

National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR OCTOBER 2019



A Vision 2030 Flagship Project



OCTOBER 2019 EW PHASE

Drought Status: NORMAL

Shughuli za kawaida

Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming: Food Crops/ Livestock	Normal	Stable
Mixed Farming: Food Crops/ Horticulture/Dairy	Normal	Stable
Mixed Farming: Irrigated Cropping/ Livestock/Food Crops	Normal	Stable
National Park	Normal	Stable
County	Normal	Stable
Biophysical Indicators	Value	Normal Range/ Value
Rainfall 3 Months Anomaly	223	80 – 120
VCI-3Month	39.08	35 – 50
Production indicators	Value	Normal
Crop Condition (maize)	Weeding	Planting
Livestock Body Condition for cattle	Good	Good
Milk Production per HH/ day	3.8Litres	2.8 Litres
Livestock Migration Pattern	Normal	Normal
Access Indicators	Value	Normal
Terms of Trade (Casual labour Vs maize prices)	56.7	62.5
Milk Consumption per HH/ day	1.2 Litres	0.7 Litres
Return HHs distance to water sources	2.3km	2.8 Km
Water source return distance from grazing areas	2.8km	3.6 Km
Cost of water (20 litres)	Kshs 5.00	< Kshs 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	0.3	<3.0

Drought Situation & EW Phase Classification

Biophysical Indicators

- The County registered early onset of short rains. The rains were above normal and evenly distributed across all livelihood zones.
- The county vegetation greenness condition was above the normal range (3 Months VCI 39.08).

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Weeding was ongoing in the highlands and lowlands.
- Livestock body condition was good for all species across all livelihood zones.
- Average milk production per HH per day was above normal.

Access Indicators

- Terms of Trade were within the normal range.
- Milk consumption per HH per day was above normal.
- Return distances to water sources were below normal range.
- Distances to water sources from grazing areas were below normal.

Utilization Indicators

- The proportion of children at risk of malnutrition was within the long term average.

Seasonal Calendar

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

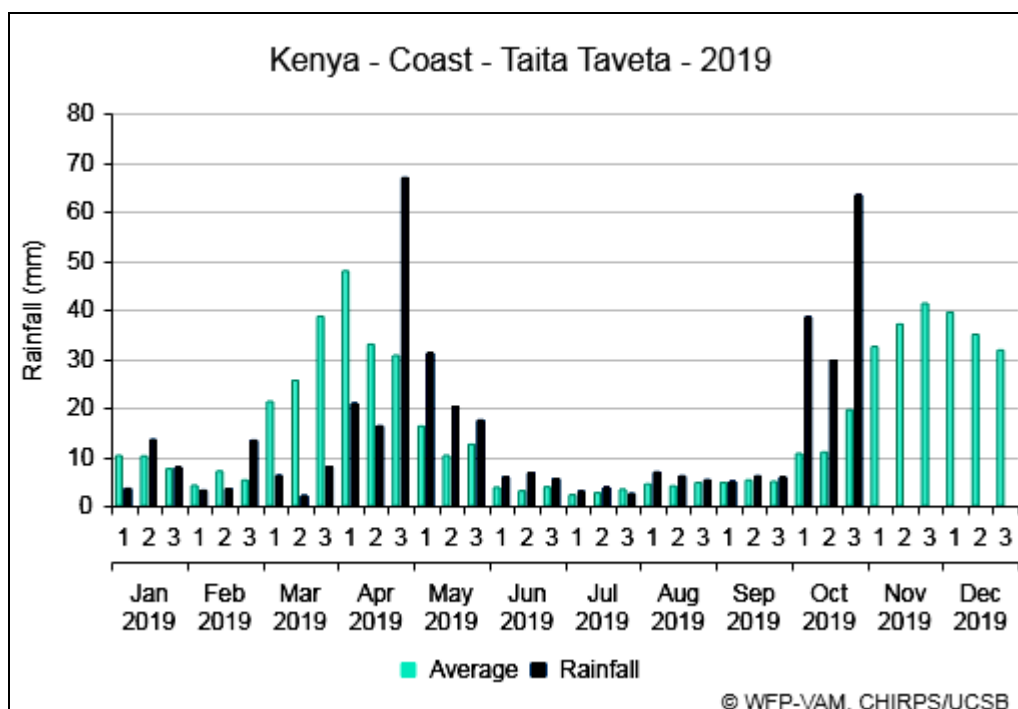
1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The county registered early onset of short rains during the first week of October compared to third week normally.
- The amount was relatively above normal and was characterised by moderate to high intensity.
- Relatively the amounts were varied with Voi met station, Rukanga, and Mwachawaza (all in Mixed farming food crop/livestock livelihood zone) recording 169,195 and 94mm in 13, six and eight days respectively while in the mixed farming, horticulture/dairy livelihood zone, Mwarungu station recorded 235 mm of rainfall in 19 days. Lastly, though no station data was available, community interviews indicated the mixed farming irrigation /livestock zone had experienced 12 days of moderate to heavy downpour.
- Generally, the rains were characterized by even spatial and good temporal distribution.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- According to WFP-VAM, Climate Hazards Group InfraRed Precipitation with Station Data (CHIRPS) three months' rainfall anomaly was 223%.
- The estimated total precipitation for the month was 131.3 mm and well spread in time as indicated in the chart below;

