTA compared to previous month of July.

Access indicators

- Terms of trade was favourable to crop farmers when compared to livestock farmers.
- Water access for both human and livestock was fair to poor depending on the water sources available in the livelihood zone.
- Milk consumption decreased and lower than the long-term Average.

Utilization indicators

- The proportion of children at risk of malnutrition increased compared to previous month and above average when compared to normal ranges.
- The average coping strategy decreased when compared to previous month of July.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro pastoral	Alarm	Worsening
Mixed farming/Irrigated cropping	Alarm	Worsening
Fisheries /Mangroves	Alert	Worsening
Formal/Casual Labour	Alert	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	16	80 -120
VCI-3Month	32.41	<50
Forage condition	Fair -Poor	Good
Production indicators	Value	Normal
Crop Condition (specify crop) Maize	Fair -poor	Good
Livestock Body Condition	Fair to poor	Good
Milk Production	2.3 litres	>3 Litres
Livestock Migration Pattern	Not normal	Normal
Livestock deaths (from drought)	Death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	104	84
Milk Consumption	1.0 litres	>2litres
Return distance to water sources (HH).	5.8	<2 Km
Cost of water at source (20 litres)	5-10	<5Kshs
Utilization indicators	Value	Normal
Nutrition Status, MUAC colour	Green-98.6 Yellow-0.4 Red -0.2	>90%
Coping Strategy Index (CSI)	8.30	<0.95

Seasonal Calendar

<ul style="list-style-type: none"> ▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation 	<ul style="list-style-type: none"> ▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase 	<ul style="list-style-type: none"> ▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased HH Food Stocks ▪ Kidding (Sept) 	<ul style="list-style-type: none"> ▪ Short rains ▪ Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 Rainfall performance

- Off seasonal rainfall received during the month of August was of low precipitation when compared to the previous months of July as recorded in the first two decades of August as in figure 2 below.
- The current NDVI value is below average when compared to the historical long-term values as shown in figure 1.

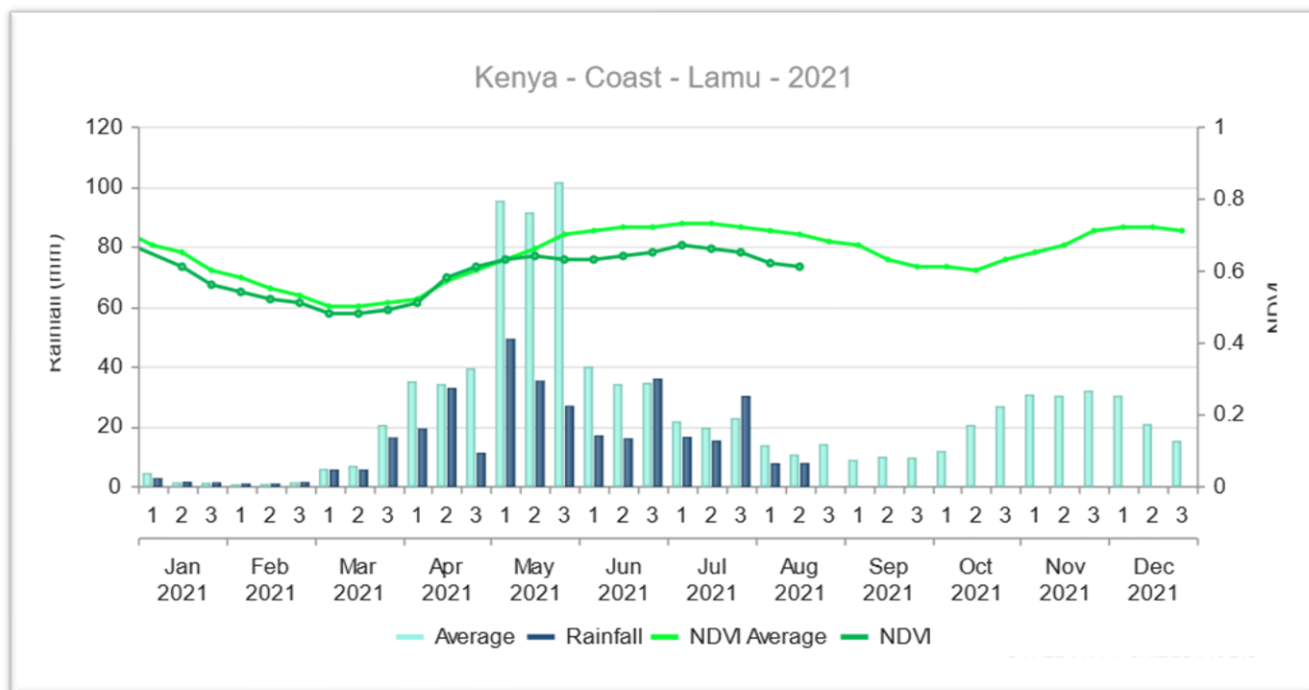


Figure 1: Rainfall and NDVI Satellite data

1.2 Amount of rainfall and spatial distribution

- According to VAM WFP rainfall and vegetation data, the County received a total of 14.7mm of rainfall in the month of August during the first two decades.
- This was a decrease of 52 percent rainfall when compared to previous month of July; however, this (14.7mm) was lower when compared to long-term average of 23.5mm for the two decades as in the figure 2 above.
- This 14.7mm of rainfall was above by 61 percent when compared to 23.8mm received in the same period during the previous year.
- The off seasonal rainfall received was poor, both in spatial and temporal and was unevenly distribution in all parts of the livelihood zones of the county during the month of August.

