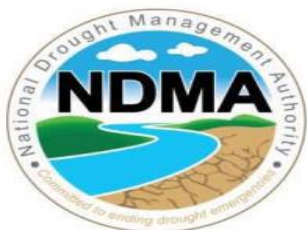


LAMU COUNTY
DROUGHT EARLY WARNING BULLETING FOR FEBRUARY 2021



A Vision 2030 Flagship Project



Drought Status: **ALERT**



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The County received below average off seasonal rainfall during the Month of February.
- The vegetation condition Index (VCI-3Month) showed decrease of 23 percent when compared to previous month.
- The VCI indicated normal vegetation greenness. The overall drought phase in the county was at Normal in February.
- Forage condition was fair to poor across all livelihoods zones during the month.

Socio Economic Indicators

Production indicators

- All livestock species exhibited poor to fair body condition.
- Crops farmers are at Land preparation.
- Milk production slightly increased and above the LTA compared to previous month of January.

Access indicators

- Terms of trade were favorable to livestock herders than crop farmers in mixed and pastoral livelihood zones respectively.
- Water access for both human and livestock was fair depending on the water sources in the zone.
- Milk consumption increased and lower than the long term Average.

Utilization indicators

- The proportion of children at risk of malnutrition cases slightly increased and above the normal range as indicated by the percentage of mid upper arm Circumference (MUAC).
- The average coping strategy increased when compared to previous month of January.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro pastoral	Normal	Worsening
Mixed farming/Irrigated cropping	Alert	Worsening
Fisheries /Mangroves	Alert	Worsening
Formal/Casual Labour	Normal	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	1	80 -120
VCI-3Month	38.94	<50
Forage condition	poor	Good
Production indicators	Value	Normal
Crop Condition(specify crop)Maize	Fair to Good	Good
Livestock Body Condition	poor to fair	Good
Milk Production	2.4 litres	>3 Litres
Livestock Migration Pattern	Not Normal	Normal
Livestock deaths (from drought)	55(Lamu East)	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	140	84
Milk Consumption	1.6 litres	>2litres
Return distance to water sources (HH).	5.3	<5 Km
Cost of water at source (20 litres)	5-10	<5Kshs
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	6.9%	>5%
Coping Strategy Index (CSI)	9.04	<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 Season rainfall received during the month of February was of low intensity when compared to the previous months as recorded in the first and second dekad of February as in figure 1 below.
- The current NDVI value is slightly below average when compared to the historical long term values as shown in figure 1.

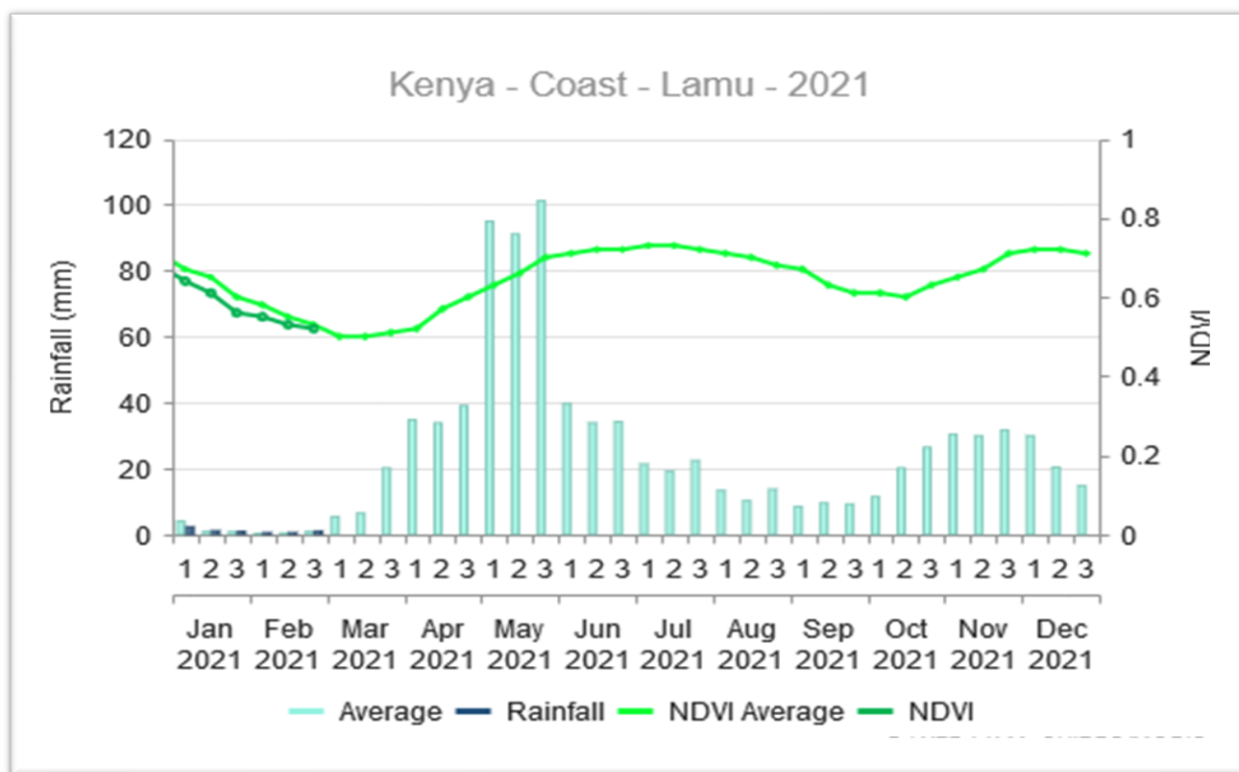


Figure 1: Rainfall Satellite data and NDVI data.

1.2 Amount of rainfall and spatial distribution

- According to VAM WFP rainfall and vegetation data, the County received a total of 1.0 mm of rainfall in the month of February during the first and second dekad.
- This was a decrease of 71 percent rainfall when compared to previous month of January, however, this (1.0 mm) was higher when compared to long-term average of 0.7 mm as in the figure 1 above.
- This 1.0 mm of rainfall was lower by 17 percent when compared to 1.2 mm received in the same period during the previous year.
- The off season 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 February.