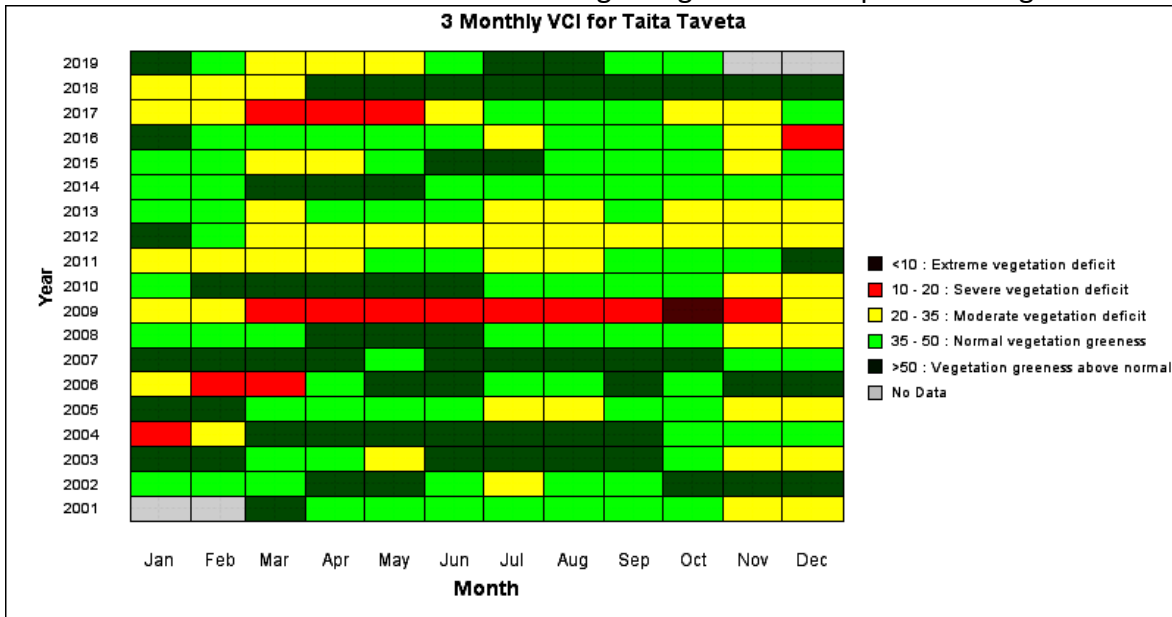


2. IMPACTS ON VEGETATION AND WATER

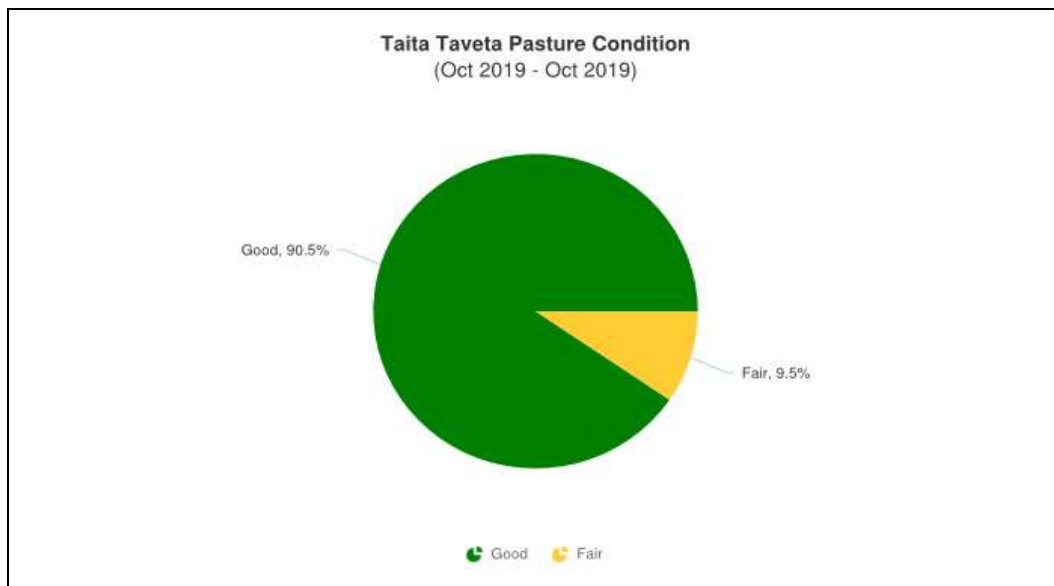
2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The vegetation greenness condition in the county was above the normal range as depicted by a 3 months' vegetation condition index (3M - VCI) value of 39.08 and was mainly attributed to earlier than normal onset of the rain season resulting to unusual regeneration of vegetation (Figure below).
- Relatively, Voi Sub County in mixed farming; food crop/livestock livelihood zone, recorded moderate vegetation greenness condition and this was attributed to variation in actual date of onset of rains and the lag in regeneration of pasture in Ngolia Ward.

