




A Vision 2030 Flagship Project



**National Drought Management Authority  
LAMU COUNTY  
DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2021**

JANUARY EW PHASE						Early Warning Phase Classification					
						LIVELIHOOD ZONE	EW PHASE	TRENDS			
<p><b>Drought Status: NORMAL</b></p>  <p><i>Shughuli za kawaida</i></p> <p><b>Drought Situation &amp; EW Phase Classification</b></p> <p><b>Biophysical Indicators</b></p> <ul style="list-style-type: none"> <li>The County received below average off seasonal rainfall during the Month of January 2021.</li> <li>The vegetation condition Index (VCI-3Month) showed decrease of 16 percent compared to previous month.</li> <li>The VCI indicated above normal vegetation greenness. The overall drought phase in the county was at Normal in January.</li> <li>Forage condition was poor to fair across all livelihood's zones during the month.</li> </ul> <p><b>Socio Economic Indicators</b></p> <p><b>Production indicators</b></p> <ul style="list-style-type: none"> <li>All livestock species exhibited poor to fair body condition.</li> <li>Crops farmers are at flowering and harvesting stage in all livelihood zones.</li> <li>Milk production remained stable but is above the LTA compared to previous month of December 2020.</li> </ul> <p><b>Access indicators</b></p> <ul style="list-style-type: none"> <li>Terms of trade were favorable to livestock herders than crop farmers in mixed and pastoral livelihood zones respectively.</li> <li>Water access for both human and livestock was good to fair depending on the water sources in the zone.</li> <li>Milk consumption decreased and is lower than the long-term Average.</li> </ul> <p><b>Utilization indicators</b></p> <ul style="list-style-type: none"> <li>The proportion of children at risk of malnutrition cases was stable when compared to previous month of December as indicated by the percentage of mid upper arm Circumference (MUAC).</li> <li>The average coping strategy increased by 8.14 percent when compared to previous month of January.</li> </ul>						Agro pastoral	Normal	Deteriorating			
						Mixed farming/Irrigated cropping	Alert	Deteriorating			
						Fisheries /Mangroves	Alert	Deteriorating			
						Formal/Casual Labour	Normal	Deteriorating			
						County	Normal	Deteriorating			
						Rainfall (% of Normal)	3	80 -120			
						VCI-3Month	50.61	<50			
						Forage condition	Fair to poor	Good			
						<b>Production indicators</b>	<b>Value</b>	<b>Normal ranges</b>			
						Crop Condition (specify crop)	Fair to Good	Good			
						Maize					
						Livestock Body Condition	Fair to poor	Good			
						Milk Production	2.2 litres	>3 Litres			
						Livestock Migration Pattern	Not Normal	Normal			
						Livestock deaths (from drought)	51(Lamu East)	No death			
						<b>Access Indicators</b>	<b>Value</b>	<b>Normal ranges</b>			
						Terms of Trade (ToT)	140	84			
						Milk Consumption	1.1 litres	>2litres			
						Return distance to water sources (HH).	5.3	<5 Km			
						Cost of water at source (20 litres)	5-10	<5Kshs			
						<b>Utilization indicators</b>	<b>Value</b>	<b>Normal ranges</b>			
						Nutrition Status, MUAC (% at risk of malnutrition)	6.6%	>5%			
						Coping Strategy Index (CSI)	8.14	<0.95			
						Food Consumption Score (% at Acceptable)	2	≥ 80			
						<ul style="list-style-type: none"> <li>Short rains harvests</li> <li>Short dry spell</li> <li>Reduced milk yields</li> <li>Increased HH Food Stocks</li> <li>Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>Planting/Weeding</li> <li>Long rains</li> <li>High Calving Rate</li> <li>Milk Yields Increase</li> </ul>	<ul style="list-style-type: none"> <li>Long rains harvests</li> <li>A long dry spell</li> <li>Land preparation</li> <li>Increased HH Food Stocks</li> <li>Kidding (Sept)</li> </ul>	<ul style="list-style-type: none"> <li>Short rains</li> <li>Planting/weeding</li> </ul>		
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

## 1.0 CLIMATIC CONDITIONS

### 1.1 Rainfall performance

- Seasonal rainfall received during the month of January was of low intensity when compared to the previous months as recorded in the first and second dekad of January as in figure 1 below.
- The current NDVI value is slightly below when compared to the historical long-term values as shown in figure 1.