1.3 Other hazards.

- Foot and Mouth disease outbreak was reported across the entire county during the Month of August and quarantine put in place in Lamu West sub-county

2.0 VEGETATION CONDITION

2.1 Vegetation Condition Index (VCI)

- The vegetation condition index for the month of August decreased by 26 percent compared to the previous month of July. This was due to low precipitation rate received during the previous month of August.
- The vegetation condition index for the month of April was 32.41 compared to 40.72 in the previous month.
- However, Lamu East sub-county county had above normal vegetation greenness at a three months VCI of 51.31, while Lamu West sub county recorded moderate vegetation of 21.47 respectively.
- VCI-3Months is below the long-term average and the previous year as shown in the figures 2 below. {Source: Boku University, Austria}

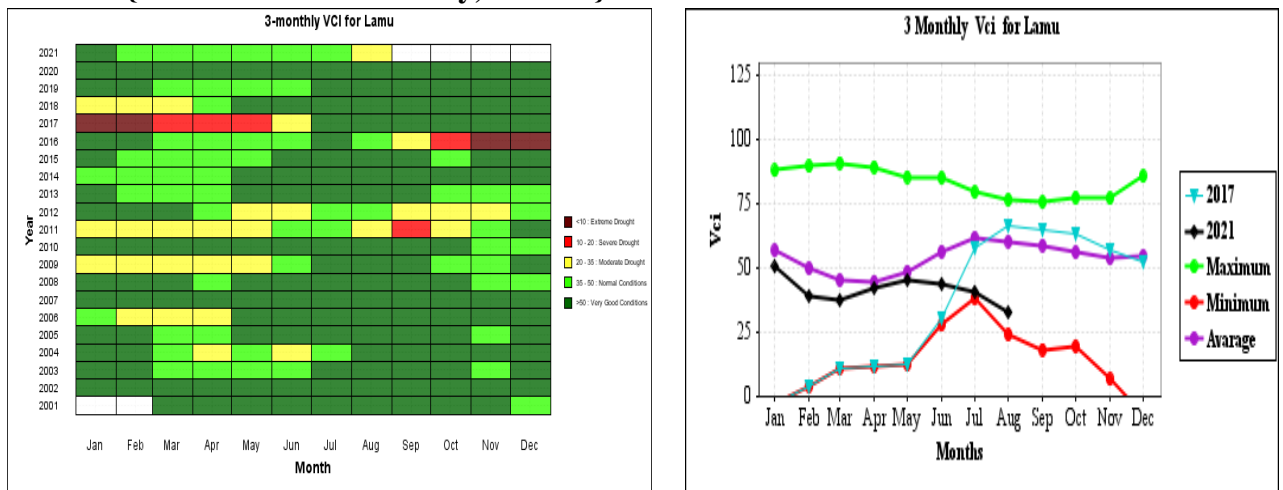


Figure 2: Vegetation condition index

OBSERVATIONS-PASTURE AND BROWSE CONDITION

2.1.2 Pasture

- Pasture condition was good to poor in all livelihood zones in the county but on worsening trend in Mixed and Agro pastoral zones both in quality and quantity.
- 60 percent of community members interviewed stated that pasture was good, 40 percent stated it was poor as in figure 3.
- Pasture condition by livelihood zones was as follows; Agro pastoral and mixed farming was good to poor while fishing/ mangrove was good to fair as well.
- The available pasture is expected to last less than a month due influx.
- The current pasture is not within the normal range.

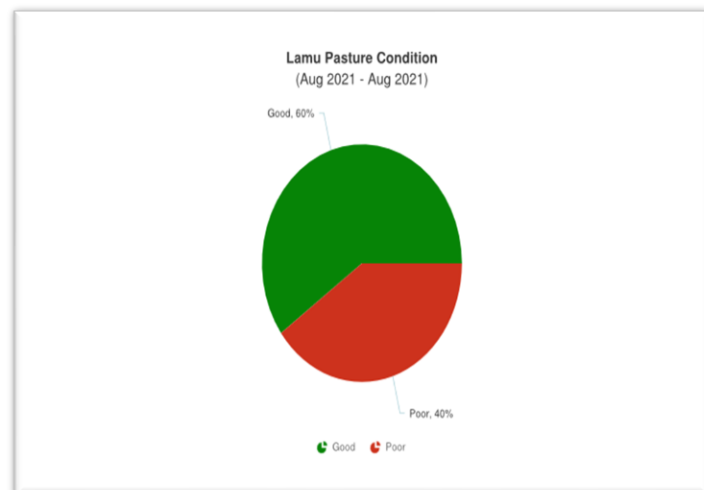


Figure 3: Pasture condition

2.1.3 Browse conditions

- The quantity and quality of browse was good to fair across all livelihood zones.
- Community members interviewed indicated that 60 percent of the respondents stated that browse was good while 40 percent stated that it was good to poor and on worsening trend due to below average off seasonal rains and high rate of transpiration as shown below in figure 4.
- Browse condition by livelihood zones was as follows; Agro pastoral and mixed farming was good to poor while in fishing/mangrove was good to fair.
- The browse is expected to last less than a month. The current browse condition is below the normal range compare to previous year.

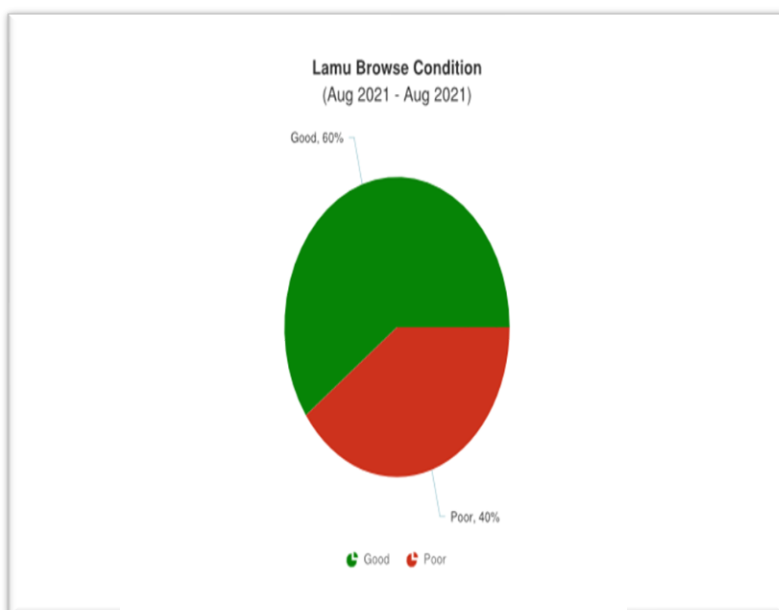


Figure 4: Browse conditions

2.2.0 HYDROLOGICAL DROUGHT

2.2.1 Water Sources and Availability

- The state and condition of water sources in the County was fair to poor across all the livelihood zones, however most of the Djabias and water pans have dried up and the shallow wells have been turning totally saline, this attributed to low water levels poor recharge.
- The two major water sources in the county during Month were shallow-wells which was recorded at 90 and Traditional river wells at 10 percent of the total.
- The other remaining sources are have dried up as shown in the figure 5.
- The current water situation is on decline compared to previous months due to pressure from the influx, however, this is not normal at this time of the year.

