

**National Drought Management Authority
LAMU COUNTY
DROUGHT EARLY WARNING BULLETING FOR NOVEMBER 2019**



A Vision 2030 Flagship Project



NOVEMBER 2019: EW PHASE



Drought Situation & EW Phase Classification

Biophysical Indicators

- The County received enhanced rainfall during the Month under review.
- The vegetation condition Index (VCI-3Month) was showing an increase of 25percent compared to previous month.
- The VCI indicated normal vegetation greenness. However the overall drought phase in the county was at Normal in November.
- Forage condition was good across all livelihoods zones during the month.

Socio Economic Indicators

Production indicators

- All livestock species exhibited fair to good body condition.
- Maize crop is at harvesting stage in all livelihood zones.
- Milk production increased and is below the LTA compared to previous month of October.

Access indicators

- Terms of trade were favorable to livestock herds than crop farmers in mixed and pastoral livelihood zones respectively.
- Water access for both human and livestock was good and increased in all the livelihood zones.
- Milk consumption reduced and is higher than the long term Average.

Utilization indicators

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

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro pastoral/Fishing	Normal	Improving
Mixed farming/Irrigated cropping	Normal	Improving
Fisheries /Mangroves	Normal	Improving
Farming/Casual Labour	Normal	Improving
Agro pastoral	Normal	Improving
County	Normal	Improving
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	95	80 -120
VCI-3Month	76.97	<50
Forage condition	good	Good
Production indicators	Value	Normal
Crop Condition(specify crop)Maize	good	Good
Livestock Body Condition	fair to good	Good
Milk Production	1.7litres	>3 Litres
Livestock Migration Pattern	Not Normal	Normal
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	102	84
Milk Consumption	1.4litres	>2litres
Return distance to water sources (HH).	2	<5 Km
Cost of water at source (20 litres)	5-10	<5Kshs
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	8%	>5%
Coping Strategy Index (CSI)	9.72	<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
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 Rainfall performance

- The onset was witnessed in the 1st dekad of November. The onset is timely compared to the same period during the previous year in 2nd dekad of November 2018.
- Above average rainfall was received during the month under review, with high intensity compared to the previous months as recorded in the first and second dekad of November as in figure 1a below.

The current NDVI value is above the historical long term values as shown in figure 1b.

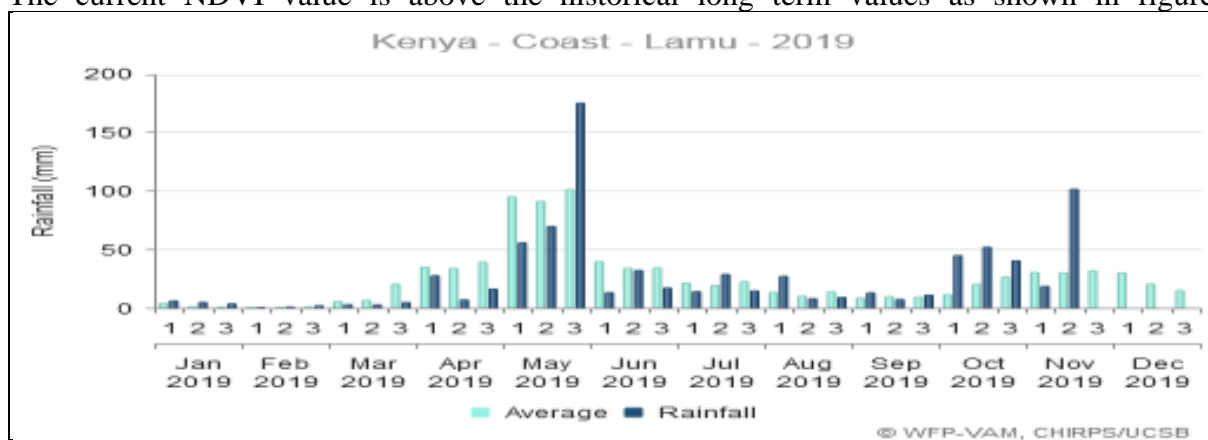


Figure 1a: Rainfall Satellite data. (Source: WFP-VAM, CHIRPS/UCSB)

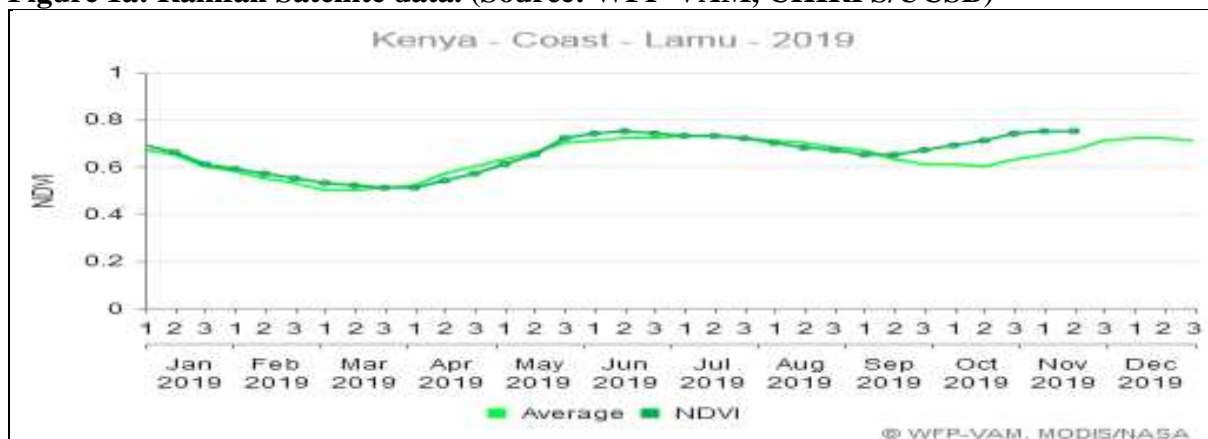


Figure 1b: NDVI data. {Source: wfp-Vam}

1.2 Amount of rainfall and spatial distribution

- According to VAM WFP rainfall and vegetation data, the County received a total of 119.7mm of rainfall in the month of November during the first and second dekad.
- This was an increase of 24percent rainfall when compared to previous month of October (96.5mm); however, this (119.7mm) was higher when compared to long-term average of 60.2mm as in the figure 1a above.
- This 119.7mm of rainfall was much higher when compared to 23.7mm received in the same period during the previous year.

- The rainfall received was good, both in spatial and temporal distribution in all parts of the livelihood zones of the county during the month under review.

1.3 Other hazards.

- Flooding have been reported with more than 500 households, including school-going children and security agencies, in villages around Boni Forest have been affected by floods after River Lagwarera connecting to Mangai river which is seasonal, burst its banks affecting residents of Bodhei, Mangai, Milimani, Mararani and Bargoni villages, were left stranded after some parts of the Hindi-Kiunga road and several bridges washed away. This also affected crop farmers in the area.