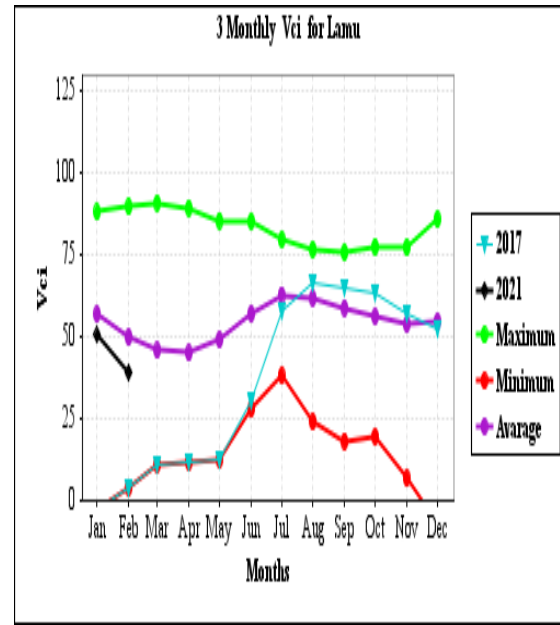
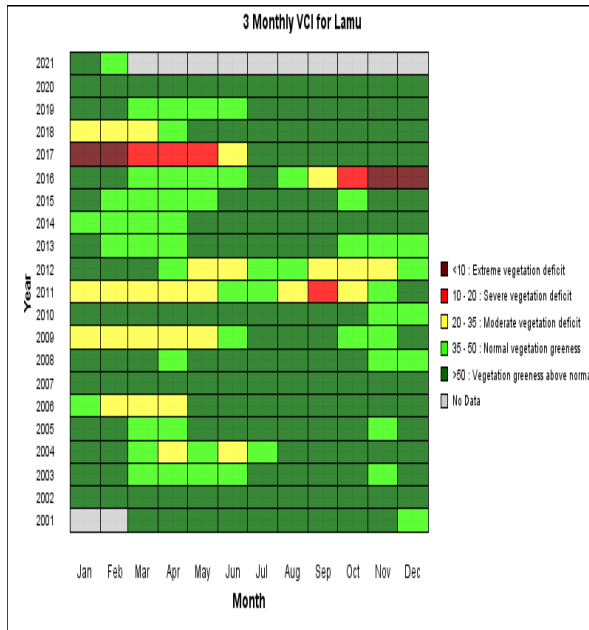
1.3 Other hazards.

- New castle disease outbreak in chicken was reported across the entire county during the Month of February.

2.0 VEGETATION CONDITION

2.1 Vegetation Condition Index (VCI)

- The vegetation condition index for the month of February increased by 23 percent compared to the previous month. This was due to low precipitation rate received during the previous month.
- The vegetation condition index for the month of February was 38.94 compared to 50.61 in the previous month.
- The VCI indicated normal vegetation greenness in the County.
- VCI-3 Months is below the long-term average and the previous year as shown in the figures 2a and 2b below. {Source: Boku University, Austria}



**Figure 2a: VCI-Lamu County
OBSERVATIONS-PASTURE AND BROWSE CONDITION**

Figure 2 b: VCI-Lamu County

2.1.2 Pasture

- Pasture condition was fair and poor in some parts of the county especially in fish and mangrove livelihood zones both in quality and quantity.
- 50 percent of community members interviewed stated that pasture was fair, 40 percent indicated that pasture was poor, while 10 percent stated that the pasture was good but with improving trend as in figure 3.
- Pasture condition by livelihood zones was as follows; Agro pastoral is good, mixed farming is poor and fishing/mangrove was poor as well.
- The available pasture is expected to less than one month. The current pasture is 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 except in fishing zones.
- Community members interviewed indicated as follows; 50 percent of the respondents stated that browse was poor, 40 percent stated it was fair while 10 percent said it was good but deteriorating due to the poor performance of the off seasonal rains and high rate of transpiration as shown below in figure 4.
- Browse condition by livelihood zones was as follows; Agro pastoral, mixed farming was fair and fishing/ mangrove was poor.
- The browse is expected to last more than two months. The current browse condition is within the normal range compare to previous year.

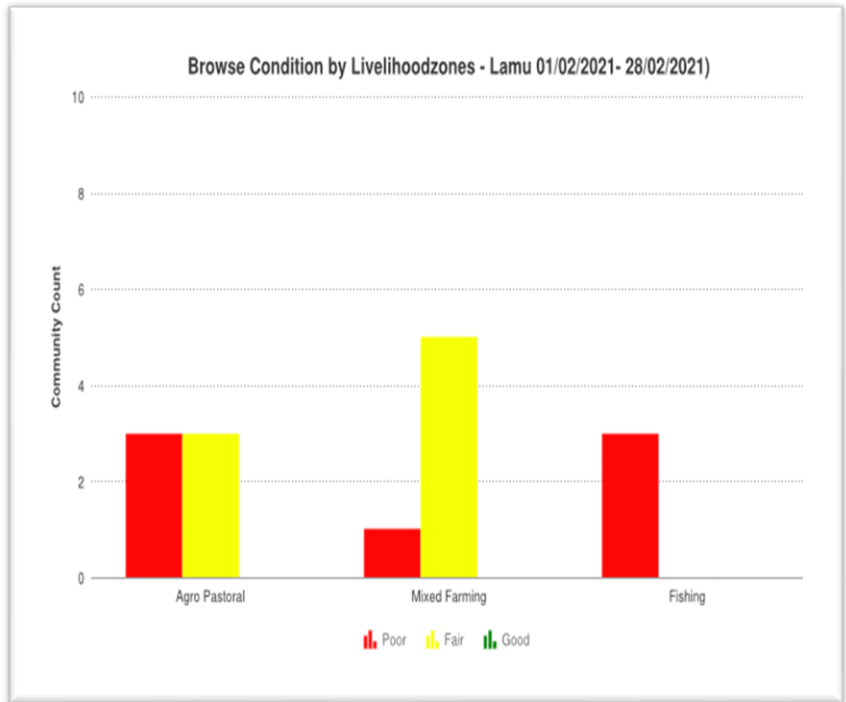


Figure 4: Browse conditions

2.2.0 HYDROLOGICAL DROUGHT

2.2.1 Water Sources and Availability

- The state and condition of water sources in the County was good to fair across most livelihood zones, except in the Islands where most of the Djabias have dried up and the shallow wells have turned saline.
- However, the current water situation reduced compared to previous month.
- The main water sources in the month of February; shallow wells 78.6 percent, Boreholes 14.3 percent lakes 7.1 percent, as shown in the figure 5.
- The status of main sources of water was on decline at this period of the Month.