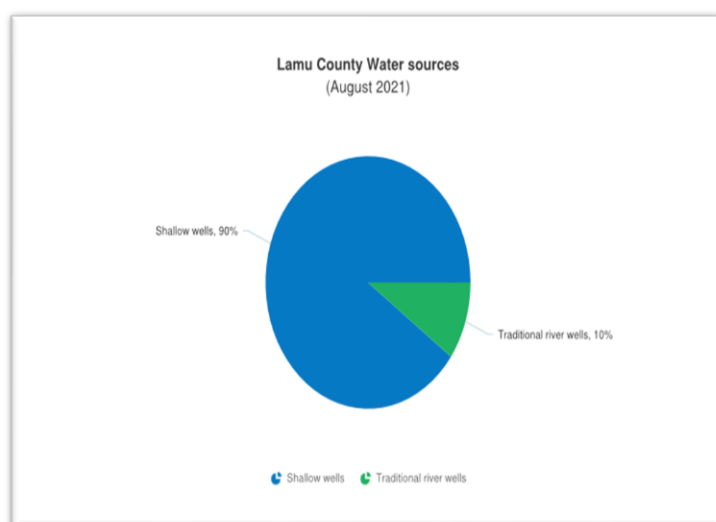


Figure 5: Main sources of water

2.2.2 Household access and Utilization

- Average household watering return distance increased to 5.8 Kilometers in August, when compared to previous month of July at 5.5 Kilometres. This increase in household water distance was attributed to the below average rainfall received. Household return water distances per livelihood zones were as follows; the Agro pastoral 3.8 Kilometers, Fishing &

Mangrove Harvesting 4.4 Kilometers and Mixed Farming Zone it was two Kilometers respectively.

- The below average precipitation received led to decrease in the level of open water sources.
- The average household water distance for August was 5.8 Kilometers which is above the long-term average of 2.2 Kilometers as shown in figure 6 below.
- The average household water consumption per person per day is at 10-15liters in all livelihood zones except in fishing zone at 5-10 litres per person per day.
- Water costs at source are 5-10 Kshs in town/villagecenters for 20 liters while the cost in fishing and mixed farming is ranging between Kshs 20-50.

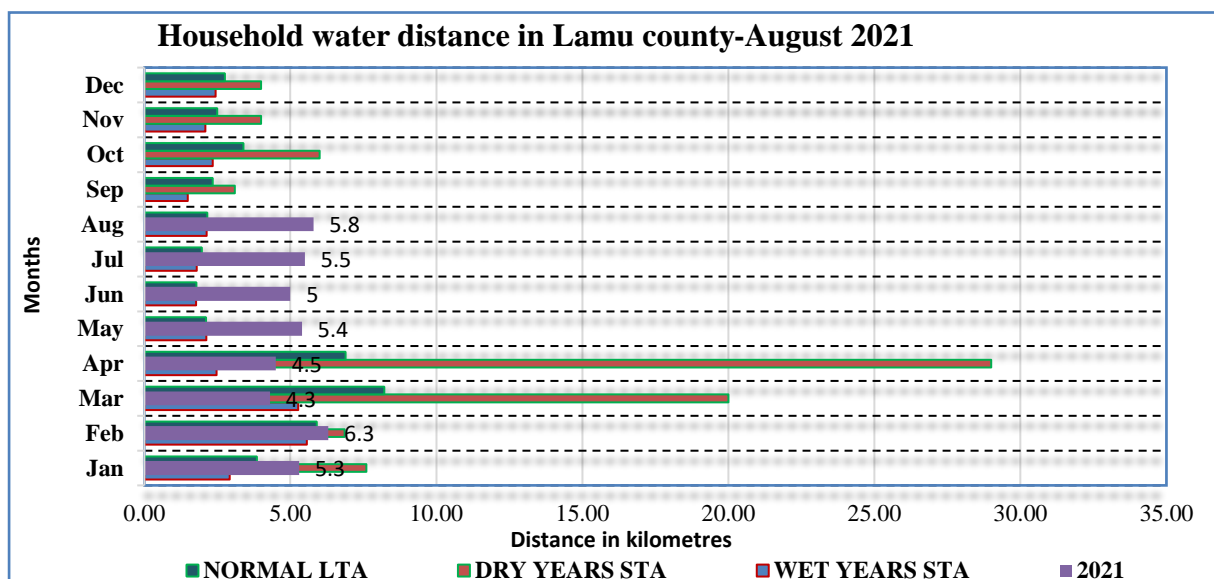


Figure 6: Households water distance

2.3 Livestock access to Water

- Livestock average distance to water source from grazing areas increased by 53 percent (11.5 kilometres) when compared to 10.5 kilometrers during the previous month as shown in figure 7.
- Grazing return water distances per livelihood zone were as follows: the Agro pastoral seven Kilometres, Fishing & Mangrove Harvesting 6.3 Kilometres and for Mixed Farming zone recorded 5.1 Kilometres.
- The increase of grazing water distance was as a result of low precipitation and open water sources (Pans) drying up.
- Watering frequencies for livestock species was 4-7 days times per week.
- The current average grazing distance for August was 11.5 Kilometers was higher when compared to the short-term average of 5.4 Kilometres.