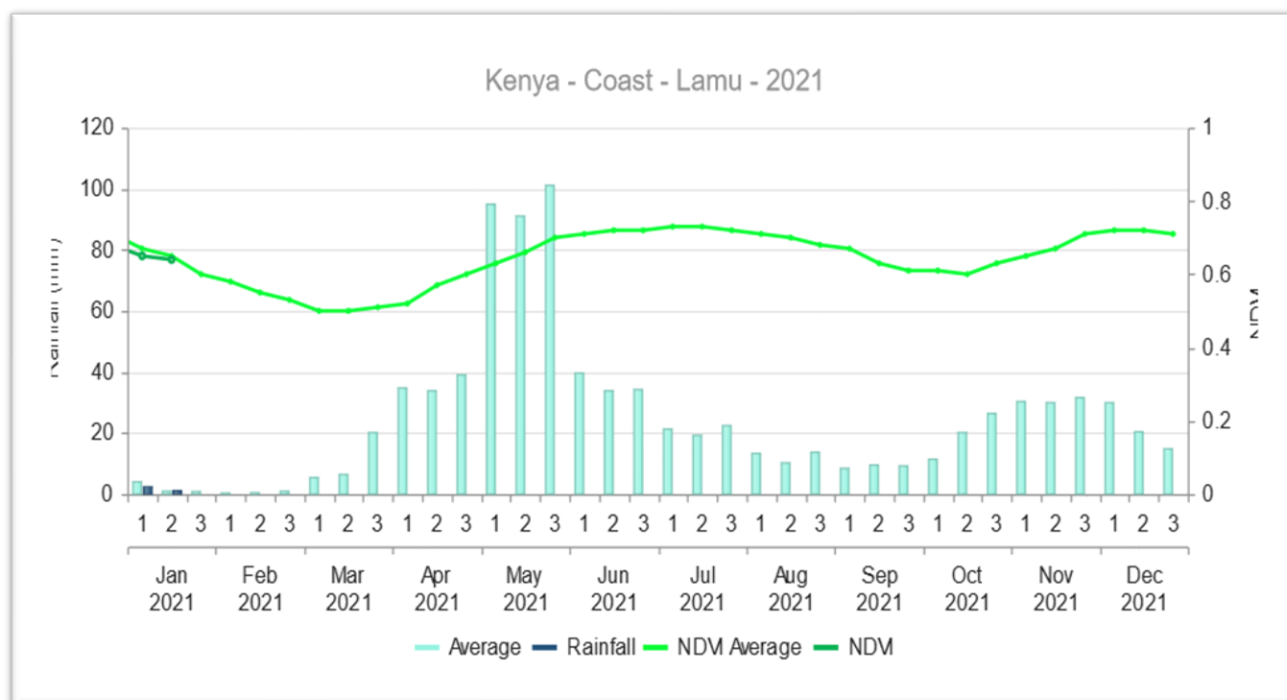


Figure 1: Rainfall and NDVI Satellite data.

### 1.2 Amount of rainfall and spatial distribution

- According to VAM WFP rainfall and vegetation data, the County received a total of 3.4 mm of rainfall in the month of January 2021 during the first and second dekad.
- This was a decrease of 81 percent rainfall when compared to previous month of December; however, this (3.4mm) was lower when compared to long-term average of 4.9 mm as in the figure 1a above.
- This 3.4 mm of rainfall was lower by 74 percent when compared to 13 mm received in the same period during the previous year.
- The rainfall received was poor in spatial and unevenly distribution in all parts of the livelihood zones of the county during the month under review.

### 1.3 Other hazards.

- New castle disease outbreak in chicken was reported across the entire county during the Month of January.
- Locust invasion was also reported in some parts of the county.

## 2.0 VEGETATION CONDITION

### 2.1 Vegetation Condition Index (VCI)

- The vegetation condition index for the month of January decreased by 16 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 January was 50.61 compared to 60.1 in the previous month.
- The VCI indicated vegetation above normal 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

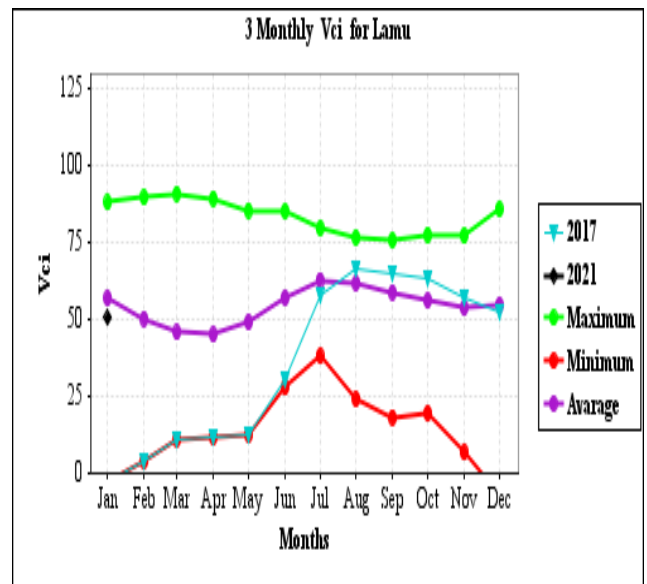


Figure 2 b: VCI-Lamu County

## OBSERVATIONS-PASTURE AND BROWSE CONDITION

### 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 last one month. The current pasture is within the normal range.

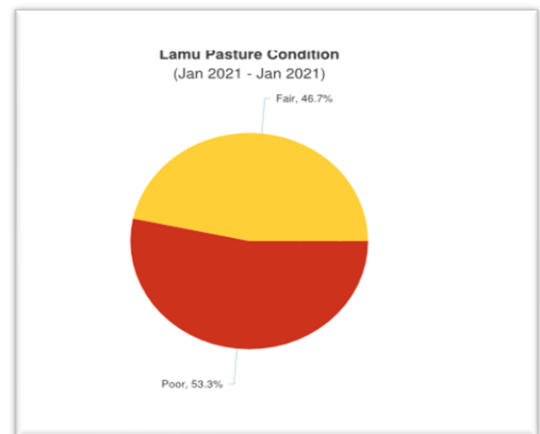


Figure 3: Pasture condition

### 2.1.3 Browse conditions

- The quantity and quality of browse was good across all livelihood 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.