2.0 VEGETATION CONDITION

2.1 Vegetation Condition Index (VCI)

- The vegetation condition index for the month of November increased by 25 percent compared to the previous month. This was due to above average precipitation received during the previous month.
- The vegetation condition index for the month of November was 76.97 compared to 61.68 in the previous month.
- The VCI indicated vegetation normal greenness in the County.
- The VCI-3Months is below the long-term average and the previous year as shown in the figures 2a, 2b and 2c below.

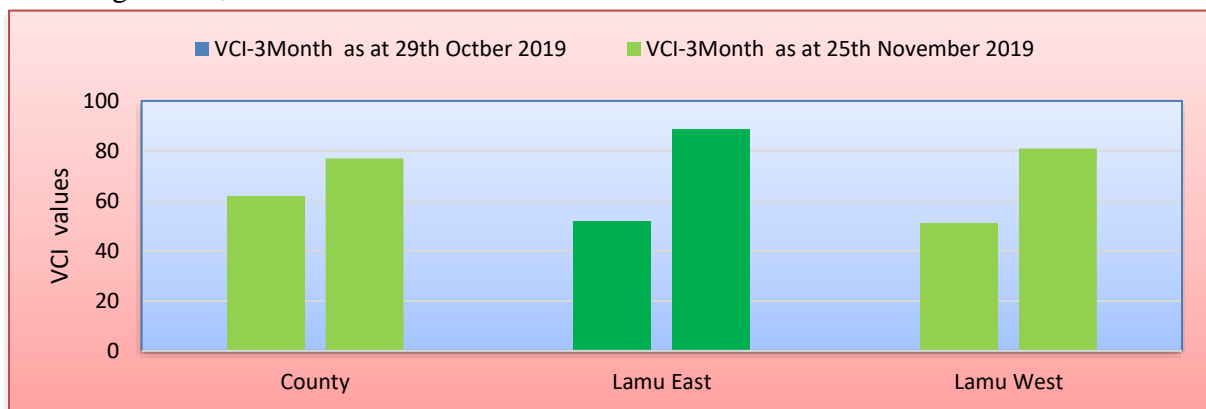


Figure 2a: VCI (3M)

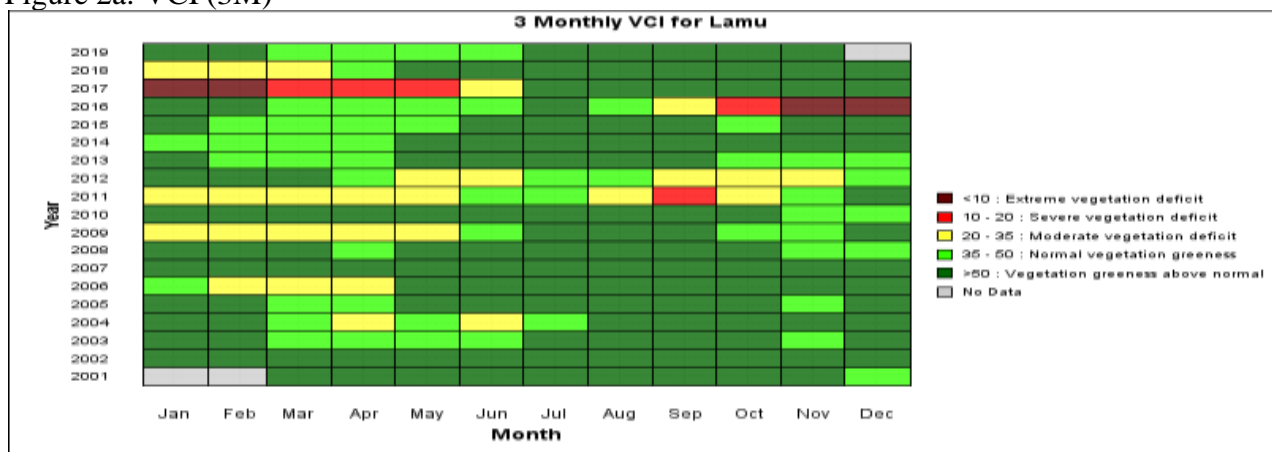


Figure 1b: VCI-Lamu County {Source: Boku University, Austria}

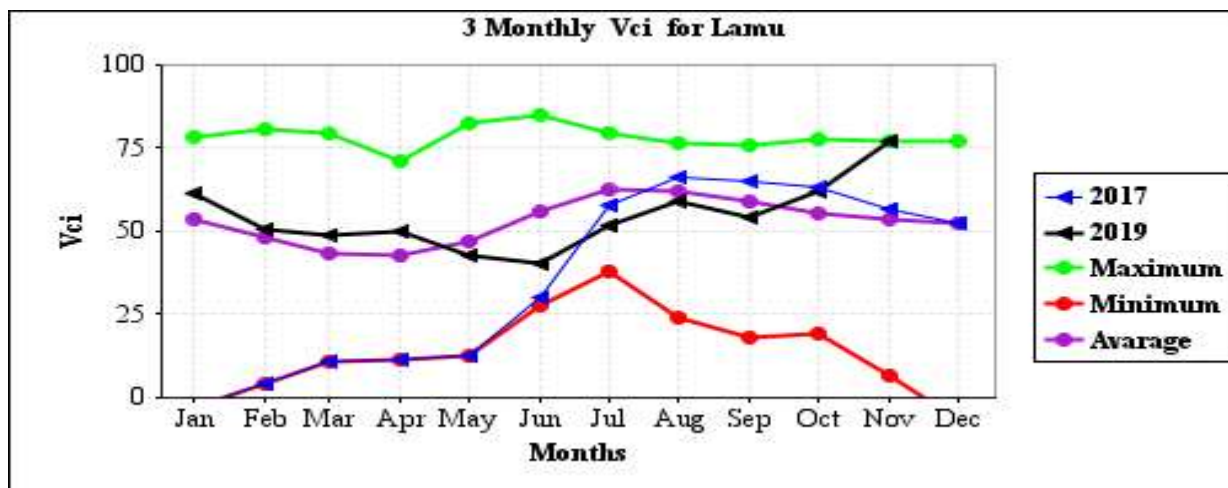


Figure 2c: VCI-Lamu County {Source: Boku University, Austria}

OBSERVATIONS-PASTURE AND BROWSE CONDITION

2.1.2 Pasture

- Pasture condition was good across all livelihood zones both in quality and quantity.
- 80 percent of Community members interviewed stated that pasture was good while 20 percent indicated that pasture was fair but with improving trend as in figure 3.
- Pasture condition by livelihood zones was as follows; Agro pastoral is very good, mixed farming is good and fishing/ mangrove was good as well.
- The available pasture is expected to last three month due to the presence of in-migrant livestock from neighbouring counties. The current pasture situation is within the normal range.