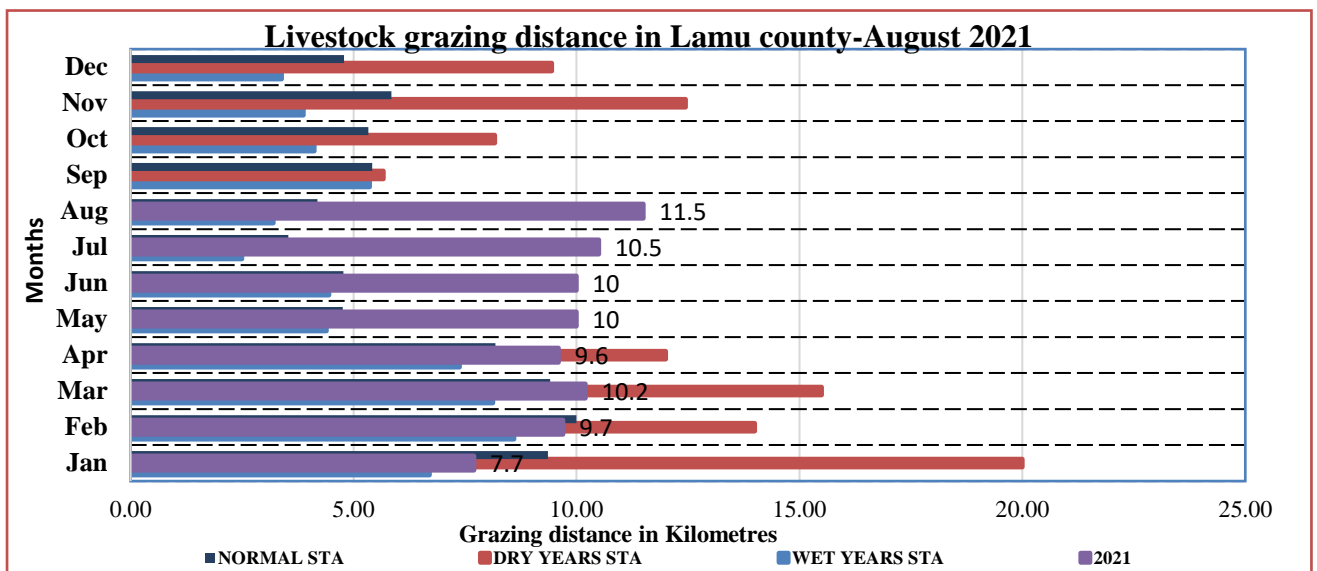


Figure 7: Grazing water distances

2.2.4 Household Income Sources

- The main households income for the month of August in the County was distributed as follows: Casual labour 56.7 percent, trade 20 percent, employment 14 percent, sale of livestock 7.3 percent and sale of crop two percent in figure 8 alongside.
- However, casual labour and sale crops decrease by 3 and 0.7 percent respectively when compared to the previous month of July while trade and and Employment were stable.

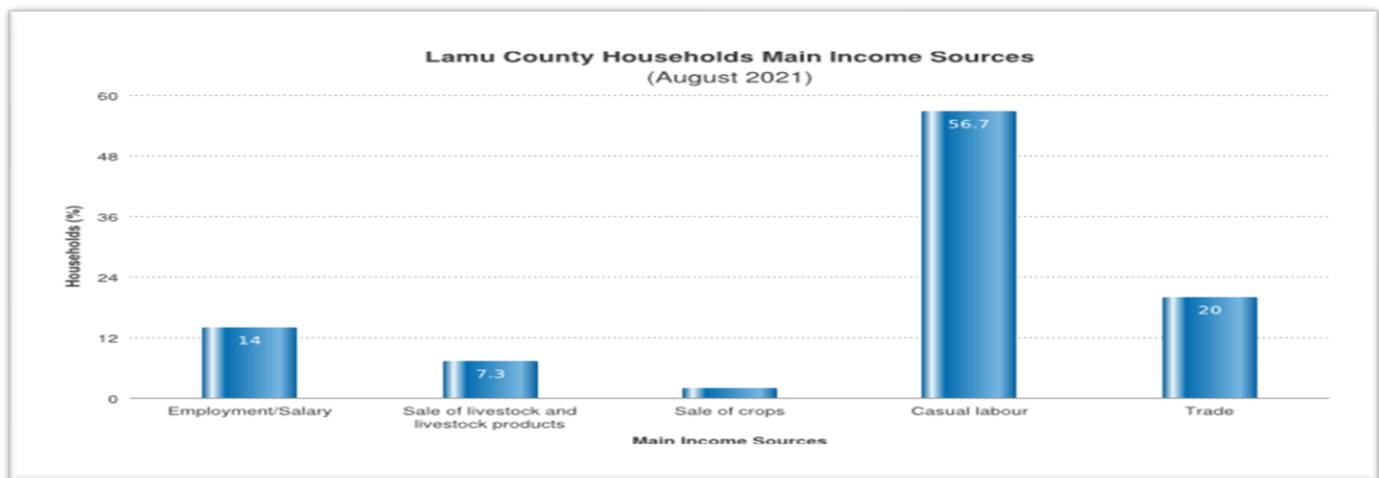


Figure 8: Households sources of Income

2.4 Implication to Food Security

- All livelihood zones will experience increased water salinity due to low level of water table of the Boreholes, Traditional River wells and shallow wells.
- Curfew and stay home orders issued by the government because of the fourth wave of the COVID-19 outbreak and increased number of HIV-positive cases according to the health department and this had undermined the general normal

operation in all livelihood zones hence impacted on food security and household incomes.

3.0 PRODUCTION INDICATORS

3.1.0 Livestock Production

3.1.1 Livestock Migration Patterns

- In flux of livestock from neighbouring counties to Agro pastoral, Mixed farming zones were reported during the month.
- This in-migration is not normal during this period of the year.

3.1.2 Livestock Body Condition

- The livestock body condition was fair to poor for cattle and fair to good for small ruminants.
- This was attributed to low quality and quantity of pasture and browse due to the below average precipitations received during this month.
- However, due to influx and pasture depletion the body conditions are expected to deteriorate further in coming months.

3.1.3 Livestock Diseases

- Foot and Mouth disease outbreak in cattle was reported during the month and quarantine put in place to control the spread.

3.1.4 Milk Production

- Milk production in August decreased slightly to 2.3 litres when compared to previous month with decrease in households' milk production. The 2.3 litres of milk were from three percent of total household interviewed as in figure 9.
- Milk productions were distributed as follows: Mixed farming produced 1.3 litres, Fishing is nil, while the Agro pastoral Zone produced average of 1.5 litres. The trend of Milk production was on decline since the month of June.
- Milk prices are retailing at an average price of Kshs.50-100 per Liter across the livelihood zones which is not normal at this period of the year.