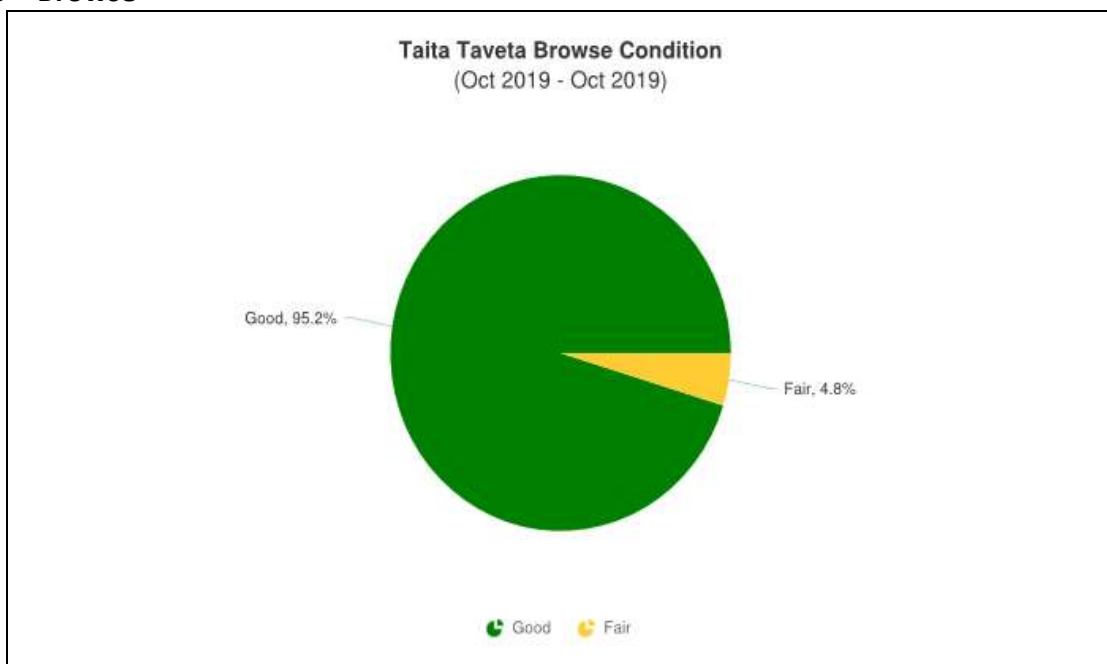


2.1.2 Pasture



- From the sampled communities 90.5 and 9.5percent reported that pasture was good and fair respectively as a result of the early onset of the short rains. Compared to a similar season in the previous year respondents reported situation to be above normal.
- In comparison to the previous month pasture situation had improved substantially where proportionate of respondents that reported pasture condition was good rose by 72 percent.
- Pasture variation by livelihood zone indicated that pasture condition was good in the mixed farming: horticulture/ dairy located in the highlands and also in the mixed farming; food crops/ livestock livelihood zone in the lowlands. In the mixed farming: irrigated cropping/ livestock livelihood zone bigger proportion of farmers practise zero grazing and rely on crop residues from the irrigated farms and Napier grass along the drainage canals.

2.1.3 Browse



- From community interviews 95.2 of the respondents reported browse situation was good as a result of the early onset of the short rains.
- Compared to the previous month, the browse situation improved given that proportion of respondents that reported good vegetation condition rose by 81 percent.
- Compared to long term mean the browse condition was above normal.
- Available browse is expected to cater for livestock for the next three months.

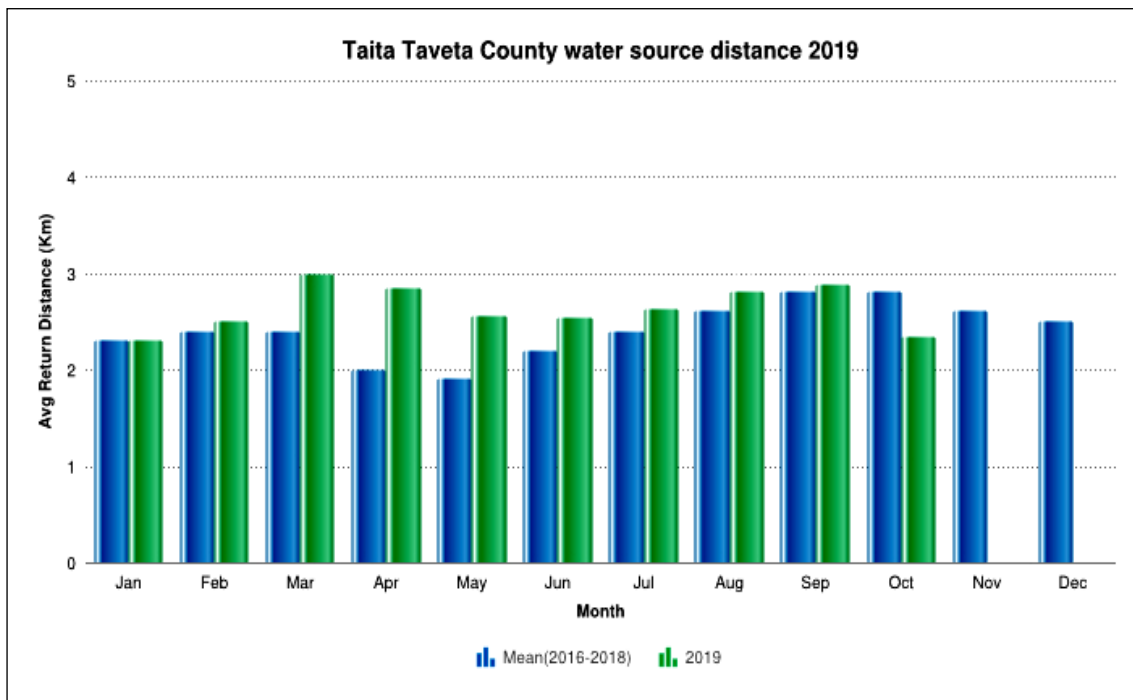
2.2 WATER RESOURCE

2.2.1 Sources

- The main sources of water in use by both households and livestock were piped water systems, rivers, boreholes, springs, pans and dams and shallow wells and were relied upon by 23,21,21,21,7 and 7 percent of the households respectively.
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- | Water Source | Percentage |
|---------------|------------|
| Piped water | 23.5% |
| Springs | 20.9% |
| Rivers | 20.9% |
| Boreholes | 20.9% |
| Shallow wells | 7% |
| Pans and dams | 7% |
- Proportion of those using piped water systems, rivers and boreholes dropped by 7.5, 4.7 and 2.2 percent respectively while those using springs rose by 0.4 percent.
 - Water situation across the county was good due to recharge of open water sources and springs and expected to remain stable for the next three months.

2.2.2 Household Access and Utilization of Water

- The average return distance from households to main water sources decreased to 2.3km from 2.9 km posted in the previous month and below long term average by 17 percent. The decrease was due to recharge of water sources resulting from the rains realized in the month under review.