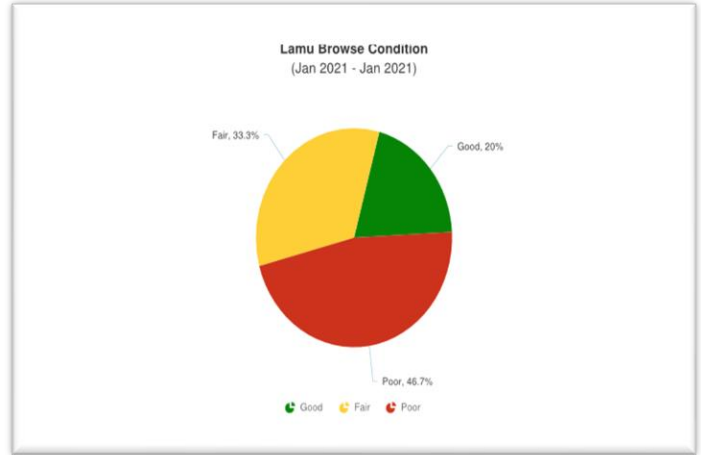


Figure 4: Browse conditions

### 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.
- However, the current water situation reduced compared to previous month.
- The main water sources in the month of January 2021; Pans and dams 18.8 percent, shallow wells 62.5 percent, Boreholes 6.3 percent, Rivers 6.3 percent and Traditional river wells 6.3 percent, as shown in the figure 5.
- The status of main sources of water was on decline at this period of the Month.

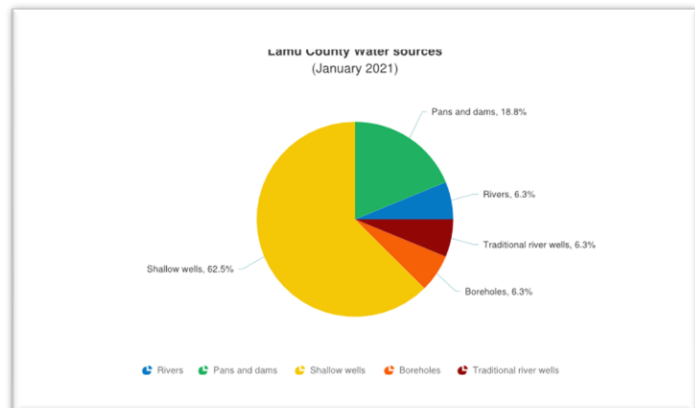
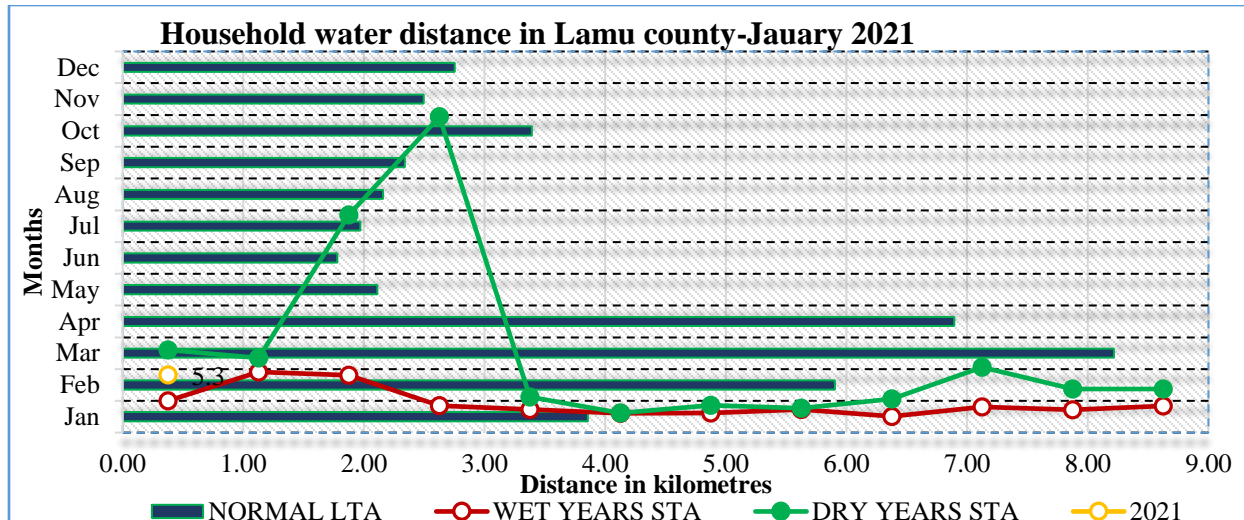


Figure 5: Main sources of water

#### 2.2.2 Household access and Utilization

- Average household watering return distance was 5.3 Kilometers, which slightly increased when compared to previous month of 5 Kilometers. Household return water distances per livelihood zones were as follows; the Agro pastoral 4.5 Kilometers, Fishing & Mangrove Harvesting 3.7 Kilometers and for Mixed Farming Zone it was 1.5 Kilometers respectively.
- The below average precipitation received led to decrease in the level of open water sources of between 50-55 percent of their capacity.