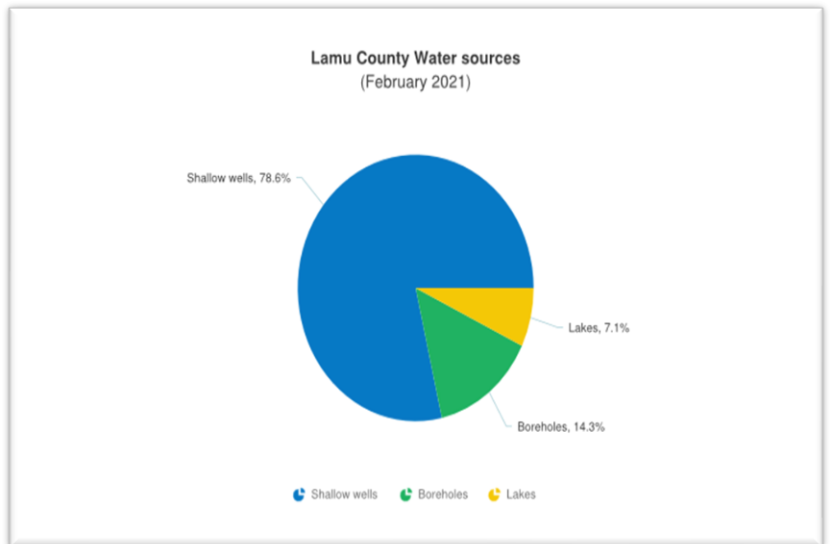


Figure 5: Main sources of water

2.2.2 Household access and Utilization

- Average household watering return distance was 6.3 Kilometers, which increased when compared to previous month of 5.3 Kilometers. Household return water distances per livelihood zones were as follows; the Agro pastoral 4.6 Kilometers, Fishing & Mangrove Harvesting 4.7 Kilometers and for Mixed Farming Zone it was 1.8 Kilometers respectively.

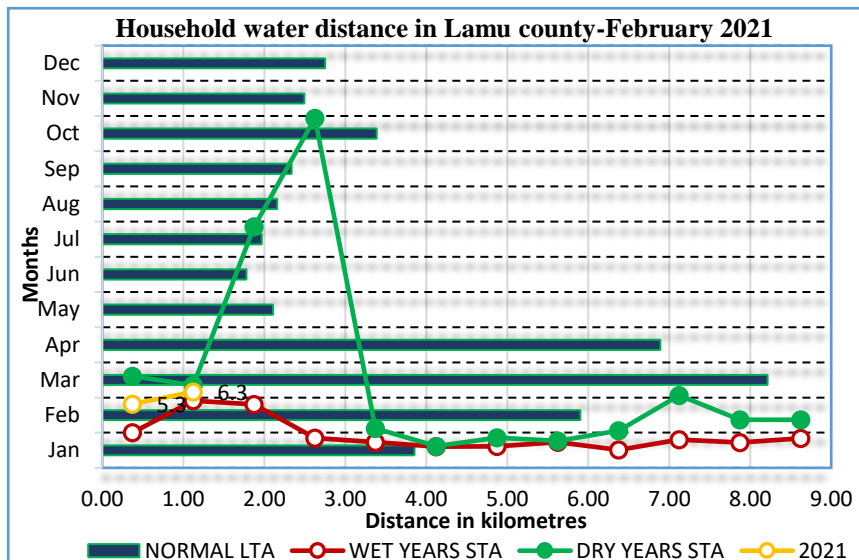


Figure 6: Households water distance-Kms

- The below average precipitation received led to decrease in the level of open water sources of between 45-50 percent of their capacity.

- The average household water distance for February was 6.3 Kilometers which is below LTA of 7.6 Kilometers as shown in figure 6 below.
- The average household water consumption per person per day is at 10-20 liters in all livelihood zones. Water costs at source are 5-10 Kshs in town/village centers for 20 liters.

2.3 Livestock access to Water

- Livestock average distance to water source from grazing areas increased from 7.7 Kilometres to 9.7 Kilometres when compared to the previous month as in figure 7.
- Grazing return water distances per livelihood zone were as follows: the Agro pastoral 4.5 Kilometres, Fishing & Mangrove Harvesting 5 Kilometres and for Mixed Farming zone it was 3.7 Kilometres and irrigated farming 1.9 Kilometres.
- The increase of grazing water distance when compared to last month was due to below average rainfall received.
- Watering frequencies for livestock species was seven times per week.
- The current average grazing distance for February was 9.7 Kilometers which was lower than the long-term average of 8.8 Kilometres.