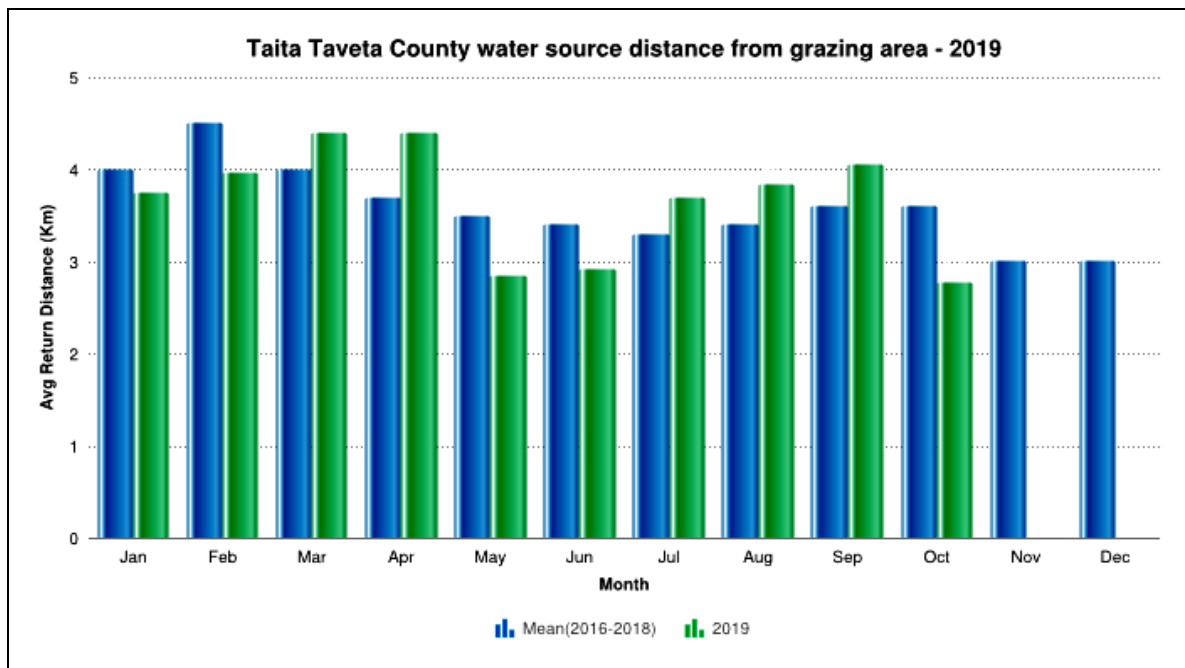


n=21Key Informants

- The county average water consumption per person per day was at 17.1 litres compared to 16.5 litres in the previous month and was represented as follows; mixed farming: horticulture/ dairy livelihood zone at 25.4 litres, mixed farming: irrigated cropping/ livestock livelihood zone at 18.2 litres and mixed farming: food crops/ livestock livelihood zone at 16.4 litres.
- Proportion of households purchasing water was at 56 percent compared to 83 percent posted in the previous month and price per 20 litre Jerry can ranged between Kshs 1 - 5 at source across all livelihood zones. Recharging of shallow wells and pans and dams had also reduced expenses incurred by purchasing water from vendors at relatively higher prices of Kshs. 20-30 as seen in the previous month.
- An estimated 17 percent of the sampled households treated water before drinking. Out of this 17 percent, 89 and 11 percent practised use of water treatment chemicals, and boiling respectively compared to 81, 9.5 and 9.5 percent that used water treatment chemicals, filtration and boiling respectively posted in the previous month.
- Households treating water before drinking by livelihood zone was as follows; Food crop/ livestock zone 3.3 percent, irrigated cropping/ livestock zone 100 percent and 3.3 percent in Horticulture/ dairy zone.

2.2.3 Livestock Trekking Distance to Water Sources from Grazing Areas

- Return distance to water source from grazing areas decreased to 2.8 km from 4.1 km and below the long term average by 22 percent as indicated in the graph below. The decrease in distance was due to availability of water near grazing areas.
- In all livelihood zones frequency of watering was maintained at once or twice per day for cattle and goats.



n=21Key Informants

3. PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

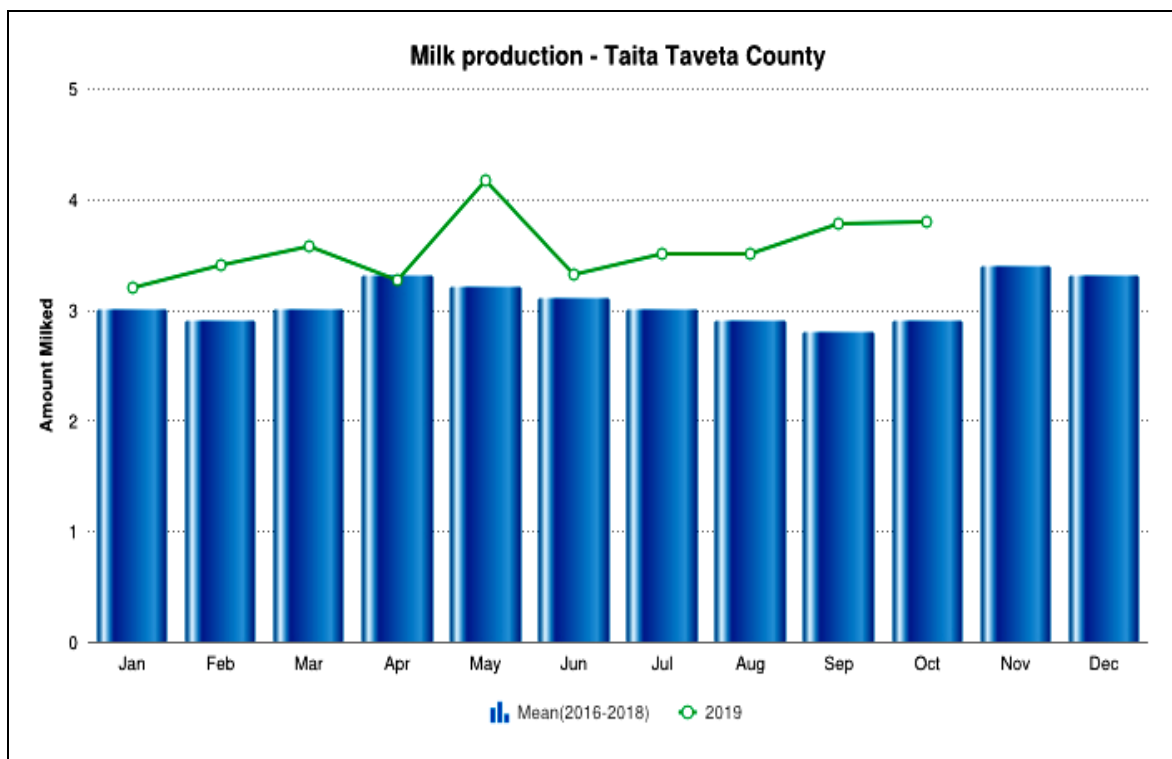
- By and large, the livestock body condition for all species was good across the county except in isolated areas in Mwatate, Kasingau, Mwanda and Wundanyi wards where outbreak of livestock diseases was reported. The current situation was sustained by access to forage and water.
- In all livelihood zones more than 90 percent of cattle observed were in good body condition.
- Livestock body condition for all species across the county was above normal compared to previous month.