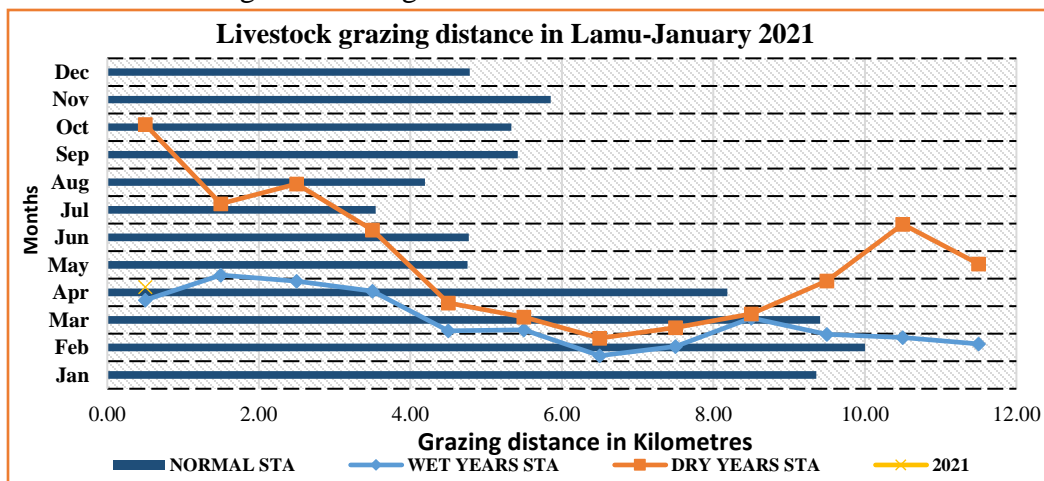
- The average household water distance for January 2021 was 5.3 Kilometers which is below LTA of 7.5 Kilometers as shown in figure 6 below.
- The average household water consumption per person per day is at 20-25 liters in all livelihood zones. Water costs at source are 5-10 Kshs in town/village centers for 20 liters.



**Figure 6: Household water Distance-Kms**

### 2.3 Livestock access to Water

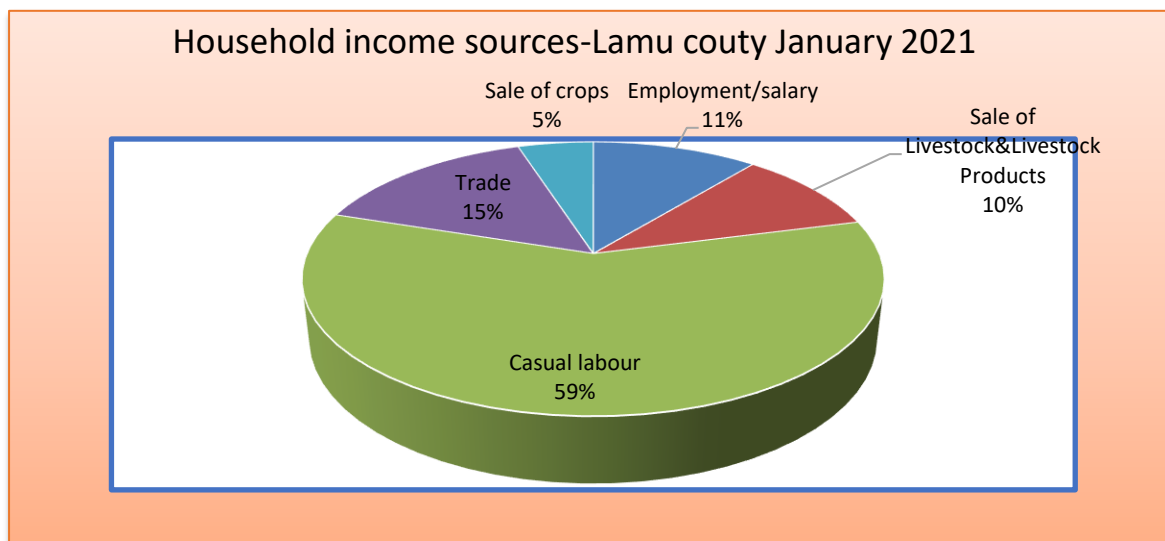
- Livestock average distance to water source from grazing areas increased from 6.6 Kilometres to 7.7 Kilometres when compared to the previous month as in figure 7.
- Grazing return water distances per livelihood zone were as follows: the Agro pastoral 4.3 Kilometres, Fishing & Mangrove Harvesting 4 Kilometres and for Mixed Farming zone it was 3.3 Kilometres and irrigated farming 1.7Kilometres.
- 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 January 2021 was 7.7 Kilometres which was lower than the long-term average of 8.8 Kilometres.



**Figure 7: Grazing distance**

### 2.2.4 Household Income Sources

- The main sources in the county was casual labour that was affected by COVID-19.
- The main household income for the month of January was distributed as follows: Casual labour 59 percent, trade 15 percent, employment 11 percent, sale of livestock 10 percent and sale of crop five percent in figure 8 below.
- However, casual labour increased when compared to the previous month of December while employment and sale of crop also increased.



**Figure 8: Household 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 negative on food security.

### 3.0 PRODUCTION INDICATORS

#### 3.1.1 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.

##### 3.1.2 Livestock Body Condition

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

##### 3.1.3 Livestock Diseases

- Large scale New castle disease outbreak in chicken was reported during the month.