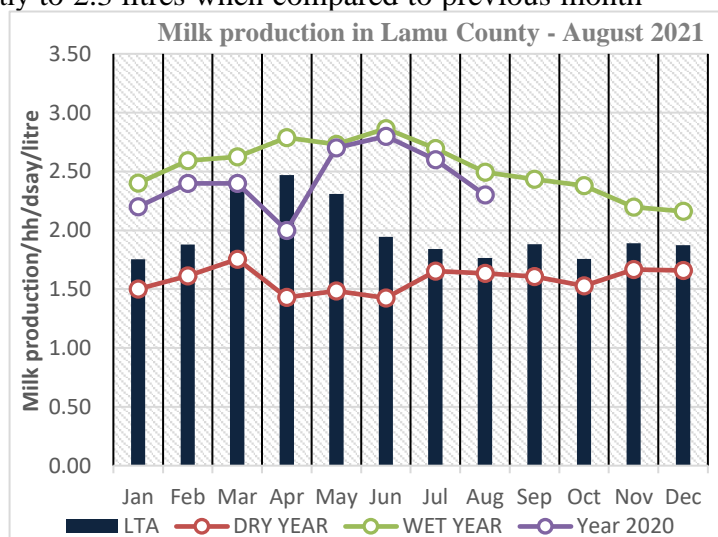


Figure 9: Milk production

3.2.0 Rain fed crop production

3.2.1 Stage and condition of food crop

- The main crops grown are Maize, Cowpeas, Green grams and Simsim in the County.
- Crops farmers are currently on land preparation in readiness to short rains.

3.2.2 Crop Harvest

- Currently there are no reports of any harvesting.

3.2.3 Implications on Food Security

- The fair to poor body condition of livestock body condition across the livelihood zones has decreased the prices resulting to decline income to households. The crop failure due to low

precipitation, reduced food stocks at household level hence impact on food security.

4.0 MARKET PERFORMANCE

4.1 Livestock marketing

4.1.1 Cattle Prices

- Average cattle market price in the month of August decreased by nine percent (Kshs 26,400) compared to previous month (Kshs28, 500) as in figure 10 below.
- This decrease of nine percent price could be attributed to high demand and low supply at the markets.
- The cattle average market prices were highest in Patte at 32,000 and lowest at Witu at Kshs 20,000.
- The average market cattle price for the month of August was Kshs.26, 400, was higher when compared to normal short-term average of Kshs.22,000.
- The current price was also higher when compared to dry and wet seasons.

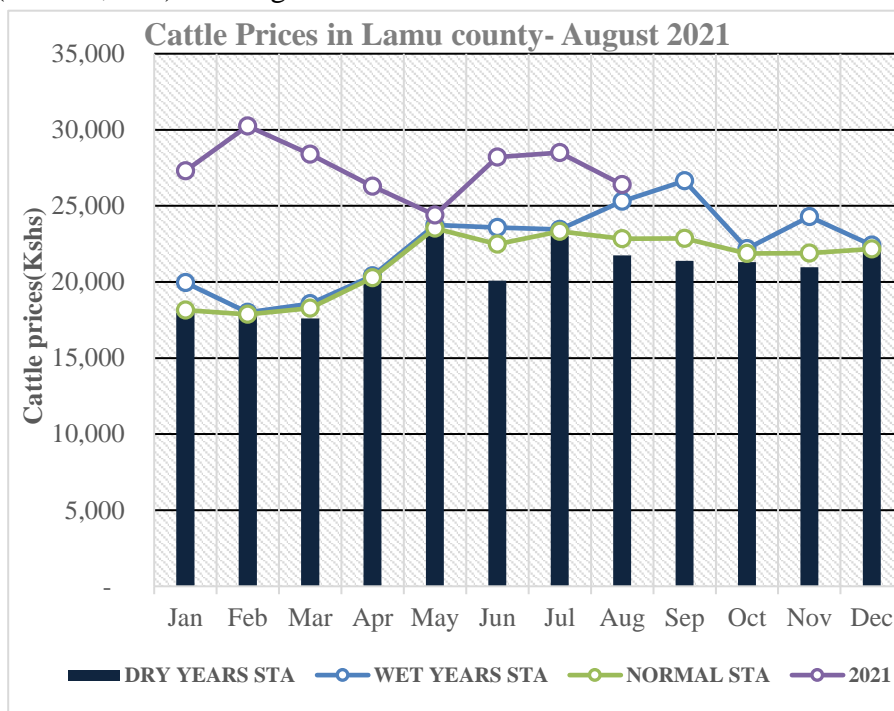
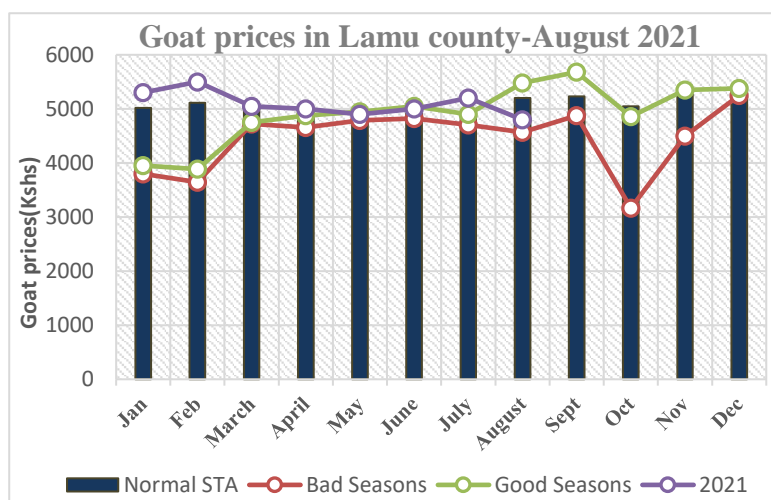


Figure 10: Cattle prices

4.1.2 Small Ruminants Prices

4.1.3 Goat Prices

- Goat price increased in August (Kshs 4,800) when compared to previous month of July (Kshs 5,200).
- The current goat price decreased by eight percent when compared to the previous month and the higher than the short term and price recorded in previous year at a similar period and following seasonal trends as shown in figure11.
- This decrease in price of goats could be attributed to low market demand and fair body condition.



- The goat average market price for August was highest in Witu at Kshs 6,500 and the lowest was in Mswakini market at Kshs 4000.
- The current price was also lower when compared to dry and short-term average.