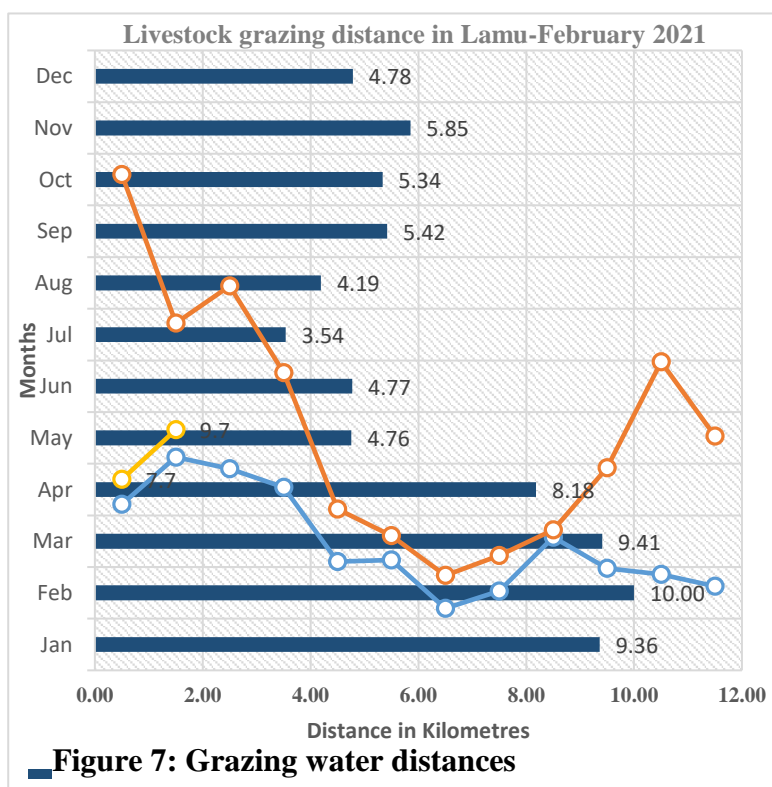


Figure 7: Grazing water distances

2.2.4 Household Income Sources

- The main households income for the month of February in the County was distributed as follows: Casual labour 56.7 percent, trade 17.3 percent, employment 11.3 percent, sale of livestock 10 percent and sale of crop 4.7 percent in figure 8 below.
- However, casual labour and trade decreased by two percent respectively when compared to the previous month of January while employment, sale of crop and sale of livestock and livestock product remain stable.

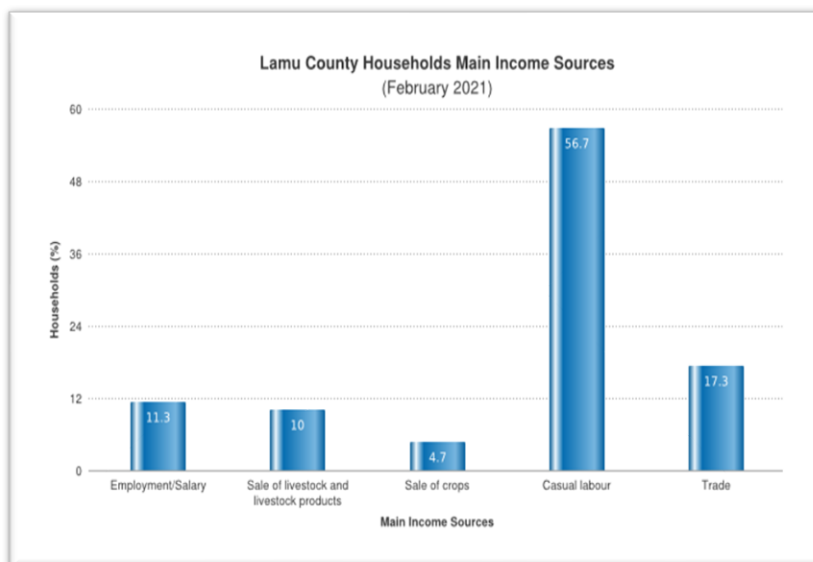


Figure 8: Households sources of Income

2.4 Implication to Food Security

- Fishing and Mangrove livelihood zones will experience increased water salinity due to less recharge coupled with low level of water table of the shallow wells in the Islands.
- Diseases such as Lumpy skin disease; Trypanosomiasis, New castle foot and mouth have had a negative impact on the livestock body condition of animals and household hygiene standards.
- The off seasonal rainfall will not improve forage condition and recharge into open water sources. Hence this would be unfavourable environment in terms of water and forage condition for the next one month.
- Curfew and stay home orders issued by the government because 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.

3.1.0 Livestock Production

3.1.1 Livestock Migration Patterns

- In-migration of livestock from Bahari ward towards Agro pastoral areas of Witu
- This in-migration is not normal during this period of the year.

3.1.2 Livestock Body Condition

- The livestock body condition was poor to fair for all species.
- This was attributed to low quality and quantity of pasture and browse due to the below average precipitations.
- However, due to influx and pasture depletion the body conditions are expected to deteriorate further.

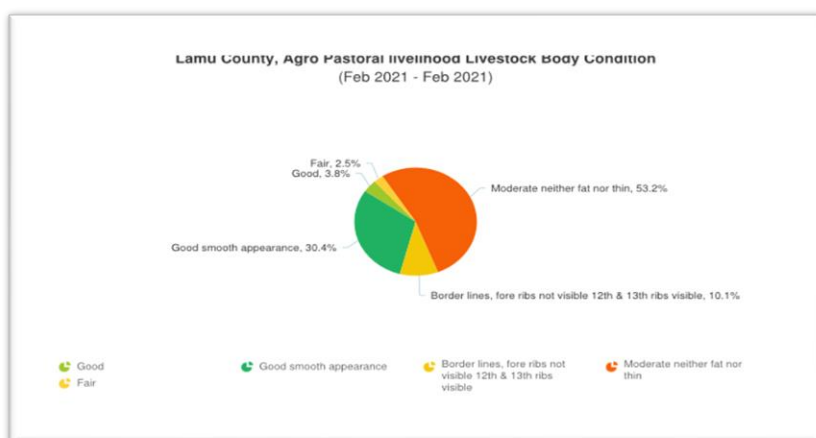


Figure 9: Body condition in Agro pastoral areas.

3.1.3 Livestock Diseases

- Large scale New castle disease outbreak in chicken and suspected foot and mouth diseases was reported during the month of February .

3.1.4 Milk Production

- Milk production in February increased to 2.4 litres when compared to previous month, but less household milk production. The 2.4 litres was from 3 percent of total household interviewed.
- Milk productions were distributed as follows: Mixed farming Produced 1.8 litres, Fishing 1.1litres, and irrigated 1.9 litres while the Agro pastoral Zone produced average of 1.2 litres. Milk prices are retailing at an average price of Kshs.40-100 per Liter across the livelihood zones which is the normal milk price at this period of the year.