3.1.2 Livestock Diseases

- The county was under quarantine following outbreak of Foot and Mouth disease reported in Kishushe and CCPP in Taveta Sub County; FMD and LSD in Mwatate, Taveta, Kasigau Ward and Taita areas of Mwanda – Mghange and Wundanyi – Mbale Wards during the month of September. In response vaccination against LSD and FMD SAT 2 was ongoing.

3.1.3 Milk Production

- The average milk production (cow) per household per day rose to 3.8 litres compared to 3.5 litres posted in the previous month. This can be directly attributed to the regeneration of pastures and browse after the early onset of the rain season.



n=210 HHs

- Milk production for the month under review was above normal by 31 percent.

- Mixed farming: horticulture/ dairy livelihood zone milk production was at 7.1 litres, in the mixed farming: irrigated cropping/ livestock livelihood zone at 3.6 litres and lowest at 2 litres in the mixed farming: food crop/ livestock livelihood zone.

3.2 RAIN-FED CROP PRODUCTION

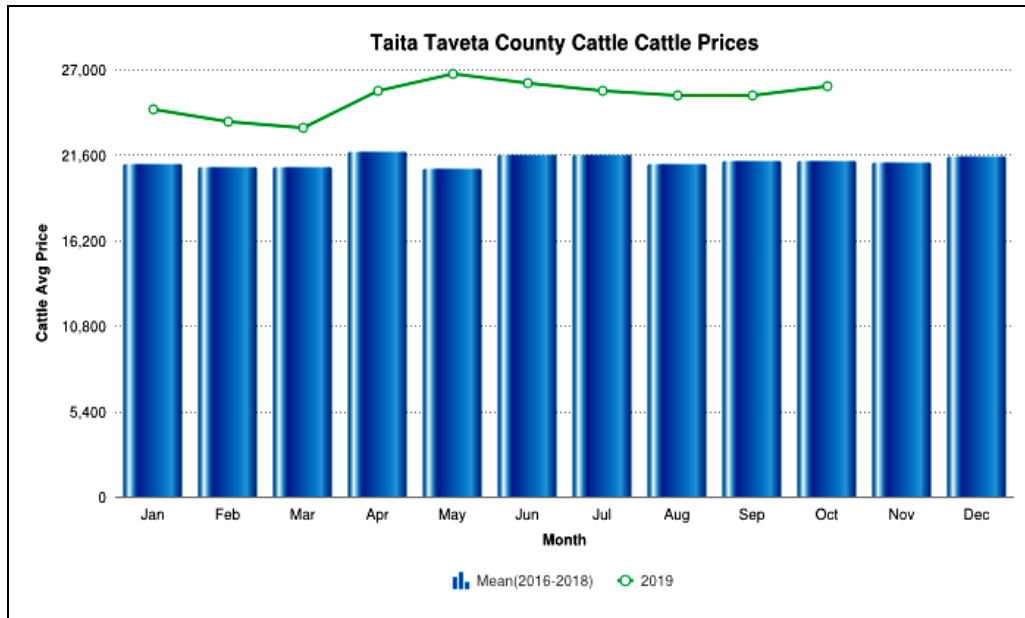
3.2.1 Stage and Condition of food Crops

- The main crops planted were at various stages of vegetative growth and included; maize, sorghum, beans, green grams and cowpeas. The maize crop ranged from germination to knee high, the pulses ranged from germination to tertiary branching/rapid leaf formation.
- The crop is healthy except in swampy areas where some crops exhibited signs of stagnation due to water logging and yellowing of basal leaves associated to nitrogen deficiency but the situation is expected to improve during the projected dry spell in the first week of November.

4. MARKET PERFORMANCE

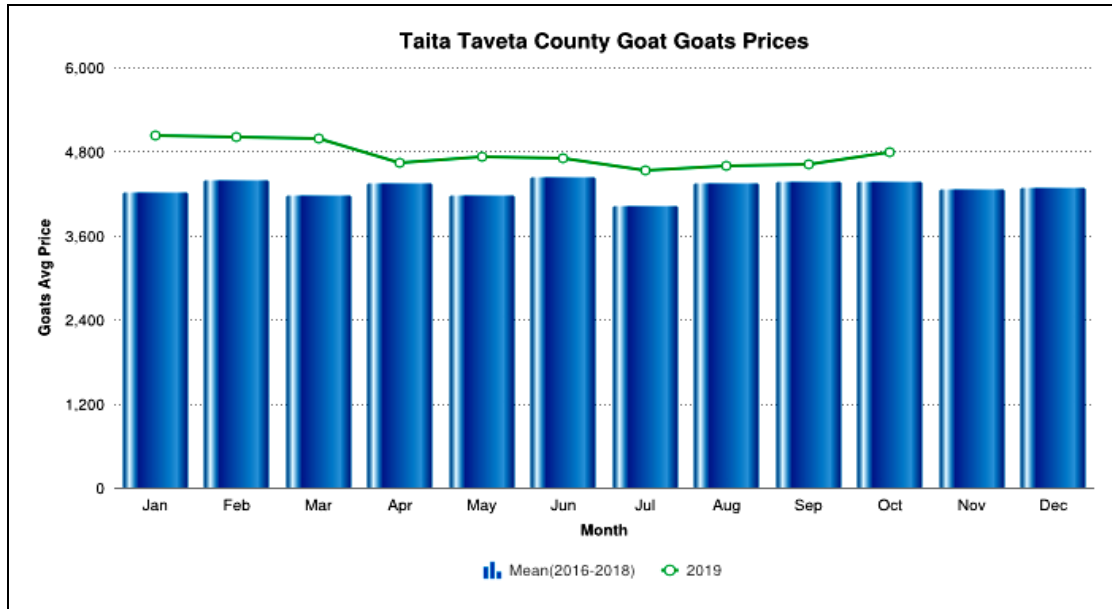
4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices



- The average market price of a three-year-old bull increased slightly by Kshs. 600 to Kshs 25,952 compared to Kshs. 25,381 the previous month. Good forage and good livestock condition had generally contributed to the slight price increase.
- The highest prices were reported in two mixed farming: food crop/livestock livelihood zones and mixed farming: horticulture/ dairy at Kshs. 35,000, Kshs. 33,000 and Kshs. 28,500 respectively while lower prices were also reported in mixed farming: food crop/livestock livelihood at Kshs. 17,000.
- Good pastures following the start of the short rains led to the better market prices for cattle.
- Compared to the long term mean, the county average price was higher by 18 percent.