Figure 11: Goat prices

4.2: Crop prices

4.2.1 Maize price

- The maize prices were stable when compared to previous month of July at Ksh 46 as shown in the figure 12.
- The average price for August was Kshs 45, which was below the short term, the wet and dry season's averages.
- The stability of price was due low demand of the product coupled with high supply of maize in different markets.
- The maize market prices were highest in Mokowe at Kshs 50 and lowest in Mpeketoni at Kshs 40.
- However, price ranges are determined by commodity supply in different markets. The price is likely to follow seasonal trends.

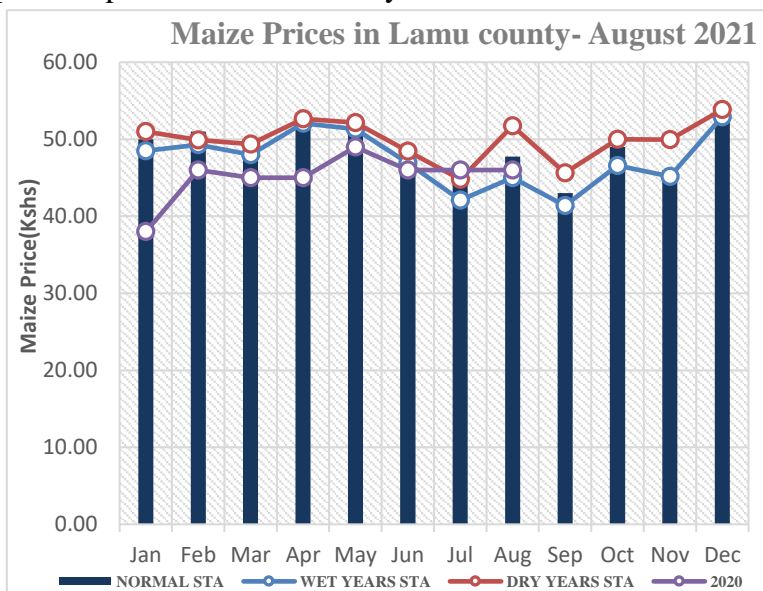


Figure 12: Maize prices

4.2.2 Beans prices

- Average price of Kilogram of beans was Kshs 123 in August, this was stable was when compared to the previous month of July at Kshs 125 as shown in the figure 13 below.
- The stability in price was attributed to low demand and high supply of the commodity in different markets.
- The beans price was highest in Patte at Kshs 140 and lowest in Mpeketoni at Kshs 100.
- However, price ranges is determined by commodity supply in the different markets and the purchasing power since COVID-19 has affected most of the bussiness enterprises.
- The short-term average price of beans was Kshs 107 which is lower when compared to the

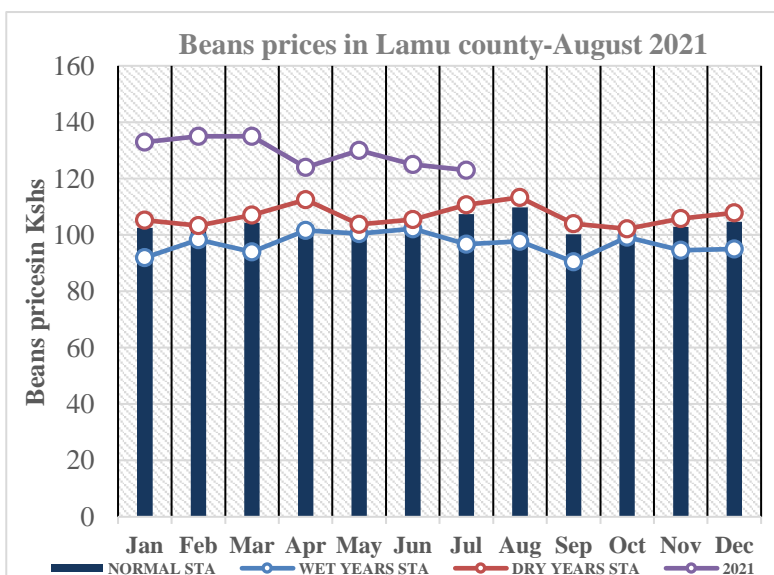


Figure 13: Beans prices

current beans price for the month of July and the wet and dry seasons.

- The price is likely to follow seasonal trends.

4.3 Livestock Price ratio/Terms of Trade

- The terms of trade (ToT) for the month of August (104 Kilograms) which was a decreased by 15 percent when compared to previous month of July (120 Kilograms) as in figure 14 below.
- This TOT of 104 Kilograms was higher when compared to the short-term average by 37 percent. The TOT trend is likely to decrease due decrease in prices of goats.
- Sale of a medium goat in August would cost a household about 104 kilograms of maize.
- This showed the exchange ratio decreased in favour of crop farmers when compared to goat sellers. However, this was determined by supply in different markets.
- The ToT was highest in mixed farming zone at 102 kilograms and lowest at Fishing zone at 67 kilograms.
- The Terms of trade for August was higher when compared to the short-term average of 76 Kilograms and above the bad season.

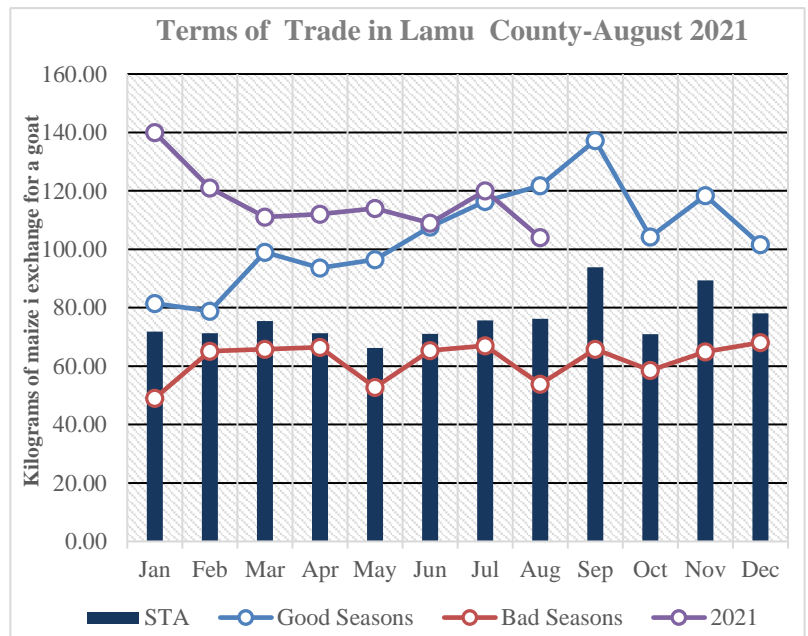


Figure 14: Terms of Trade

4.4 Implication on food security

- Low livestock prices, hence decline in food security at household level, especially for cattle herders, this low price was attributed to by decline in body condition.
- The Curfew and stay home orders issued by the government because of the third wave of the COVID-19 outbreak had under mined the general normal operation in all livelihood zones hence negative impact on food security.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk for Household Consumption