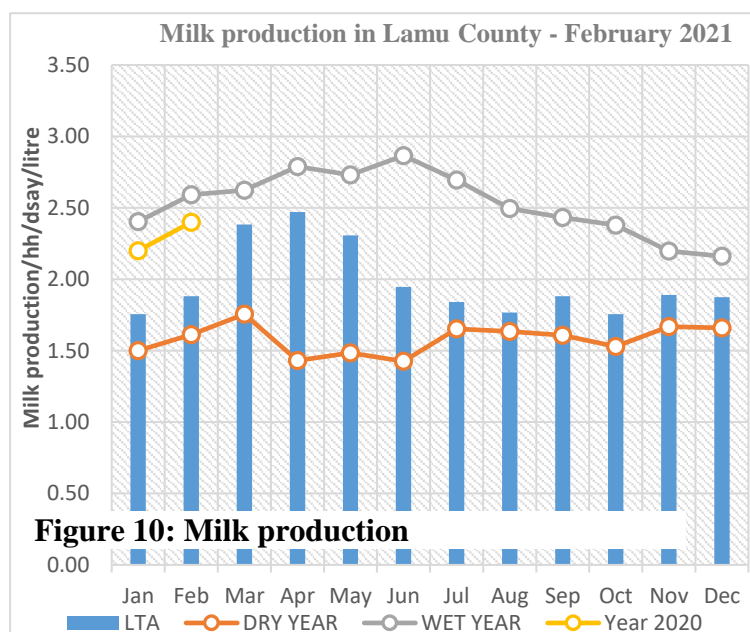


Figure 10: Milk production

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, waiting for the long rains onset.

3.2.2. Crop Harvest

- Currently there is no harvest that is going on.

3.2.3 Implications on Food Security

- The fair to poor body condition of livestock across the livelihood zones declined the prices resulting to low income for livestock herders.

4.0 MARKET PERFORMANCE

4.1 Livestock marketing

4.1.1 Cattle Prices

- Average cattle market price in the month of February increased to Kshs 30,250 compared to previous month (Kshs27, 300) as in figure 10 below.
- This increase in 10 percent price could be attributed to high demand and low supply of cattle by local herds owing to deteriorating of body conditions.
- The cattle average market prices was highest in Witu at 33,600 and lowest at Mswakini market.
- The average market cattle price for the month of February was Kshs.30, 250 which was higher when compared to normal short-term average and previous year price of Kshs.17, 800.

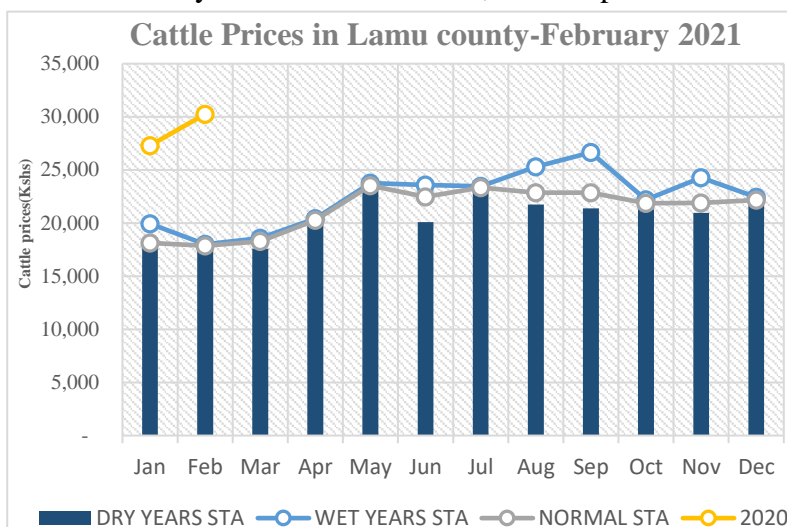


Figure 11: Cattle prices

4.1.2 Small Ruminants Prices

4.1.3 Goat Prices

- Goat price increased in February (Kshs5, 500) when compared to previous month of January (Kshs5, 300). This was an increase of three percent but the market demand slightly changed owing to low supply.
- The current goat price was higher when compared to the short term average by three percent and the price recorded in previous year at a similar period and following seasonal trends as shown in figure 11.

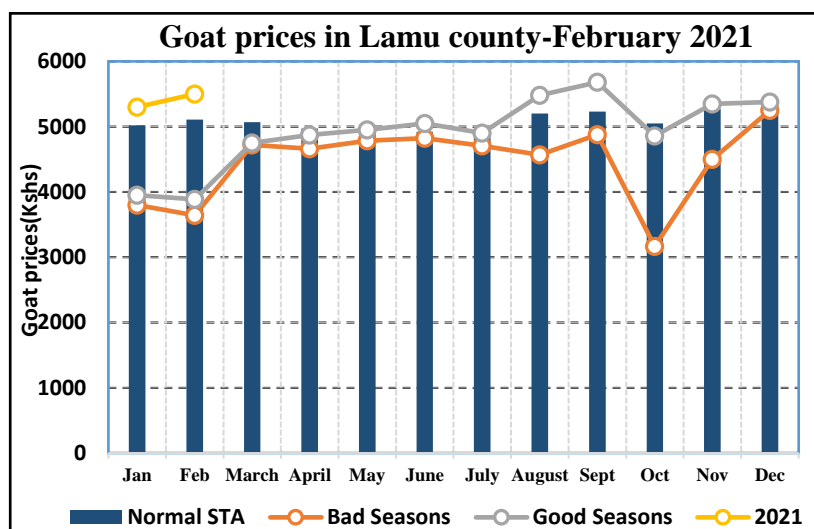


Figure 12. Goat prices

- This slight increase in price of goats could be attributed to high market demand and low supply in different markets.
- The goat average market prices was highest in Mokowe at Kshs 6000 and the lowest was in Hindi market at Kshs 5000.

4.2: Crop prices

4.2.1 Maize price

- The maize prices increased by 17 percent when compared to previous month, as shown in the figure 12.
- The average price for February was Kshs 46, which was below the short term, the wet and dry season's averages.
- The increase of price was due low supply of the product reserved stock from previous harvests of the product during the seasonal period and at the end of the previous season coupled with low supply in different markets.