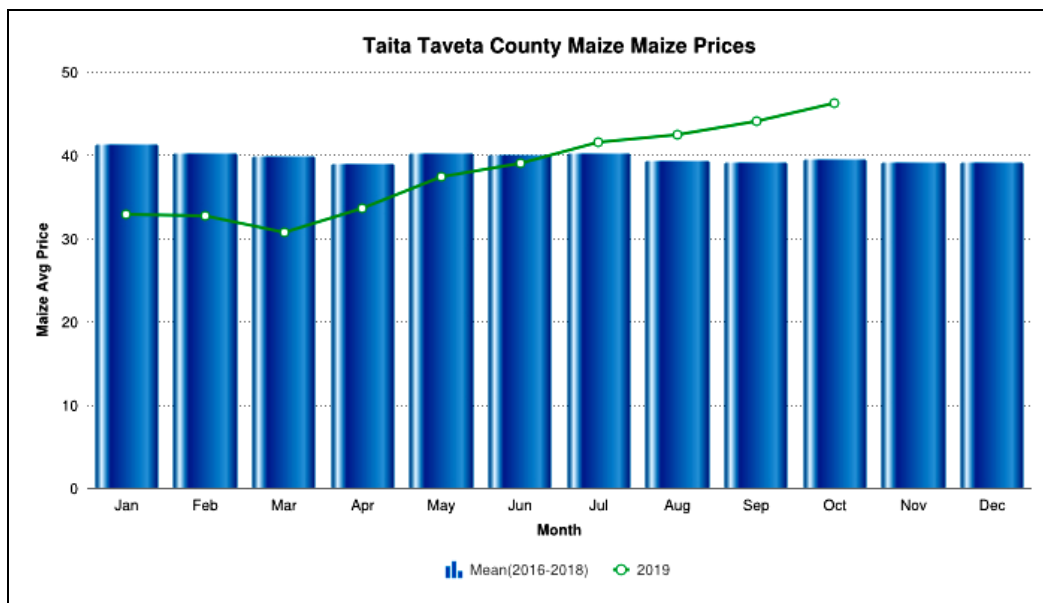
4.1.2 Goat Prices



- The county average market price of a two-year-old goat increased slightly to Kshs 4,800 from Kshs. 4,600 the previous month. Better pastures following the onset of short rains contributed to this rise.
- The highest prices were reported in the mixed farming: horticulture/ dairy livelihood zone of Kshs 6,000 where farmers keep improved breeds that can withstand climatic conditions in the highlands, while lower prices of Kshs 3,500 were reported in mixed farming: food crop/ livestock livelihood zone.
- Compared to long term mean, the average price was higher by 10 percent.

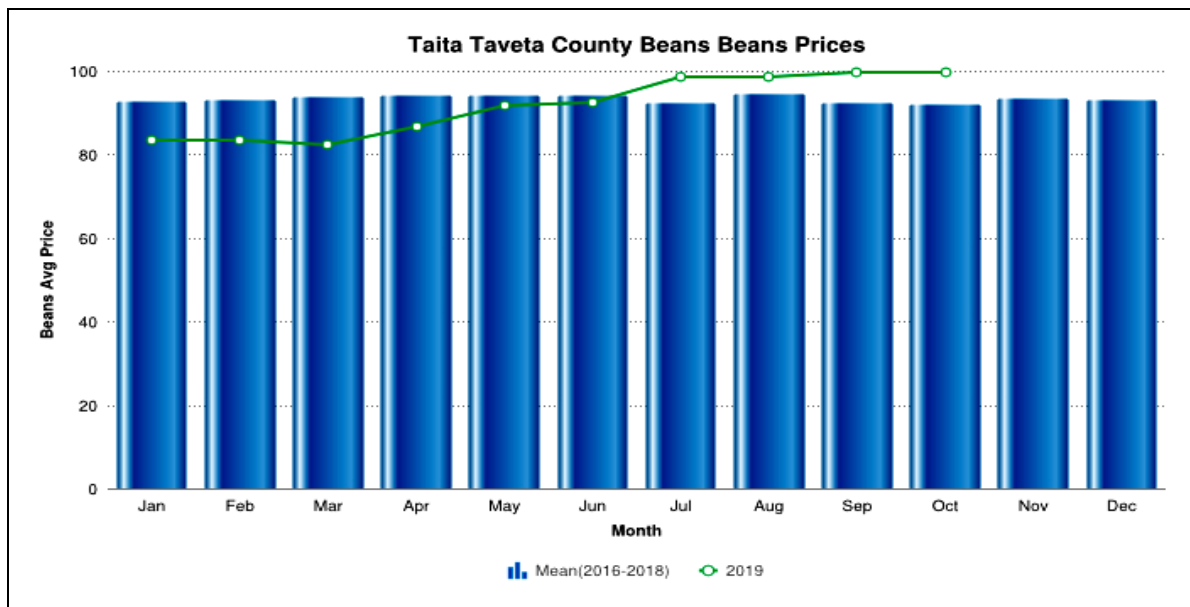
4.2 CROP PRICES

4.2.1 Maize



- The average market price of a kilo of maize increased to Kshs 46.1 compared to Kshs 44 posted in the previous month and above the long term average by 17 percent.
- Above average prices were reported due to increased demand for the product in the markets and the onset of the planting season given that most households have depleted their maize stocks. From household interviews 65 percent relied on markets and 35 percent on own production ;(Mboghoni-27, Wusi-26 and Wumingu-5).
- Across the livelihood zones the highest prices were recorded in the mixed farming; food crops/ livestock livelihood zone (Ghazi, Rukanga and Chumvini markets) at Kshs 50.00; while mixed farming: irrigated/livestock livelihood zone (Taveta Town) recorded a lower price of Kshs 40.