- Average milk Consumption was one litre in the month of August, a slight decrease when compared to previous month as in figure 15. This one litre of milk was consumed by three percent of the total households interviewed.
- Milk consumption was highest in mixed farming at one litre and zero in fishing zones.
- The decrease in milk consumption level was as a result of low production by households coupled with low purchasing power of the commodity.
- The average consumption of the product was lower when compared to the long term, dry and wet periods.

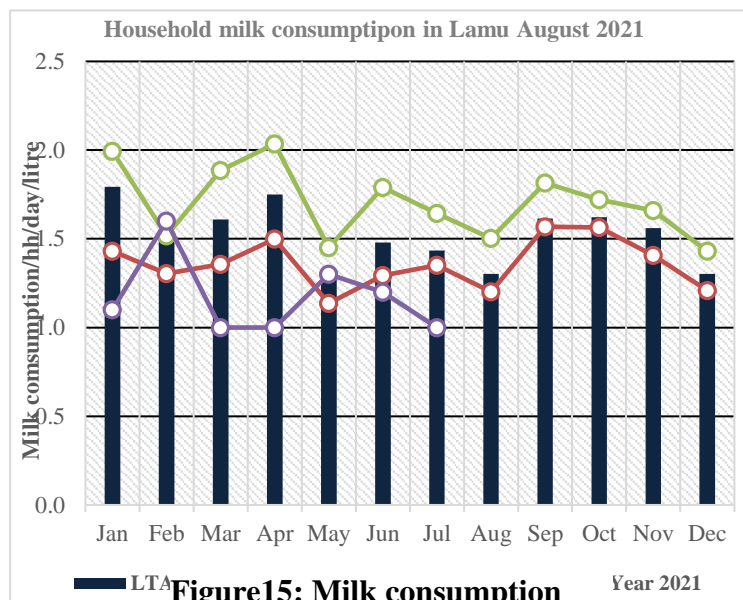


Figure 15: Milk consumption

Year 2021

5.2 Health and Nutrition status

5.2.1 MUAC

- Proportion of the under-fives categorized as being moderately and severely malnourished was 0.4 and 0.2 percent respectively (Figure 16). This is unstable when compared to last month of July.
- The reported proportion of children categorized as being severely malnourished during the month of August was 0.2 percent when compared to the previous month of July which indicated an unstable condition.
- The observed trend in August was as a result of low milk consumption by households.
- Poor child care practices, poor dietary diversity, reduced number of integrated health outreaches delivering essential nutrition services to the malnutrition hotspots area.

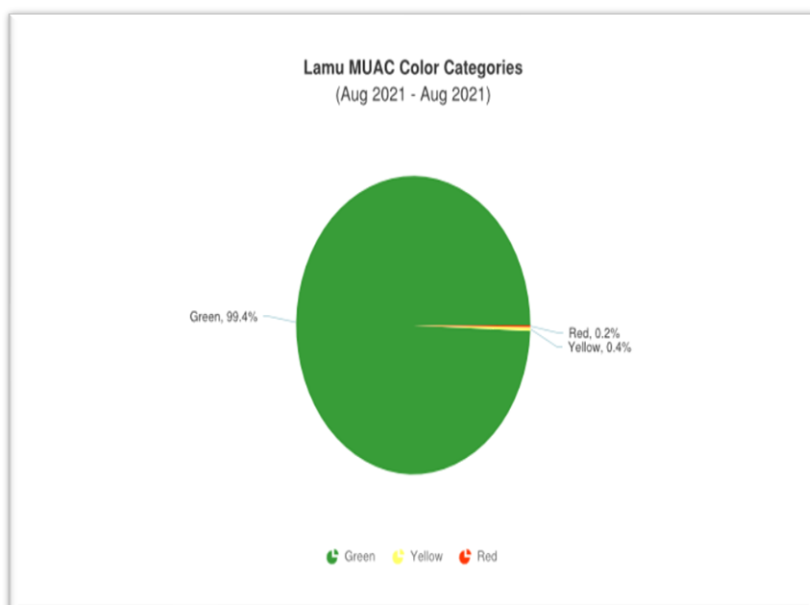


Figure 16: MUAC Coloured

5.2.2 Health

- There were no cases of major disease outbreak both for children and general population in the County.

5.3 Food consumption score

- The Proportion of households with poor, borderline and acceptable in the county was at 39, 58 and three percent respectively during the month of July.
- There was a decreased in poor borderline food consumption by 10 and nine percent respectively when compared previous month of July. The population with the highest poor food consumption in the county was mixed farming with 90 percent while fishing had the highest borderline food consumption of 93 percent, owing to reduced availability of food at households' level.

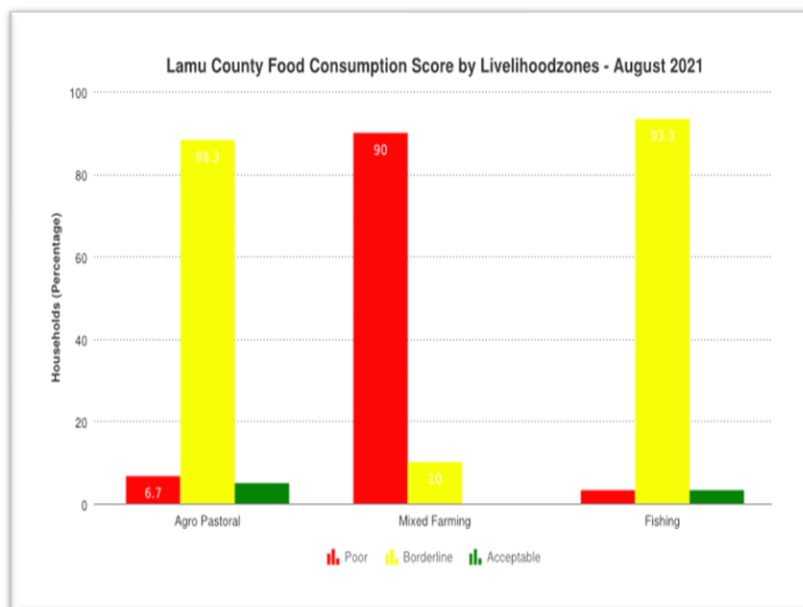


Figure 17: Food consumption scores

- Households have low purchasing power, thus consuming two to three meals per day with two to three food groups as in figure 17. Food commodity prices are on the increase in all livelihood zones. However, food prices are highest in Fishing and Mangrove zones.