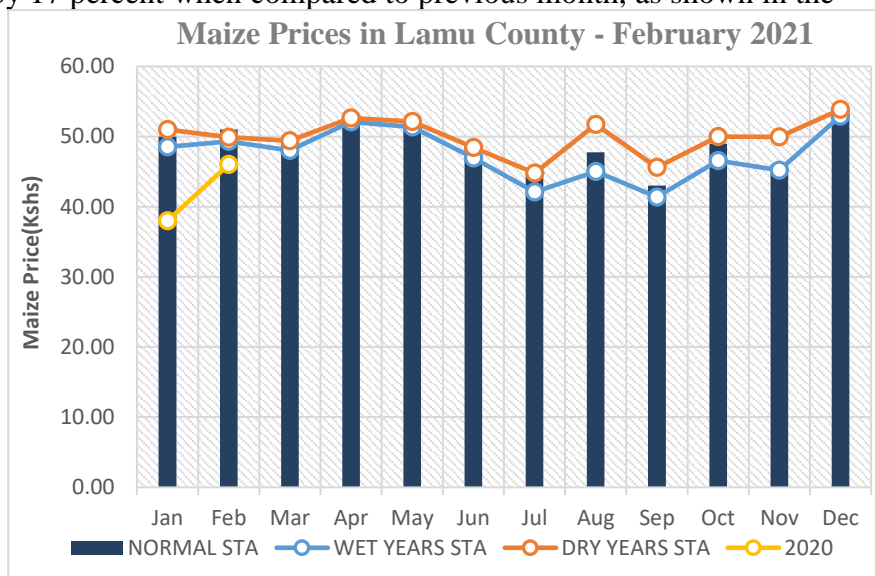


Figure 13: Maize prices

- The maize market prices was highest in Patte at Kshs 50 and lowest in Kiunga market at Kshs 40. However, price ranges is determined by commodity supply in different markets.

4.2.2 Beans prices

- Average price of Kilogram of beans was Kshs 135 in February, which was a slight increase when compared to the previous month of January at Kshs 133 as shown in the figure 13 below.
- The increase in price was attributed to high demand and low supply of the commodity in the market.
- The beans price was highest in Witu at Kshs 153 and lowest in Bahari at Kshs 107.
- However, price ranges is determined by commodity supply in the different markets.
- The short-term average price of beans was Kshs 102 which is lower when compared to the current beans price for the month of February and the previous year.

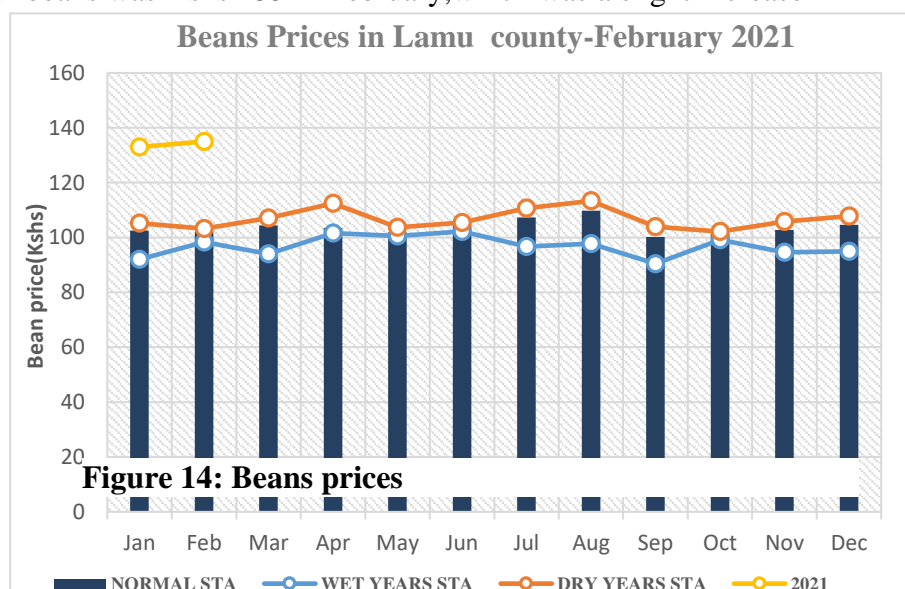


Figure 14: Beans prices

4.3 Livestock Price ratio/Terms of Trade

- The terms of trade (ToT) for the month of February (121 Kilograms) which was a decreased by 14 percent when compared to previous month of January (140 Kilograms) as in figure 14 below.
- This TOT of 121 Kilograms was higher when compared to the short term average by 41 percent.
- Sale of a medium goat in February would cost a household about 121 kilograms of maize.
- This showed the exchange ratio decreased in favour of goat sellers when compared to crop farmers. However, this was determined by supply in the different markets.
- The ToT was highest in mixed farming zone at 109 kilograms and lowest at fishing zone at 69 kilograms.
- The Terms of trade for February was higher when compared to the short term average of 71 Kilograms and above the good season.