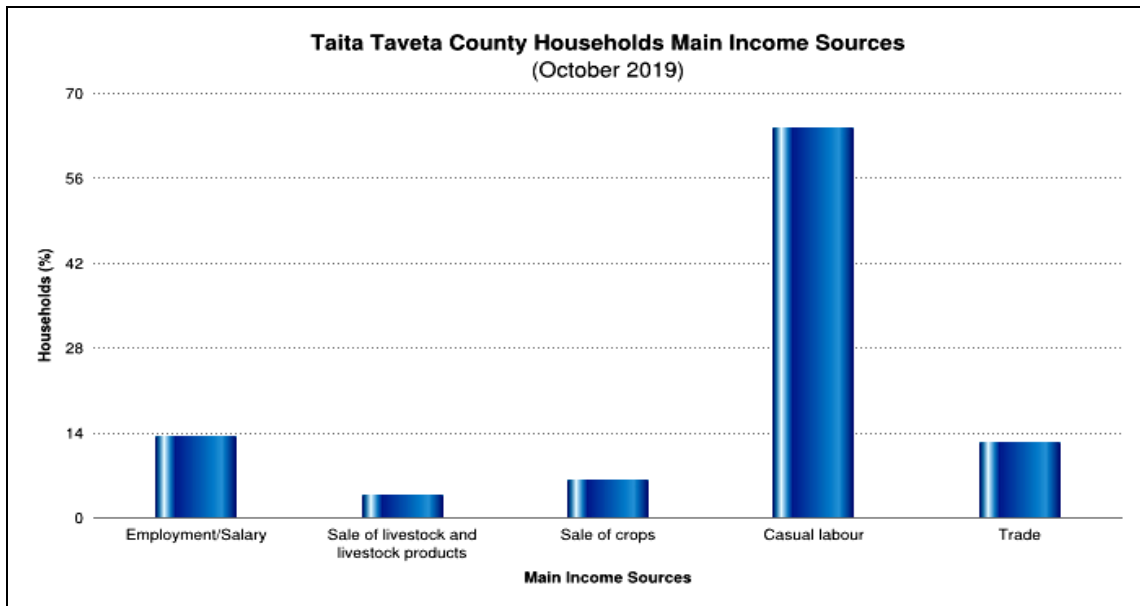
4.2.2 Beans



- The average market price of a kilo of beans remained at Kshs 100 compared to the previous month and above the long term mean by 8 percent. Above normal price was due to increased demand at the market level emanating from depleted bean stocks at household level where 70 percent of households interviewed relied on purchase of food while the remaining 30 percent relied on own production.
- Across the livelihood zones the price varied with the mixed farming: food crops/ livestock livelihood zone (Ghazi, Rukanga, Mwatate, Bura and Chumvini markets) recording the highest price of Kshs 100 and above while mixed farming: horticulture/ dairy livelihood zone (Mghambonyi market) recorded a price of Kshs 90.

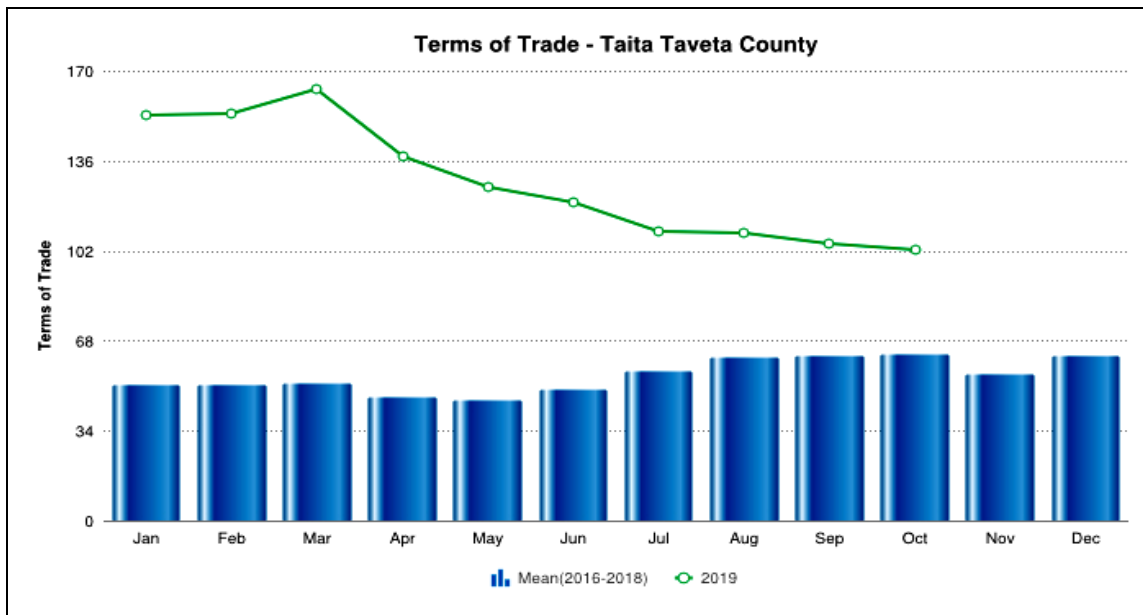
4.3 INCOME

- The main source of income was casual labour. Others included; trade, employment, and sale of livestock and livestock products and sale of crops at lower proportions. The average casual labour wage for the county for the month under review was Kshs. 2660.
- Compared to previous month sources of income remained relatively stable.
- Casual labour opportunities were available in the sisal and banana plantations, irrigation schemes, mining sector, herding, ranches, building sites, road bush clearing and town centres.