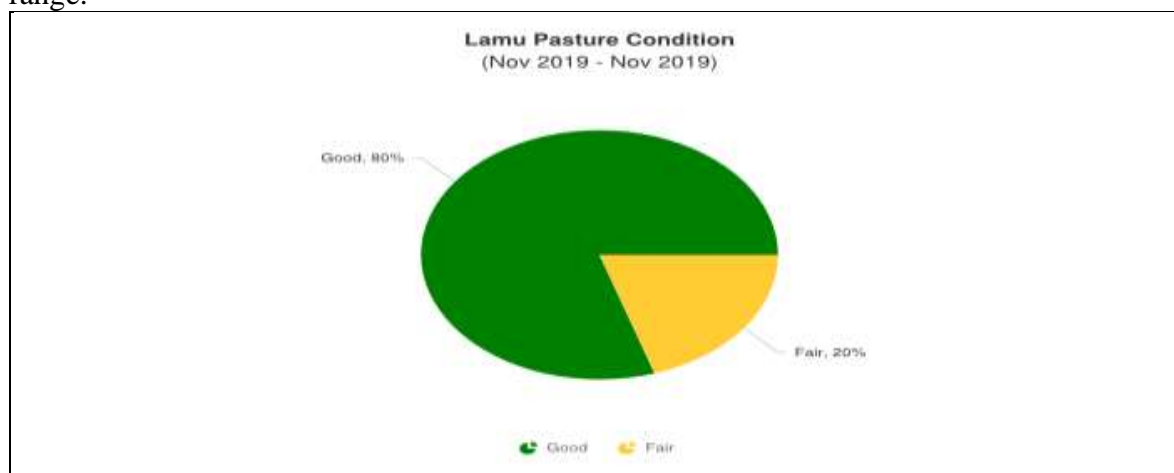


Figure 3: Pasture condition

2.1.3 Browse conditions

- The quantity and quality of browse was good across all livelihood zones.
- Community members interviewed indicated as follows; 80 percent of the respondents stated that browse was good while on improving trend due to the off seasonal rains and low rate of transpiration as in the figure 4.
- Browse condition by livelihood zones was as follows; Agro pastoral and mixed farming was good while fishing/ mangrove was also good.
- The browse is expected to last more than three months. The current browse condition is within the normal range compare to previous year.

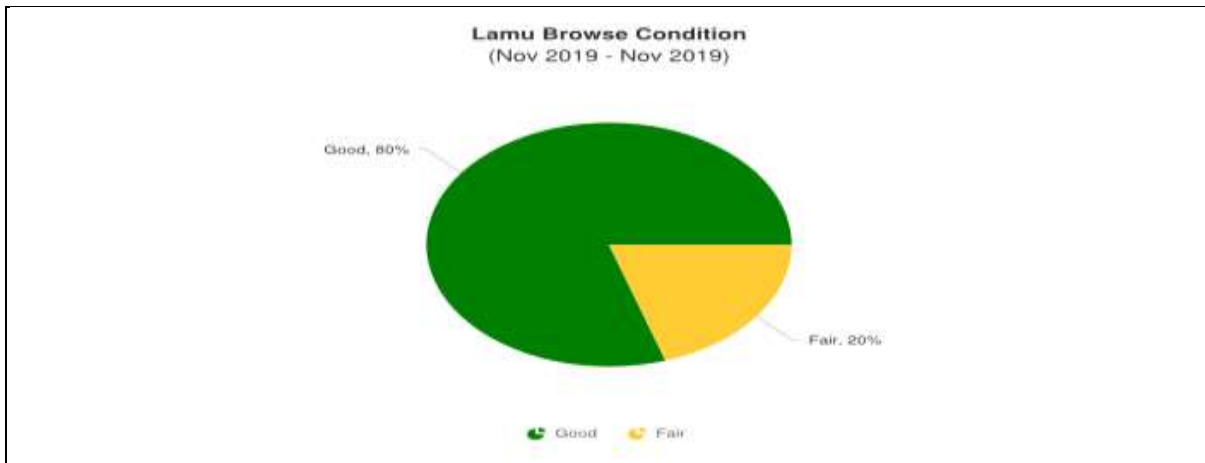


Figure 4: Browse conditions

2.2.0 HYDROLOGICAL DROUGHT

2.2.1 Water Sources and Availability

- The state and condition of water sources in the County was good across most livelihood zones except for patte island where the rainfall performance was within the normal long term average.
- However, the current water situation improved compared to previous month.
- The main water sources in the month of November; Pans and dams 27.3percent,shallow wells 27.3percent,Boreholes 27.3percent,Rivers 9.1percent and Traditional river wells 9.1percent, as shown in the figure 5 .
- The status of main sources of water has improved at this time of the year.

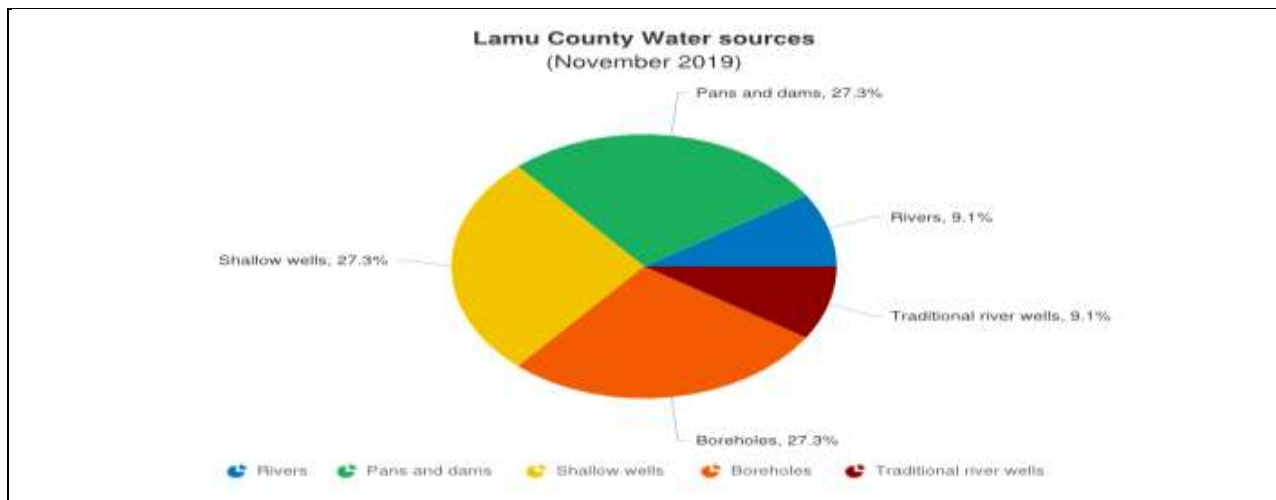


Figure 5: Main sources of water

2.2.2 Household access and Utilization

- Average household watering return distance was 2Kilometres, which was a slight decrease and below long term average, compared to previous month.
- This below LTA was due to the enhanced rainfall received which led to increase in open water recharge levels of between 70-95percent of their capacity.
- Household return water distances per livelihood zone were as follows; the Agro pastoral 3Kilometres, Fishing & Mangrove Harvesting 2.8Kilometres and for Mixed Farming Zone it was 1.7Kilometres and irrigated farming 1.2Kilometres respectively.