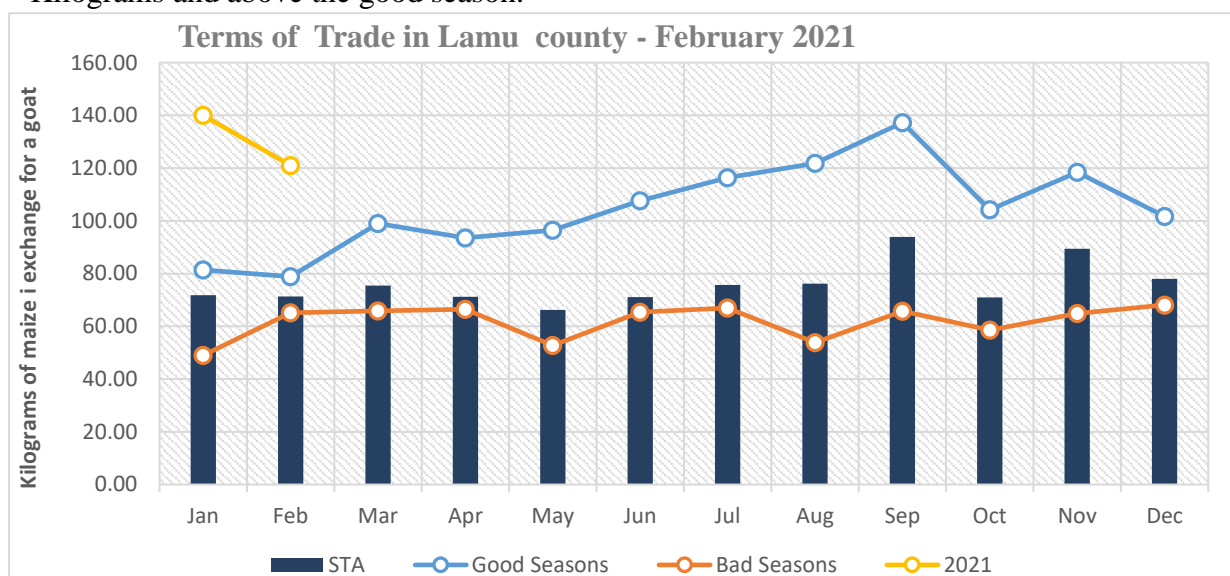


Figure 15: Terms of Trade

4.4 Implication on food security

- Farmers are able to sell livestock at fair prices, hence improved food security at household level.
- The Curfew and stay home orders issued by the government because 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 1.6 litres in the month of February, which increased when compared to previous month as in figure 15. These 1.6 litres of milk is consumed by three percent of the total households interviewed.
- Milk consumption was highest in Agro pastoral at 1.2 litres and lowest in fishing zones at less than a litre.
- The increase in milk consumption level is as a result of increased production and household purchase power of the commodity.

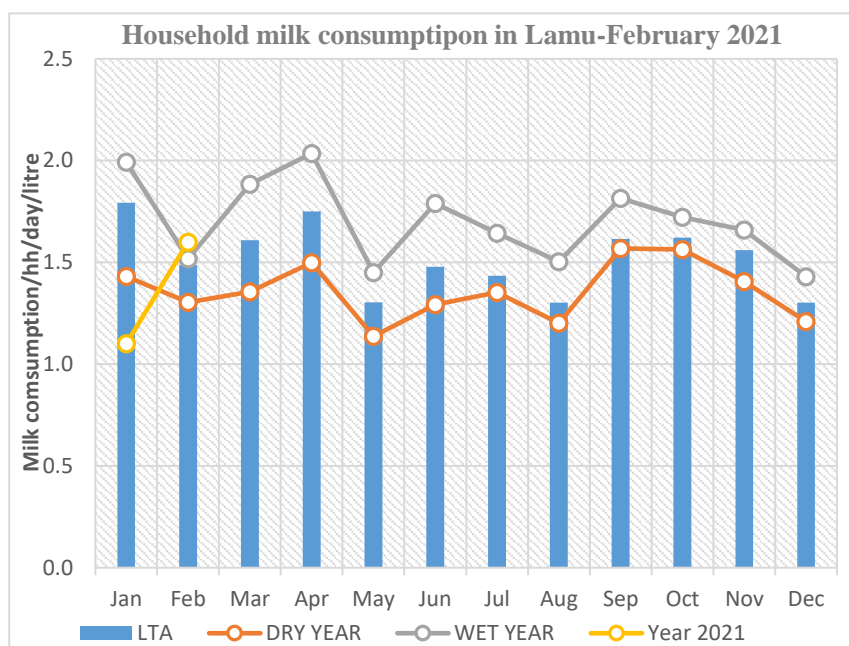


Figure16: Milk consumption

- The long term average milk consumption was higher than the current consumption.

5.2 Health and Nutrition status

5.2.1 MUAC

- Proportion of the under-fives categorized as being moderately malnourished was 0.5 percent with 0.2 percent cases of severely malnourished children (Figure 16).
- The reported proportion of children categorized as being moderately malnourished during the month of February was unstable when compared to the previous month of January.
- The observed trend in February was as a result of the low level of milk production and consumed by households.
- Poor child care practices, poor dietary diversity, reduced number of integrated health outreaches delivering essential nutrition services to the malnutrition hotspots area.
- This was also impacted by COVOID-19 pandemic restrictions.

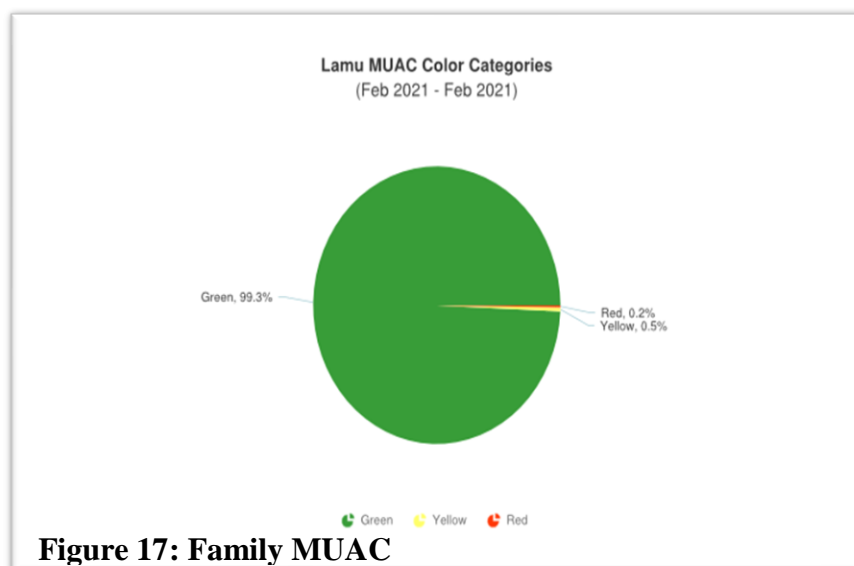


Figure 17: Family MUAC

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 and borderline in the county was at 34, and 66 percent respectively during the month of February.
- There was an increase in poor food consumption by three percent when compared previous month of January. The population with the highest poor food consumption in the county was mixed farming with 82 percent while fishing had the highest borderline food consumption of 100 percent, owing to reduced availability of food at households' level.