##### 3.1.4 Milk Production

- Milk production in January remained stable to 2.2 litres when compared to previous month. The 2.2 litres were from 14 percent of total household interviewed.
- The stability was attributed due to deterioration of the forage condition and below average rainfall received.
- Milk productions were distributed as follows: Mixed farming Produced 1.6 litres, fishing 1.5 litres, and Irrigated 1.4 litres while the Agro pastoral Zone produced average of 1.4 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.

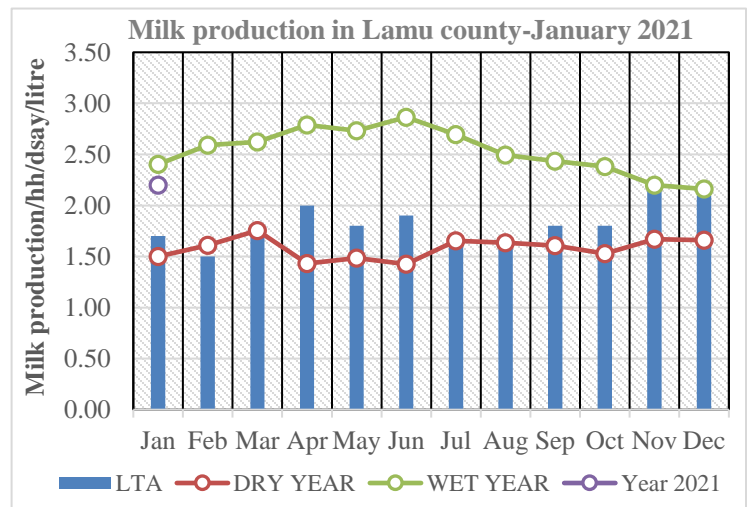


Figure 9: Milk production

#### 3.2 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 were in different stages, for example flowering and harvesting in all livelihood zones except in the fishing zone where crop farmers did not plant.

##### 3.2.2. Crop Harvest

Green gram and cow peas are been harvested.

##### 3.2.3 Implications on Food Security

- The fair to poor body condition of livestock across the livelihood zones stabilized the prices resulting to average 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 January 2021 slightly decreased to Kshs 27,300 compared to previous month (Kshs27, 700) as in figure 10 below.
- This decrease in price could be attributed to low demand and high supply of cattle by local herds owing to poor water and pasture conditions.
- The cattle average market prices were distributed as follows: Hindi Kshs 25,000, Witu Kshs 31,000, Kiunga Kshs 23,800, Mswakini 24,000 and Mokowe Kshs 24,000.
- The average market cattle price for the month of January 2021 was Kshs.27, 300 which was higher when compared to normal short-term average price of Kshs.19, 950.

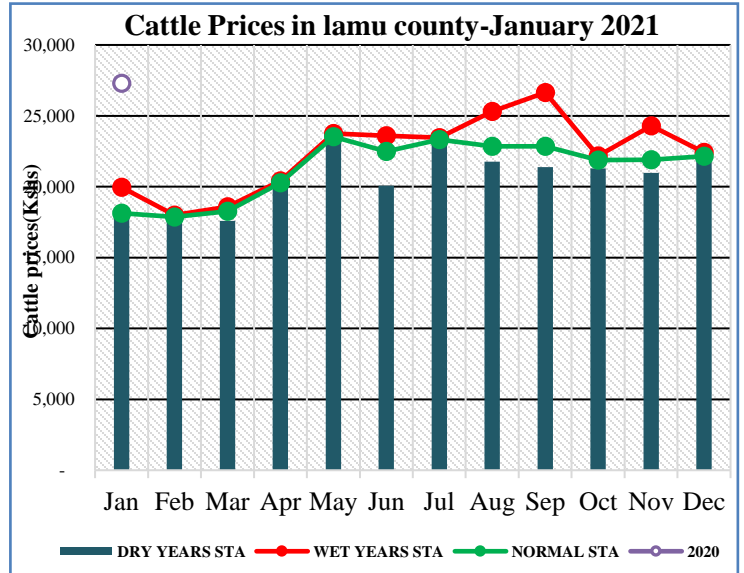


Figure 10: Cattle prices

#### 4.1.2 Small Ruminants Prices

#### 4.1.3 Goat Prices

- Goat price remained stable in January 2021 (Kshs5, 300) when compared to previous month of December 2020 (Kshs5, 300). There were no much difference but the market demand slightly changed owing to low supply.
- The current goat price was higher when compared to the short term average by five percent and the price recorded in previous year at a similar period and following seasonal trends as shown in figure 11.
- This stability in price of goats could be attributed to high market demand and low supply in different markets.
- The goat average market prices were distributed as follows: Mpeketoni Kshs 4,500, Witu Kshs 6,000, Kiunga Kshs 6,000 and Mokowe Kshs 4,500.