- The average household water distance for November was 2Kilometres which is below LTA as shown in figure 6 below.
- The average household water consumption per person per day is at 20-25liters in all livelihood zones. Water costs at source are 5-10 Kshs in town/village centers for 20 liters Jerrican.

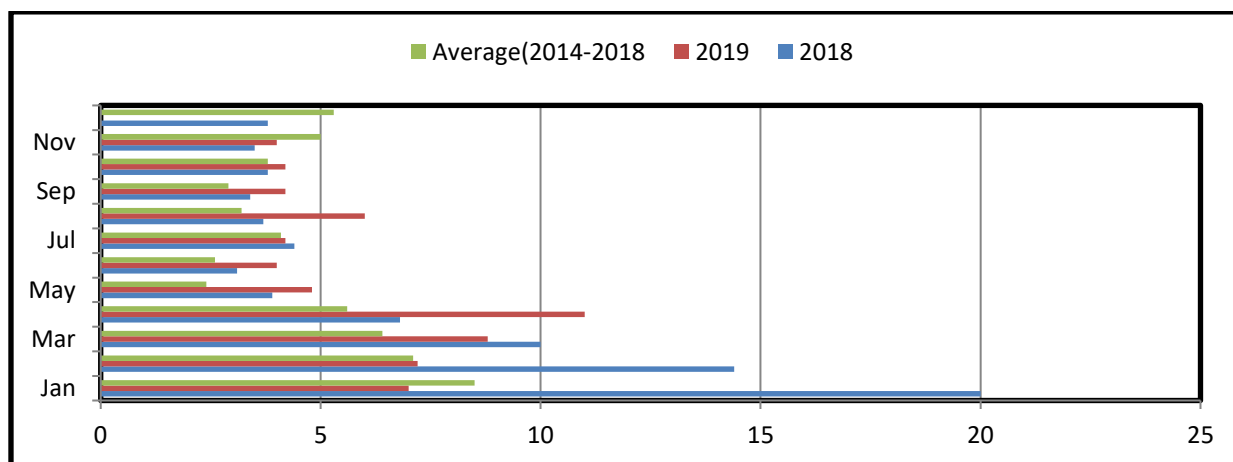


Figure 6: Household water distances-Kms

2.3 Livestock access to Water

- Livestock average distance to water source from grazing Areas decreased to 4.2Kilometres compared to the previous month of 4.5Kilometres as in figure 7.
- Grazing return water distances per livelihood zone were as follows: the Agro pastoral 3Kilometres, Fishing & Mangrove Harvesting 2 Kilometres and for Mixed Farming zone it was 1.3Kilometres and irrigated farming 1.2Kilometres.
- The decrease of grazing water distance compared to last month was due to increase of water availability in grazing areas, however some grazing areas are currently flooded.
- Watering frequencies for livestock species was seven times per week.
- The current average grazing distance for November was 4.2Kilometers which is below the long-term average of 4.6 Kilometres.

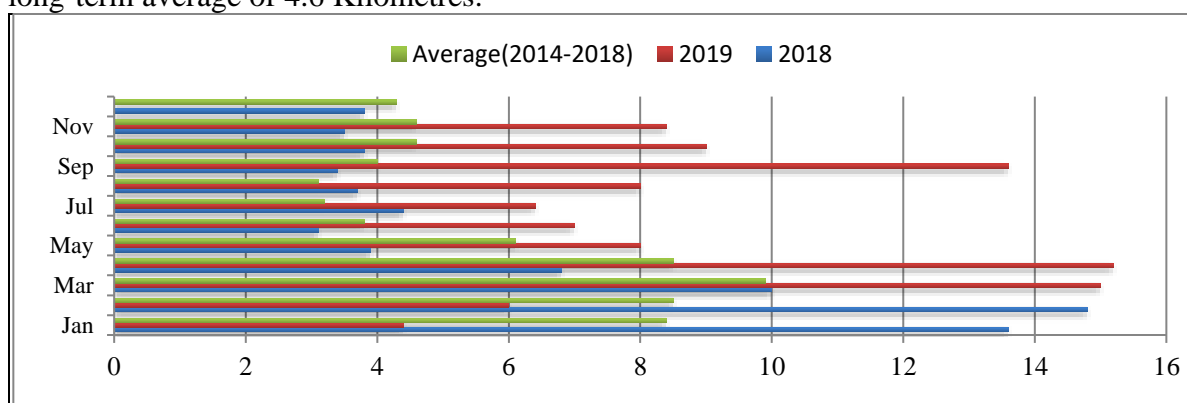


Figure 7: Grazing distance-Kms

2.2.4 Household Income

- The main household income for the month of November was distributed as follows: Casual labour 66percent, trade 9.3percent, Employment 8percent, Sale of livestock 8.7percent and sale of crop 8percent in figure 8 below.
- However, casual labour and employment decreased when compared to the previous month of October. While Sales of livestock and crop improved.

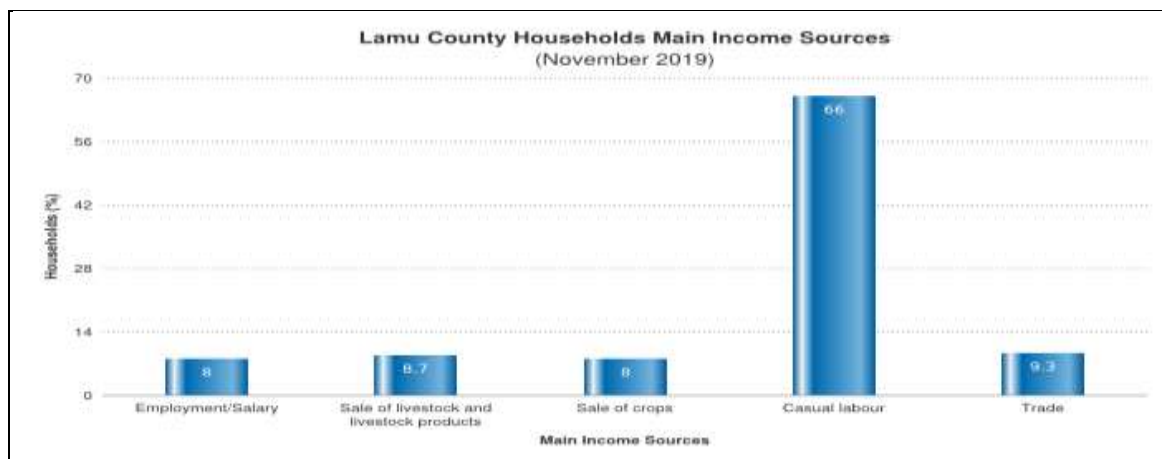


Figure 8: Household sources of income

2.4 Implication to Food Security;

- Fishing and Mangrove livelihood zones have decreased water salinity due to high recharge coupled with high level of water table of the shallow wells in the Islands.
- The reduced distances to water sources have had a positive impact on the livestock body condition of animals and household hygiene standards.