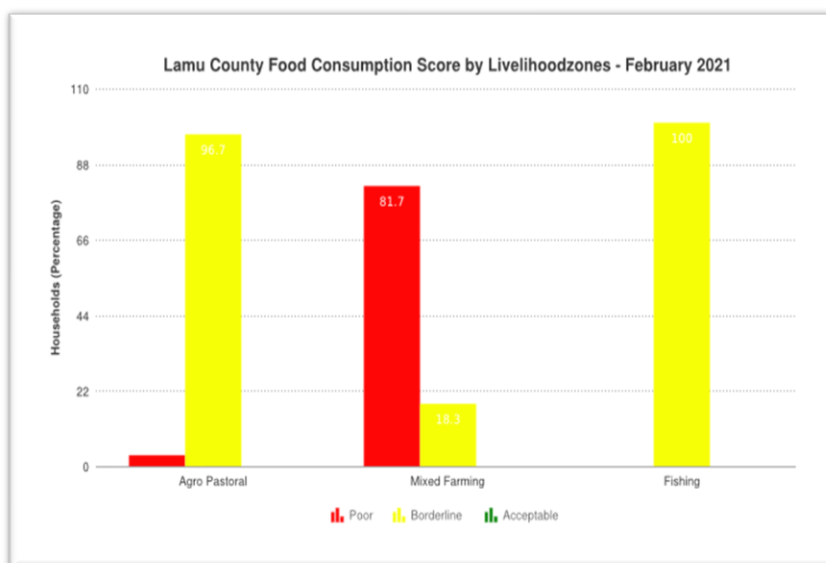


Figure18: Food consumption scores

- Households have low purchasing power, thus consuming two to three meals per day with two to three food groups as in figure 17.

5.4 Coping strategy index

- The mean coping strategy Index in the Month of February (9.04) increased when compared with the previous month of January (8.14) indicating increased in coping strategies at household level.
- Agro pastoral Zone had CSI of six; Mixed Farming livelihood zone had Five while Fishing Livelihood zone had the highest copying strategy of 23. Common coping strategies employed by food insecure households in the month of February 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.

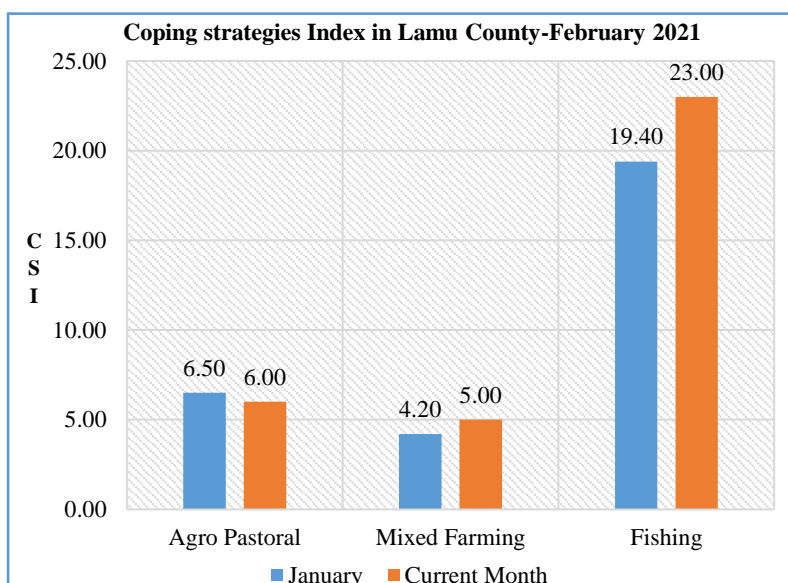


Figure 19: Coping strategy index

5.5 Implication on Food Security

- The decrease of milk consumption at household levels in Agro pastoral and mixed farming Livelihood zones could lead to poor dietary diversity and hence negative impact on food security.

- Coping strategy increased in all livelihood zones hence, these implies negative impact on food security.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 Food aid

- There were no reports of any food aid distribution in the county during the Month of February.

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.

EMERGING ISSUES

7.2 Coronavirus out break

- The announcement of the emergence of the conorovirus in the country has destabilized the equilbrum of all livelihoods in the county, specially when orders of stay at home and curhew were imposed.

7.3 Insecurity/Conflicts

- There were no cases of insecurity and conflict reported during the Month.

7.4 Migration

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

7.5 Food security prognosis.

- Based on Kenya metrological department Outlook for March-April-May 2021 long rains is expected to be near average rainfall over the Coastal Strip.
- Livestock body conditions are likely to be fair to poor, leading to unstable in livestock retail prices.
- Food and milk intake are expected to decline 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 with the continued poor performance off seasonal rainfall.
- Water salinity is expected to increase due the decrease in water levels in fishing zones.
- The overall food security situation remains in the stressed phase (IPC 2) and on a worsening trend due to the effects of COVID 19.
- Due to the effects of Trypanosomiasis, Lumpy skin disease, worms, foot and mouth diseases, the body conditions of livestock are expected to deteriorate in coming Months.
- In the event of a third wave of the COVID-19 pandemic, the government is likely to impose more stringent measures which will constrain income generating activities thus, lead to loss of income to households.

8.0 RECOMMENDATIONS BY SECTORS;

Immediate/Short Term: Partners to collaborate on;

8.1 Water

- Water trucking to hot spot areas in the County.
- Constructions/rehabilitation of water pans for preparedness.
- Desilting of open water sources Lamu West Sub-county before the commencement of the long rains.
- 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.

8.2 Livestock

- Livestock disease surveillance and control through vaccinations against notifiable diseases such as CCPP, FMD, in the county.
- Promote livestock insurance services.
- 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.
- Provision of drought tolerance seeds to crop farmers and crops under irrigation in preparation to long rains season planting.

8.3 Health and Nutrition

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

8.4 Peace and Security Sector (Co-ordination)

- Peace and security meetings should be enhanced in the County
- Provision of relief food or cash transfer to vulnerable household during this period of COVID 19.

8.7 Information Communication Technology

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