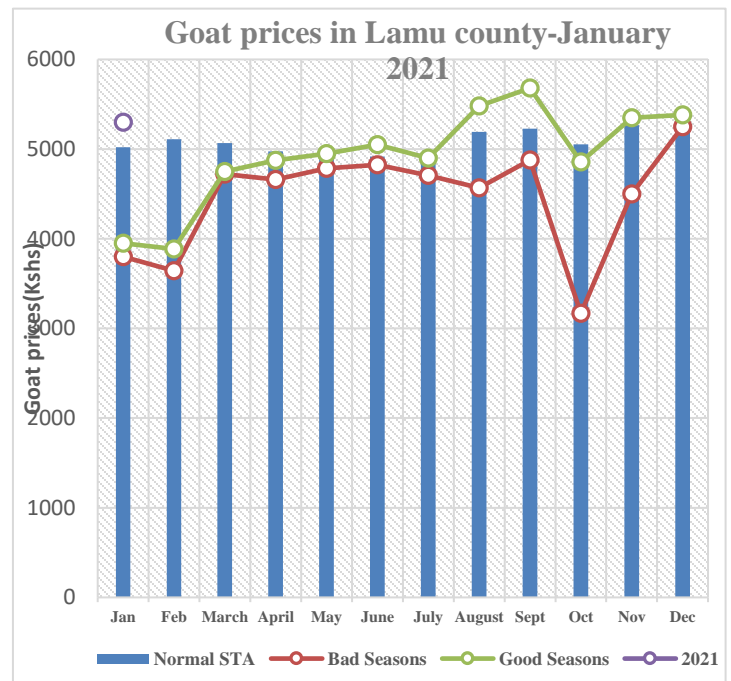


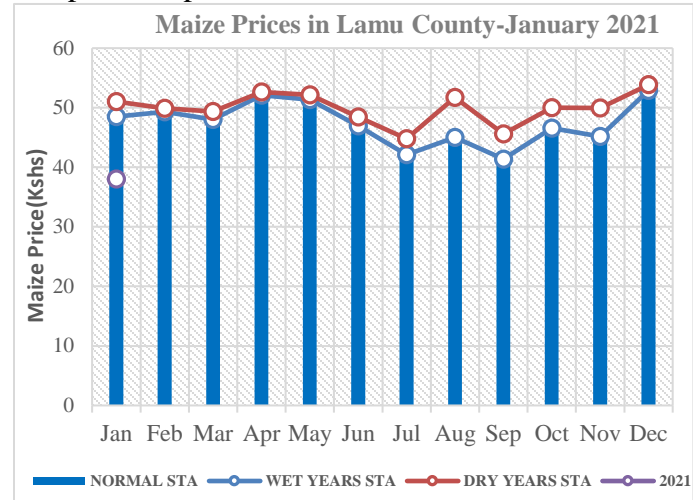
Figure 11: Goat prices



## 4.2: Crop prices

### 4.2.1 Maize price

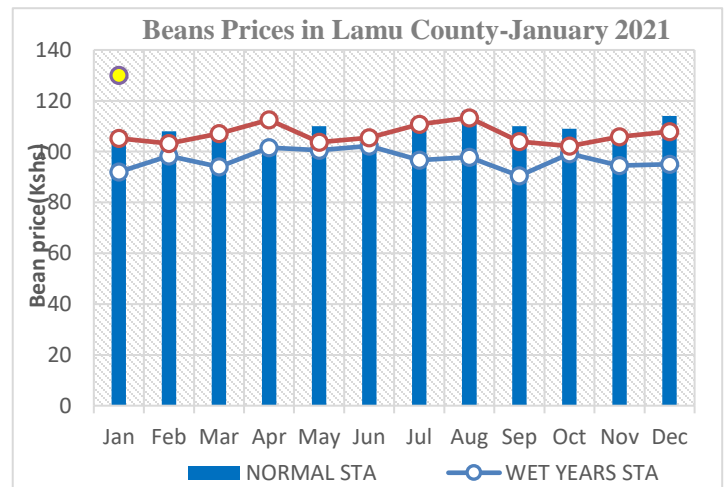
- The maize prices insignificantly decreased when compared to previous month, as shown in the figure 12. The average price for January was Kshs 38.
- The decrease of price was due to farmers selling their reserved stock from previous harvests of the product during the seasonal period and at the end of the previous season coupled with some supply in different markets.
- The market prices were distributed as follows; Hindi centre Kshs 50, Patte Kshs 30, Witu Kshs 45, Mpeketoni Kshs 30 and Kiunga Kshs 40. However, price ranges are determined by commodity supply in different markets.



**Figure 12: Maize prices**

### 4.2.2 Beans prices

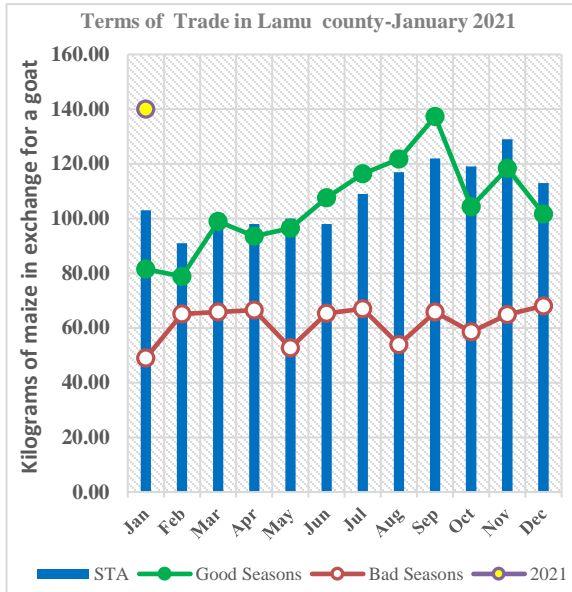
- Average price of Kilogram of beans was Kshs 130 in January, which was an increase when compared to the previous month of December at Kshs 126 as shown in the figure 13 below.
- The increase in price was attributed to high demand and low supply of the commodity in the market. The beans price was distributed as follows: Mswakini /Hindi centre Kshs 140, Patte Kshs 130, Witu Kshs 140, Mpeketoni Kshs 120 and Kiunga Kshs 140.
- However, price ranges is determined by commodity supply in the different markets. The short-term average price of beans was Kshs 108 which is lower compared to the current beans price for the month of January 2021.