3.0 PRODUCTION INDICATORS

3.1.0 Livestock Production

3.1.1 Livestock Migration Patterns

- Out-migration of livestock from Lamu to Tana River County from Agro pastoral area of Witu. This is due to Tsetse free zone in Tana River County.
- This out-migration is normal during this period of the season.

3.1.2 Livestock Body Condition

- The livestock body condition was fair to moderately good for all for species.
- This was attributed to increased quality and quantity of pasture and browse due to improved seasonal precipitations.
- However, due to pasture improvement the body conditions are expected to improve further.

3.1.3 Livestock Diseases

- There were no cases of livestock diseases reported during the month under review.

3.1.4 Milk Production

- Milk production increased from 1.1litres to 1.7litres when compared to previous month.
- The increase was attributed due to improved forage condition as a result of enhanced rainfall performance.
- Milk productions were distributed as follows: Mixed farming Produced 1.4litres, Fishing 1.0litres, and Irrigated 1.3litres while the Agro pastoral Zone produced average of 1.5 litres.Milk prices are retailing at an average price of Kshs.40-80 per Liter across the livelihood zones which is the normal milk price at these period of the year.
- The change of the household milk production recorded is due to the above average rainfall received.

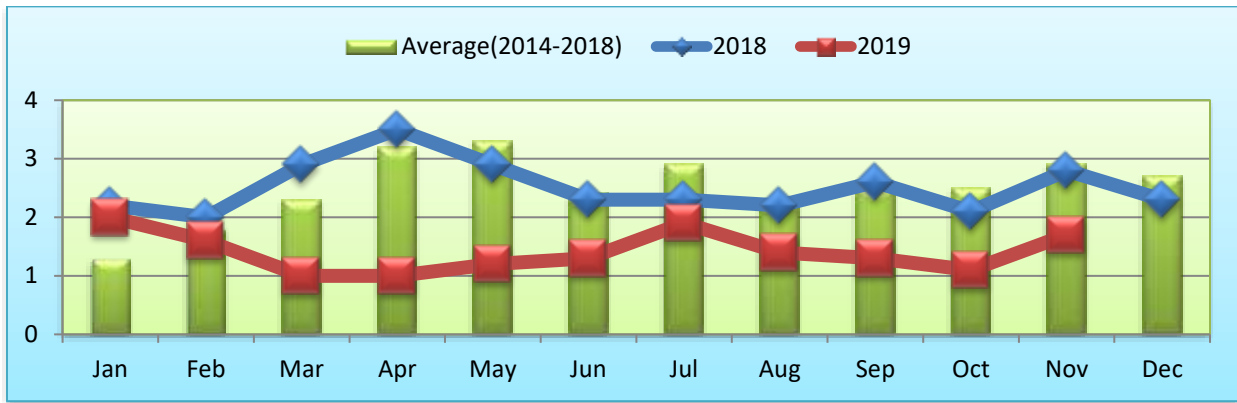


Figure 9: Milk production

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. Land preparation is currently ongoing in all livelihood zones. However, few farmers have planted owing to low rainfall performance.
- Currently the Maize crop is at different stages, for example- Germination, below, at Knee high and flowering. Simsim at Grain filling stage.

3.2.2. Crop Harvest

- Some farmers are preparing to harvest while others will harvest next month. However, some crops were destroyed by floods.

3.2.3 Implications on Food Security;

- The improve body condition of livestock species except cattle across the livelihood zones increased the prices resulting to higher income for livestock farmers.
- The heavy rains have affected crops through flash floods hence low crop production expected.

4.0 MARKET PERFORMANCE

4.1 Livestock marketing

4.1.1 Cattle Prices

- Average cattle market price in the month of November increased by 18percent compared to previous months as in figure 10 below.
- This increase in price could be attributed to high demand and low supply of animals by local herds owing to improved water and pasture conditions.
- The cattle average market prices were distributed as follows: Faza Kshs 20,000, Witu Kshs 19,500, Kiunga Kshs 31,000, Mswakini 21,000 and Mokowe Kshs 23,000.
- The average market cattle price for the month of November was Kshs.26, 167 which was higher than the long-term average price of Kshs.16, 633.

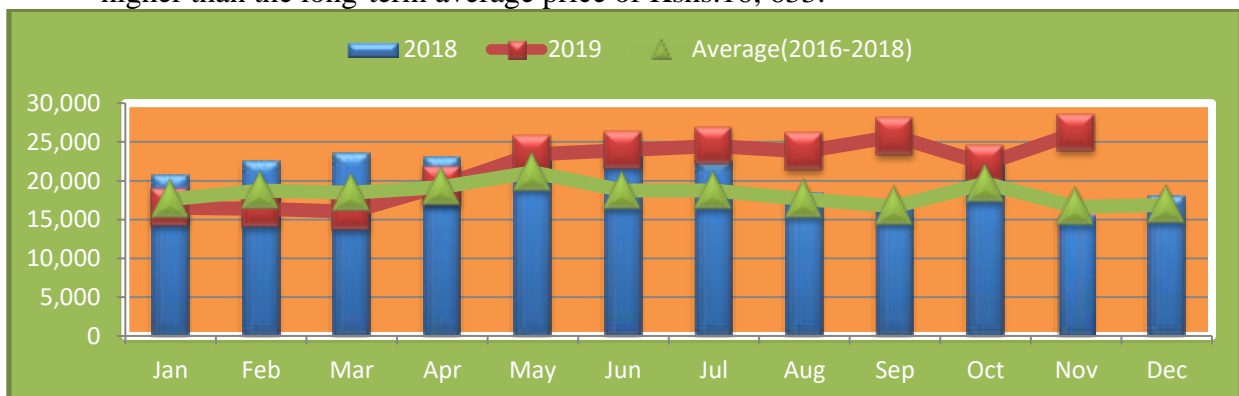


Figure 10: Cattle prices

4.1.2 Small Ruminants Prices

4.1.3 Goat Prices

- Goat prices decreased in November (Kshs4670) when compared to previous month of October (Kshs5, 000).
- This price was lower than the long term average by 0.9percent and the price recorded in previous year at a similar time and following seasonal trends as shown in figure11.
- This decrease in price of goats could be attributed to low market demand and high supply as a result of improved body condition following the enhanced rainfall that has in turn improved browse situation across the county. The goat average market prices were distributed as follows: Mpeketoni Kshs 4,700, Witu Kshs 4,500, Kiunga Kshs 6,000 and Mokowe Kshs 3,000.