5.4 Coping strategy index

- The mean coping strategy Index in the Month of August recorded 8.30 an increase when compared with the previous month of July (8.10) indicating increased in coping strategies at household level.
- Agro pastoral Zone had CSI of 5.8 Mixed Farming livelihood zone had 6.2 while Fishing Livelihood zone had the highest copying strategy of 17.40.
- Common coping strategies employed by food insecure households in the month of August were; Reduction in the number of meals, Purchase on credit/remittances from relatives, borrow food from friends or relatives, adopting for less preferred or less expensive food.

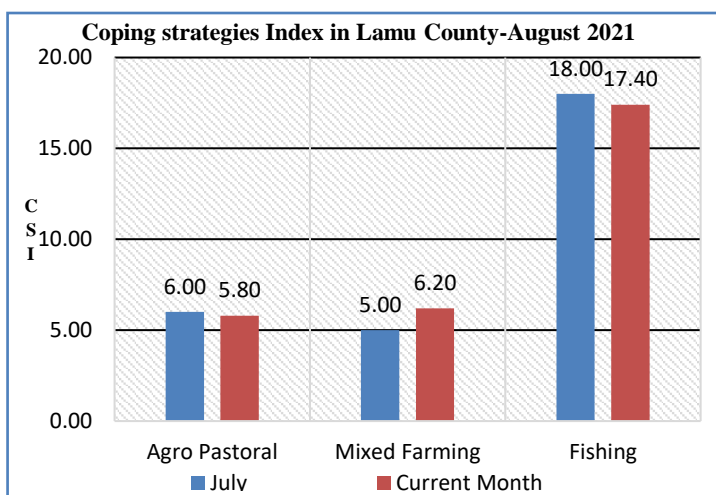


Figure 18: Coping strategy index

5.5 Implication on Food Security

- The decrease of milk consumption at household levels in all Livelihood zones could lead to poor dietary diversity and hence negative impact on food security and the under-fives.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 Food aid

- There were reports of food aid distribution in the county to vulnerable households during the Month by Kenya Red Cross society to Awer community. The Society distributed food rationing size of 10kg of Rice, 4kg of Beans, 2litres of vegetable Oil and 1kilo of salt to 256 Households.

6.2 Non-food interventions

- Cash transfer by the social protection department to 3,500 households for older persons, Orphans and people with disabilities respectively for the entire county.
- The cash transfer will improve the purchasing power of the households to access food of their preferences during the current curfew and stay at home period.
- County Government of are currently water trucking to hot spot areas in the sub-counties.

EMERGING ISSUES

7.2 Coronavirus out break

- The announcement of the emergence of the conorovirus in the country has destabilized the socioeconomic activities in all livelihoods zones in the county, specially when orders of stay at home and curhew were imposed, this impacted on household income.

7.3 Insecurity/Conflicts

- There were cases of insecurity and conflict reported during the Month.
- Human and wild life conflicts over scares resources were reported during the month and causing the death one person in mixed livelihood zone.

7.4 Migration

- There were no abnormal cases of human migration during the month under review.

7.5 Food security prognosis.

- According to the Greater Horn of Africa (GHACOF) and Kenya Meteorological department the forecast of October to December short rains is expected to be below average due to decreased probability for warmer than normal sea surface temperatures.
- Livestock body conditions are likely to dec further, leading to unstable in livestock retail prices in the next two months.
- The effects of Trypanosomiasis, Lumpy skin disease, worms, foot and mouth diseases, the body conditions of livestock are expected to deteriorate in coming Months.
- Food and milk intake are expected to decline further hence possibility of acute malnutrition levels increasing and likely to remain high due to below-average milk production and consumption and poor child-care practices.
- The distance to water sources for both human and livestock is expected to increase further due drying un up of open water sources and reduce in water levels in shallow wells.
- Water salinity is expected to increase due the decrease in water levels in Fishing zones.
- Livestock prices are likely to be below the normal average due to decline in body condition deteriorates in the next three months due to decline in forage.

- The overall food security situation remains in the stressed phase (IPC 2) and on a worsening trend due poor long rains performance, coupled with COVID 19 restrictions, the county can slide to crisis phase (IPC 3)

8.0 RECOMMENDATIONS BY SECTORS;

Immediate/Short Term: Partners to collaborate on;

8.1 Water

- Water trucking to hot spot areas in the County.
- Desalting of open water sources Lamu West Sub- County.
- Installation of solar powered water systems e.g., desalination plants.
- Promotion of rain water harvesting, repair of Djabias, roof catchment areas, installation of gutters and tanks in Villages and Institutions. Before the onset of the short rains.

8.2 Livestock

- Provision of livestock feeds to hot spot areas.
- Livestock disease surveillance and control through vaccinations against notifiable diseases such as CCPP, FMD, in the county.
- Construction of vaccination crushes and cattle dips which are currently dilapidated.

8.3 Agriculture

- Build Capacity of crop farmers to plant drought resistance food crops.
- Mobilization and sensitization of farmers on crop insurance.

8.4 Health and Nutrition

- Sensitize the community on the safety precaution measures against coronavirus.
- Strengthen malnutrition screening and active case search as well as strengthen integrated management of acute malnutrition in the community.

8.5 Peace and Security Sector (Co-ordination)

- Peace and security meetings should be enhanced in the County to solve issues arising from resource based conflicts among crop farmers and livestock herders.
- Provision of relief food or cash transfer to vulnerable household during this period of COVID – 19 about 60 percent of the households are food insecure.

8.6 Information Communication Technology

- Promote use of ICT on drought information (Forums) sharing and development programmes in the county.