**Figure 13: Beans prices**

### 4.3 Livestock Price ratio/Terms of Trade

- The terms of trade (ToT) of January 2021 (140 Kilograms) which was an increase when compared to the previous month of December (134 Kilograms) as in figure 14 below.



TOT of 140 Kilograms was higher when compared to the short-term average by 26 percent. Sale of a medium goat in January would cost a household about 140 kilograms of maize.

This showed the exchange ratio increased in favour of goat sellers when compared to crop farmers. However, this was determined by supply in the different markets.

The ToT was 120 Kilograms in Lamu West and 170.8 Kilograms in Lamu East. The ToT for January was higher when compared to the short-term average of 103 Kilograms.

Figure 14: Terms of Trade

### 4.4 Implication on food security

- Maize prices insignificantly decreased due to low demand and some supply in different markets.
- 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 undermined the general normal operation in all livelihood zones hence negative impact on food security.
- The recent locust invasion in the mainland was another food security threat.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk for Household Consumption

- Average milk Consumption was 1.1 litres in the month of January, which decreased slightly when compared to previous month as in figure 15. These 1.1 litres of milk are consumed by 14 percent of the total households interviewed.
- Milk consumption was distributed as follows; Agro pastoral 1.5 litres, Mixed farming 1.2, irrigated cropping 1.3 litres and fishing 1litres.
- The decrease in milk consumption level is as a result of poor improvement of pasture condition and household purchase power of the commodity.
- The long-term average milk consumption was higher than the current consumption.

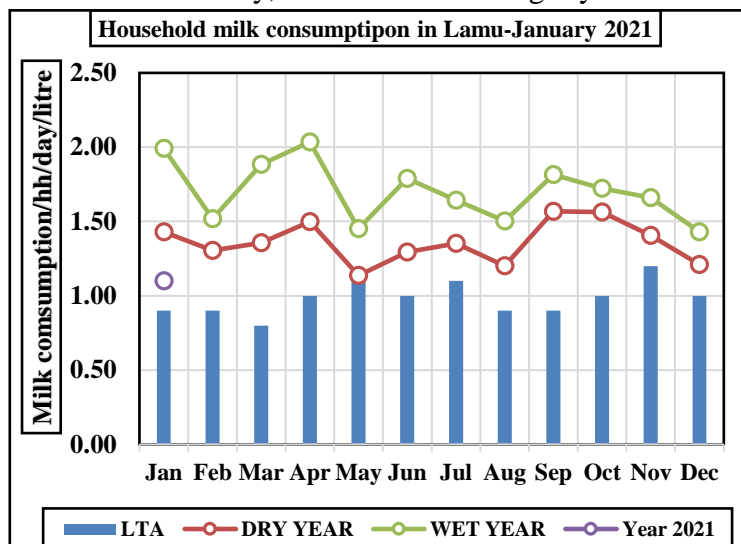


Figure 15: Milk consumption

## 5.2 Health and Nutrition status

### 5.2.1 MUAC

Proportion of the under-fives categorized as being moderately malnourished was 0.2 percent with no notable cases of severely malnourished children (Figure 16). The reported proportion of children categorized as being moderately malnourished during the month of January was stable when compared to the previous month of December. The observed trend in January was as a result of the low level of milk production and consumed. 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.

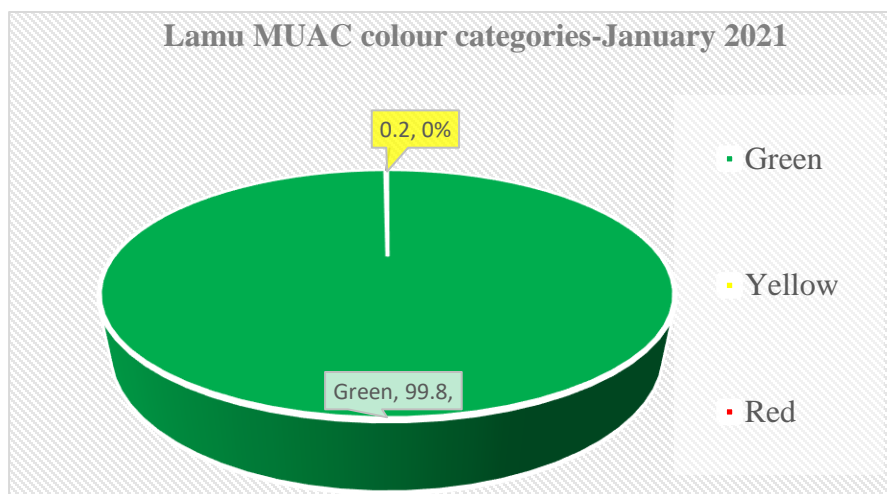


Figure 16: MUAC colour

### 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 32, 66 and two percent respectively during the month of January. There was a decrease in poor and increase in borderline food consumption by one and nine percent respectively, while acceptable decrease by six percent.
- The population with the highest Borderline food consumption in the county was Agro pastoral with 95 percent and fishing with 90 percent respectively.
- Poor food consumption was noted in Mixed farming and Agro pastoral at 75 and three percent respectively, owing to reduced availability of food at households' level; however, households have low purchasing power, thus consuming two to three meals per day with three to four food groups as in figure 17 below.