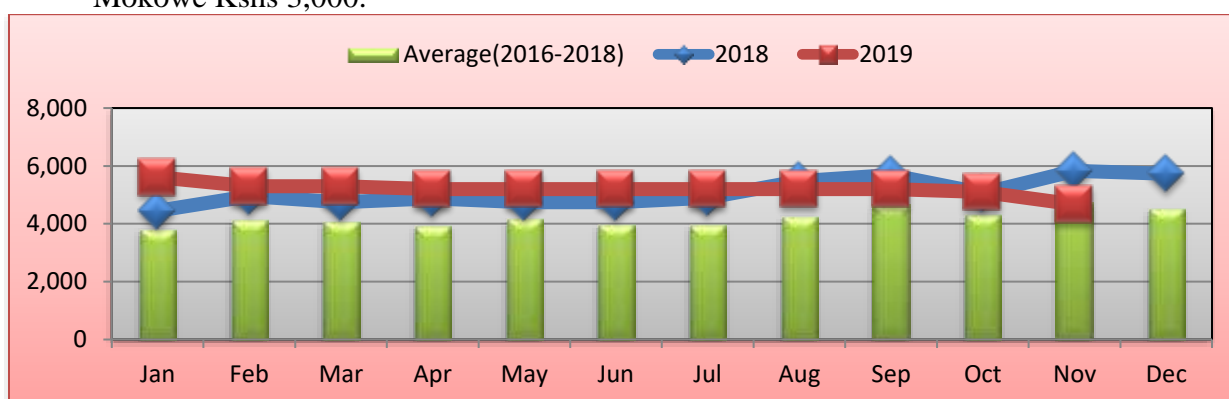


Figure 11: Goat prices

4.2: Crop prices

4.2.1 Maize price

- The maize prices increased by 28percent when compared to previous month of October as shown in the figure above.
- The decrease of price was due to expected good harvest during the above average rainfall coupled with low demand as shown in figure 12.
- The prices were distributed as follows; Hindi centre Kshs 35, Patte Kshs 30, Witu Kshs 42, Mpeketoni Kshs 35 and Kiunga Kshs 100. However, price ranges is determined by commodity supply in different markets.

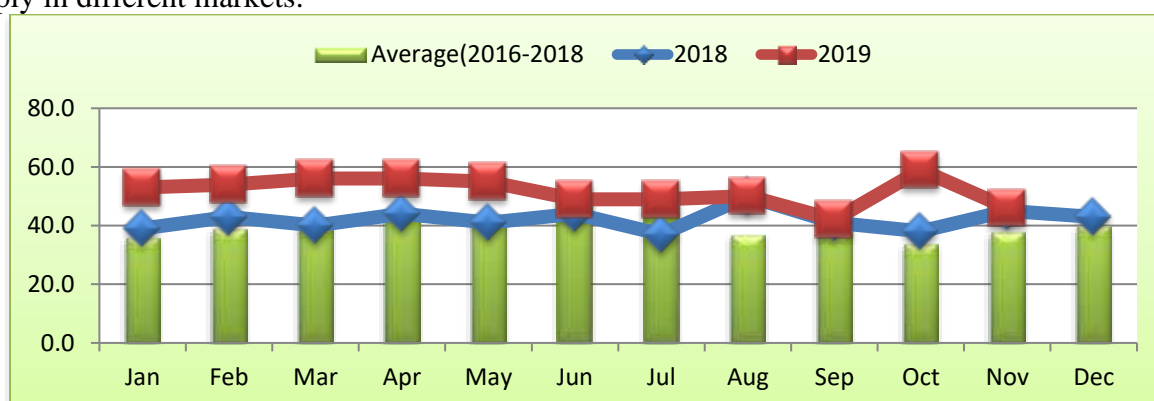


Figure 12: Maize prices

4.2.2 Beans prices

- Average price of Kilogram of beans was Kshs 108 in November, an decreased compared to the previous month of October from Kshs 111 as in the figure 13 below.
- The decrease in price was attributed to low demand and expected above average seasonal yields. The beans price was distributed as follows: Mswakini /Hindi centre Kshs 100, Patte Kshs120 and Witu Kshs 110, Mpeketoni Kshs 100 and Kiunga Kshs 120.

- However, price ranges is determined by commodity supply in the different markets. The long-term average price of beans was Kshs 96 which is lower compared to the current beans price for the month of November.

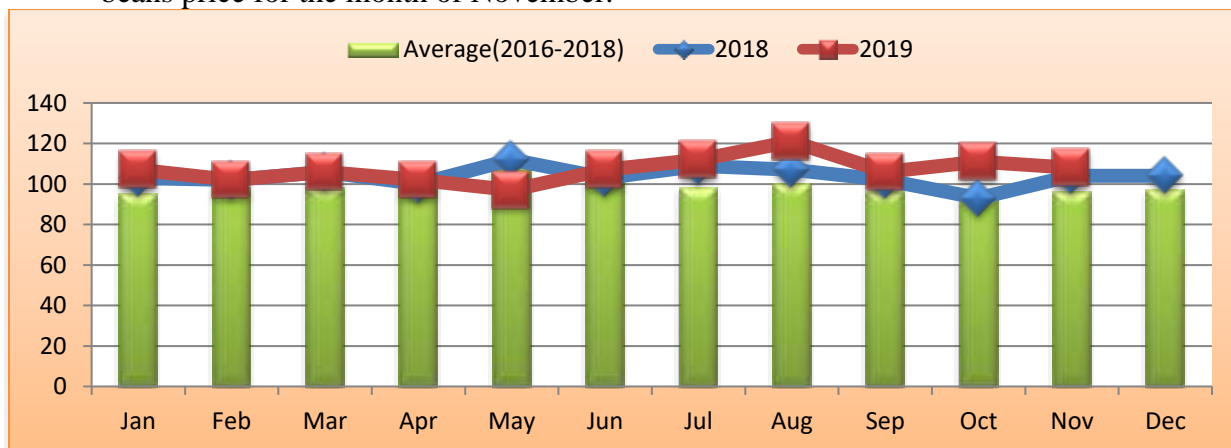


Figure 13: Beans prices

4.3 Livestock Price ratio/Terms of Trade

- The terms of trade (ToT) of November (102Kgs) increased by 20percent compared to previous month of October (85Kgs) as in figure 14 below.
- This was lower than the long term average by 22percent. Sale of a medium goat in November, would cost a household about 102kgs 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 124Kilograms in Lamu West and 81 Kilograms in Lamu East.
- The ToT for November was lower than the long term average of 124 Kilograms.

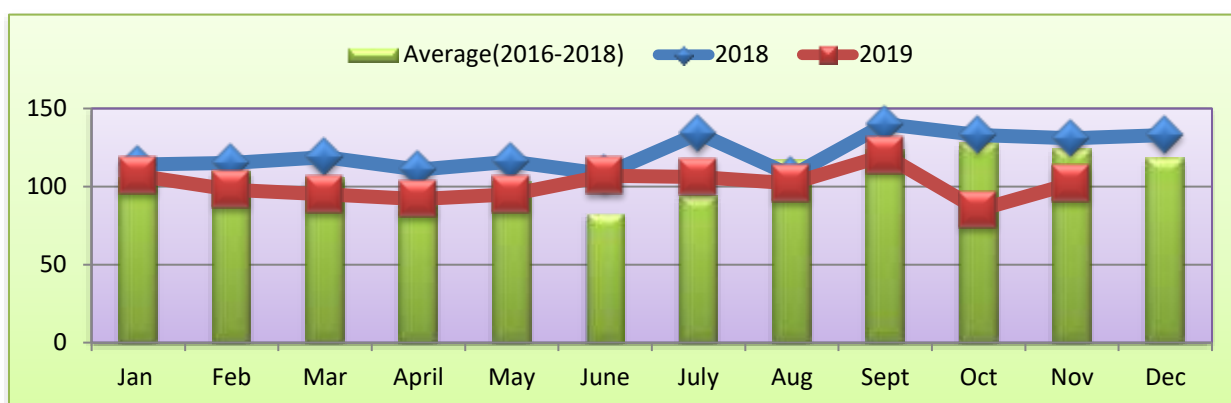


Figure 14: Terms of Trade

4.4 Implication on food security;

- Maize prices increased due to enhanced rainfall which destroyed some of the crops and also high demand at the markets.
- Farmers are able to sell livestock at fair prices, hence improved food security at household level.
- The Terms of Trade was favorable to crop famers when compared to livestock sellers.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk for Household Consumption

- Average milk Consumption was 1.4litres in the month of November, which increased compared to previous month as in figure 15.
- Milk consumption was distributed as follows; Agro pastoral 1.5 litres, Mixed farming 1.2, irrigated cropping 1.3 litres and fishing 1.5 litres.
- The increase in milk consumption level is as a result of improved in milk production and household purchase of the commodity.
- November long term average milk consumption was lower than the current average.

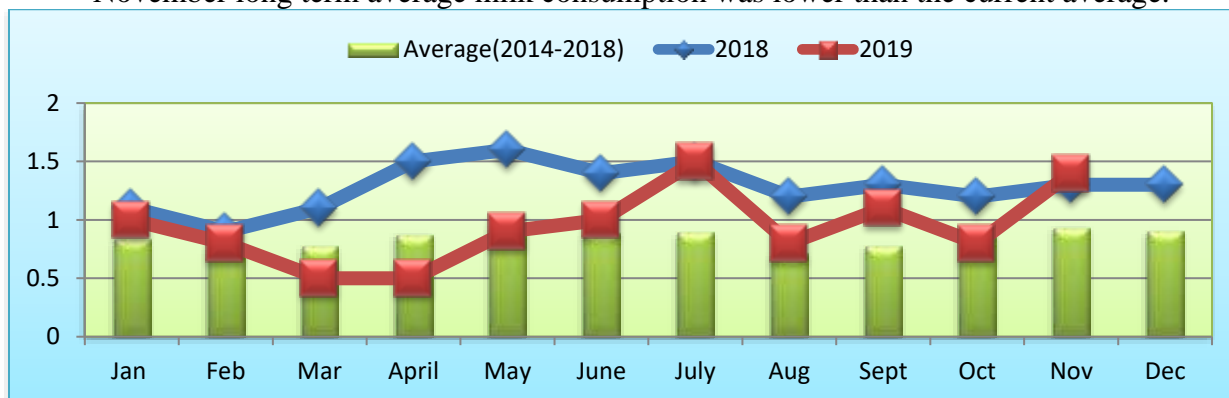


Figure 15: Milk consumption

5.2 Health and Nutrition status

5.2.1 MUAC

- The proportion of children under five at risk of malnutrition with Mid Upper Arm Circumference below 135mm slightly decreased to 8percent compared to previous month of October.
- The proportion of children under five with severe category was zero percent during the month under review, indicating decrease in the number of children with severe category.
- This was attributed to improved production of milk and consumption at household level. The rates of malnutrition cases reduced in Agro pastoral and Mixed farming Zones of Witu, Hindi and Mpeketoni areas.
- The figure of 8 percent MUAC for November, was higher than long term average as in figure 16.

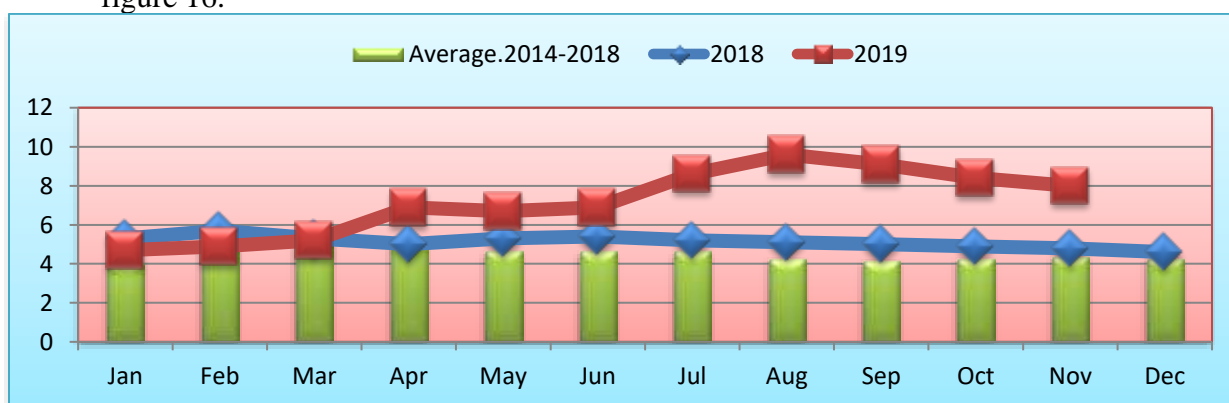


Figure 16: MUAC

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 population with the highest Borderline and Acceptable food consumption in the county were fishing with 76.7% and mixed farming with 55%.

- Acceptable food consumption was noted in Agro pastoral and Mixed farming zone with 46.7% and 55% 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.
- Households' percentage with poor food consumption decreased from 13.3 to zero percent at mixed farming livelihood zones while an increase of borderline food consumption of 56.7 percent was noted in mixed farming livelihood zones.