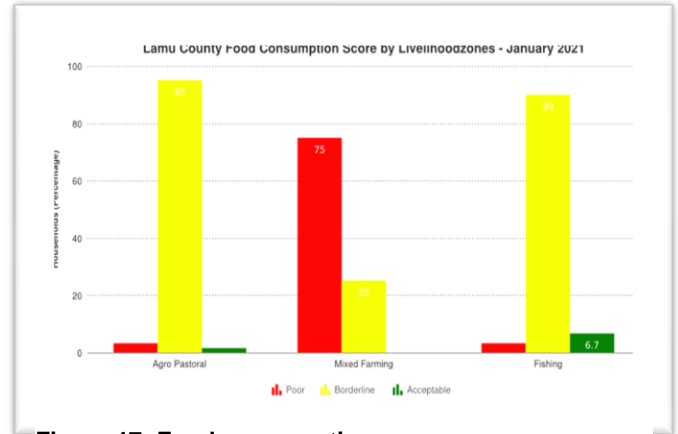


Figure 17: Food consumption

### 5.4. Coping strategy index

- The mean coping strategy Index in the Month of January (8.14) insignificantly decreased when compared with the previous month of December (8.65) indicating slight decreased in coping strategies at household level.
- Agro pastoral Zone had CSI of 6.5; Mixed Farming livelihood zone had 4.2 while Fishing Livelihood zone had the highest copying strategy index of 19.4. Common coping strategies employed by food insecure households in the month of January 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.

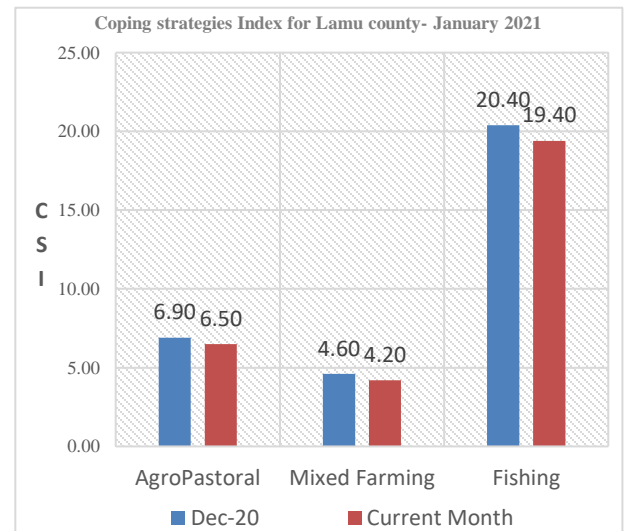


Figure 18: Coping strategy index

### 5.5 Implication on Food Security

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

## **6.0 CURRENT INTERVENTION MEASURES (ACTION)**

### **6.1 Food aid**

- There were no reports of any food aid distribution in the count.

#### **Non-food interventions**

- Cash transfer by the Social protection department to 3,500 households for older persons, Orphans and people with disabilities and Kazi mtaani to vulnerable youth 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.

### **7.1 EMERGING ISSUES**

#### **7.2 CORONAVIRUS OUT BREAK**

- The announcement of the emergence of the coronavirus in the country has destabilized the equilibrium of all livelihoods in the county, specially when orders of stay at home and curfew were imposed.
- There were ten coronavirus positive reported in the county and fear of spread (COVID-19) in to the county among the population, following the global and nationwide disease outbreak.
- There were reports of locust invasion in the mainlands of Lamu County last month.

#### **7.2 Insecurity**

- There were some cases of insecurity reported during the Month.

#### **7.3 Migration**

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

#### **7.3 Food security prognosis**

- Markets operation will continue to operate normally despite poor road network and insecurity.
- Livestock body conditions are likely to be fair to poor, leading to decreased 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 of 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 and poor food consumption.
- The return to pre-COVID-19 tax rates on January 2021, will reduce household income and food access as the cost of food and non-food commodities increase to reflect the adjusted tax rates.

## **8.0 RECOMMENDATIONS BY SECTORS;**

### **8.1 Water.**

- Promotion of rain water harvesting, repair of Djabias, roof catchment areas, installation of gutters and tanks in Villages and Institutions.
- Provision of water treatment tabs to households mainly in rain fed areas.
- Installation of solar powered water systems e.g. desalination plants.

### **8.2 Livestock**

- Livestock disease surveillance and control through vaccinations against notifiable diseases such as CCPP, FMD, in the county.
- Promote livestock insurance services.

### **8.3 Agriculture**

- Build Capacity of crop farmers to plant drought resistance food crops.
- Provision of drought tolerance seeds to crop farmers under irrigation and farmers in preparation to long rains.

### **8.3 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.
- Enhance household level water treatment.

### **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.