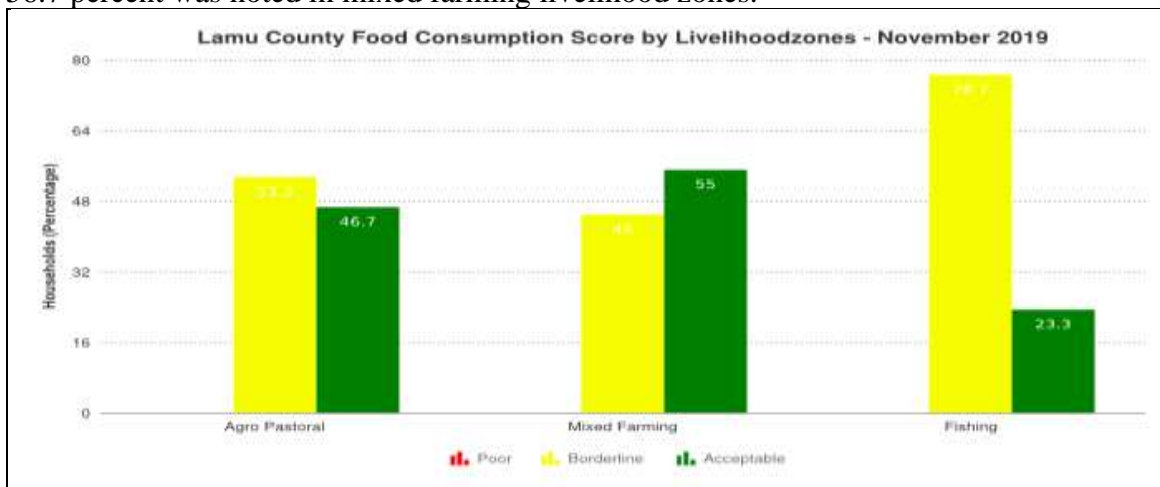


Figure 17: Food consumption score

5.4 Coping strategy index

- The mean coping strategy Index in the Month of November (9.72) remained stable when compared with the previous month of October (9.71) indicating stable coping strategies at household levels.
- Agro pastoral Zone had CSI of 8.2; Mixed Farming livelihood zone had 5.5 while Fishing Livelihood zone had the highest copying strategy index of 21.3 as figure 18 below.
- Common coping strategies employed by food insecure households in the month of November 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.

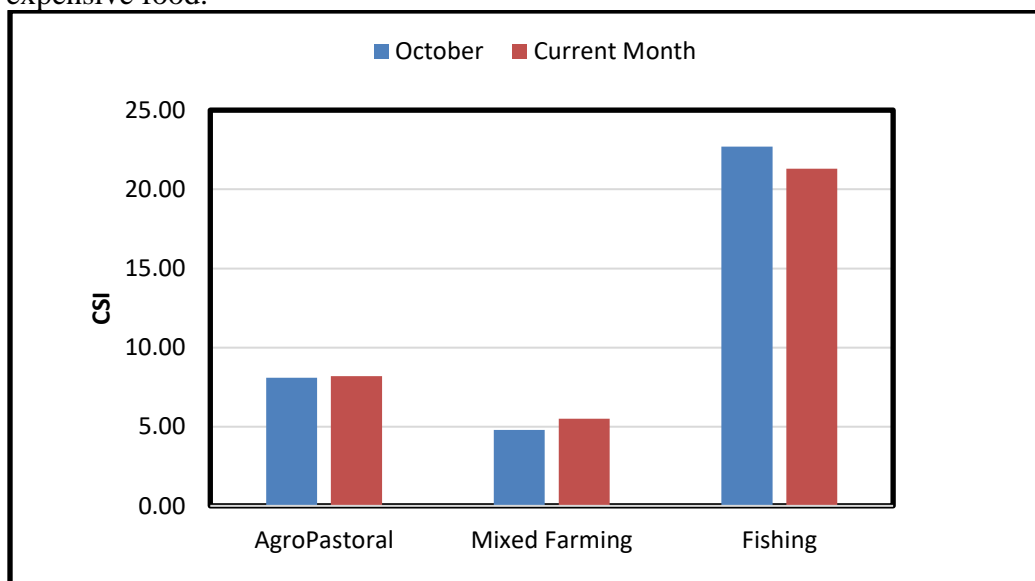


Figure 18: coping strategy index

5.5 Implication on Food Security

- The reduced milk consumption at household levels across all the Livelihood zones could lead to decreased dietary diversity and hence negative impact on food insecurity.
- Coping strategy slightly decreased in fishing livelihood zones and increased in mixed farming livelihood zones, hence both positive and negative impact on food security at household levels respectively.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 Food aid

- No reports on food aid interventions.

6.2 Non-food interventions

- The construction of Nagelle integrated drought resilience water (pan) project is ongoing at 85 percent complete.
- 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.

7.0 EMERGING ISSUES

7.1 Insecurity

- No insecurity incident reported during the month under review.

7.2 Migration

- There were no abnormal cases of human migration during the month. However, huge influxes of livestock from Tana River and Garissa Counties accompanied by some households have been observed.

7.3 Food security prognosis

- Most parts of the county are likely to experience above-average rainfall during the month of November.
- Markets will continue to operate normally despite poor infrastructure and insecurity.
- Forage and water resources are expected to improve further hence livestock will return to their normal grazing areas in late November.
- Livestock body conditions are most likely to be improve further, leading to seasonal increases in livestock retail prices.
- Some births will also offer a seasonal increase in milk availability, though expected to remain below normal levels due to low birth rates and below-normal herd sizes at household levels.
- Food and milk intake are expected to improve, acute malnutrition levels are expected to decline, but are still 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 decrease.

- Water salinity is expected to decline due the increase in water levels in fishing livelihood zone.
- Cases of livestock herders' and crop farmers' conflicts are expected to decline due to expected influx to return to their normal grazing zones to their counties.

8.0 RECOMMENDATIONS BY SECTORS;

8.1 Water

- Constructions/rehabilitation of waterpans/damfor preparedness.
- Conducting of hydro geological survey and drilling of boreholes.
- 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.

8.2 Livestock

- Livestock disease surveillance, Vaccinations and control to curb spread of livestock diseases.
- Upscale efforts aimed at stock piling livestock feeds in strategic hay reserves for use during the dry season by providing farmer groups with pasture seeds so as to maximize production over the short rains period.
- Promote Pasture and fodder planting in the county during and after the short rains.
- Provision of hay band machines for harvesting.
- Promote livestock insurance services.
- Construction of vaccination crushes and cattle dips.

8.3 Agriculture

- Build Capacity of crop farmers to plant drought resistance food crops.
- Mobilization and sensitization of farmers' on crop insurance.
- Provision of seeds and fertilizers to farmers during the short rains period.
- Training communities on CMDRR

8.4 Health and Nutrition

- Strengthen malnutrition screening and active case search as well as strengthen integrated management of acute malnutrition in the community.
- Enhance disease and nutritional surveillance in hot spot areas.
- Deworming exercise for both adults and children.
- Enhance household level water treatment.

8.5 Education

- Support to schools feeding programmes for the most vulnerable communities focusing on the most vulnerable areas in the county to minimize drop outs.
- Provide Food for fees for students hailing from Vulnerable and poor families.
- Provision of water plastic tank to learning institution for preparedness.

8.6 Peace and Security Sector (Co-ordination)

- Peace and security meetings should be enhanced in the County
- Inter Counties peace and security to be enhanced in order to avert future conflicts.
- Provision of relief food to vulnerable household in the County.

8.7 Information Communication Technology

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