n=210HHs

4.4 TERMS OF TRADE (CASUAL LABOUR VERSUS MAIZE PRICES)

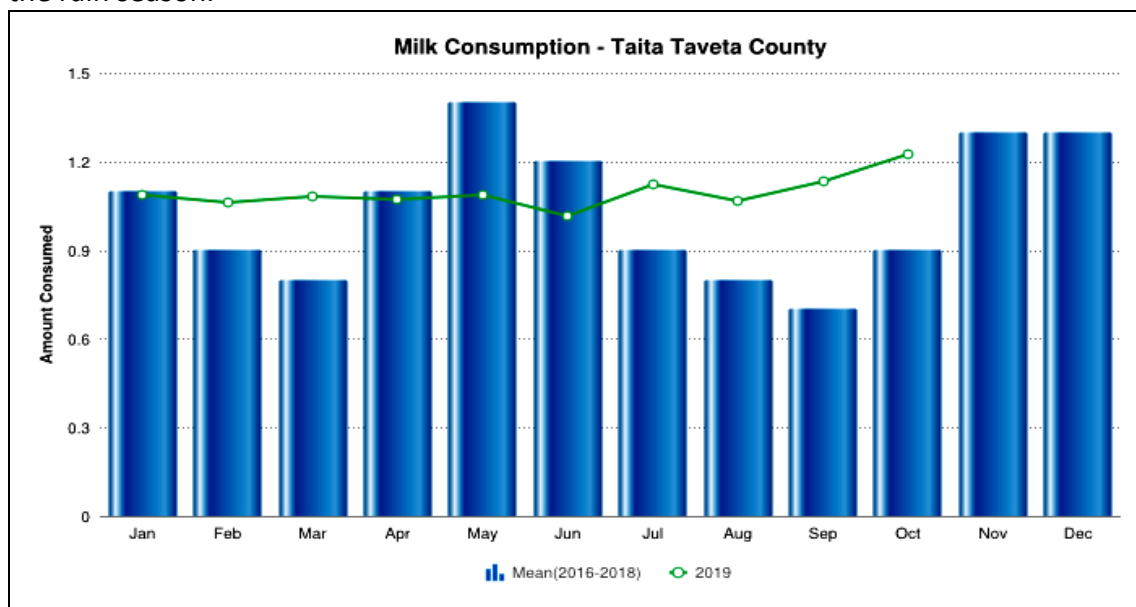


- The Terms of Trade (ToT) ratios dropped by 7 percent to 57 and below long term mean by 9 percent, implying an unfavourable ToT due to increased prices of maize which have resulted to reduced purchasing power of household members.
- ToT ratios by livelihood zones were as follows; mixed farming: irrigated cropping/livestock livelihood zone recorded the highest at 104 due to high wages paid in the irrigation zone coupled with low maize prices, mixed farming: food crops/livestock livelihood zone at 59 and mixed farming: horticulture/ dairy livelihood zone at 58.

5. FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- Milk consumption per household per day increased to 1.2 litres compared to the 1.1 litres for the previous month and above the long term mean by 33 percent. This was as a result of increased milk production brought about by good pasture and browse during the rain season.



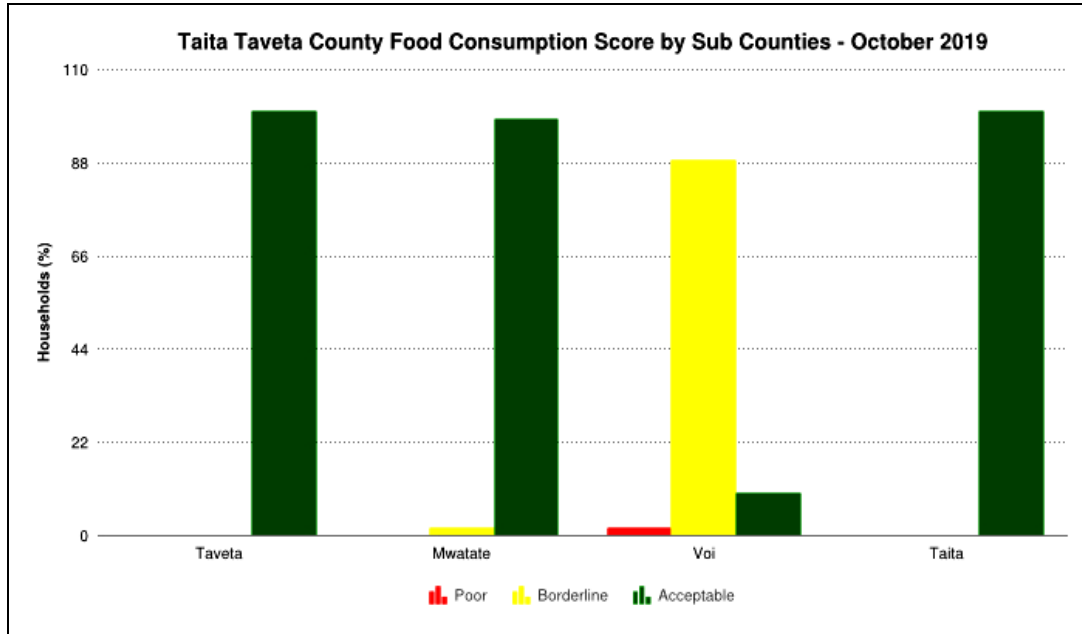
n=210 HHs

- Milk consumption per household per day in regard to livelihood zones; mixed farming: food crops/livestock (1.2 litres), mixed farming: horticulture/ dairy (1.0 litre) and mixed farming: irrigated cropping/livestock (1.3 litres).

5.2 FOOD CONSUMPTION SCORE

- The prevalence of households with acceptable, borderline and poor food consumption score (FCS) was at 73.9, 25.7 and 0.48 percent respectively.
- Compared to a similar period in 2018 where prevalence was at 58, 40 and 2.4 percent for acceptable, borderline and poor FCS respectively, household consumption for the month under review was much better given that more households were in the acceptable food consumption category.
- The current mean food consumption score increased to 58.1 compared to 49.4 posted in the previous month.

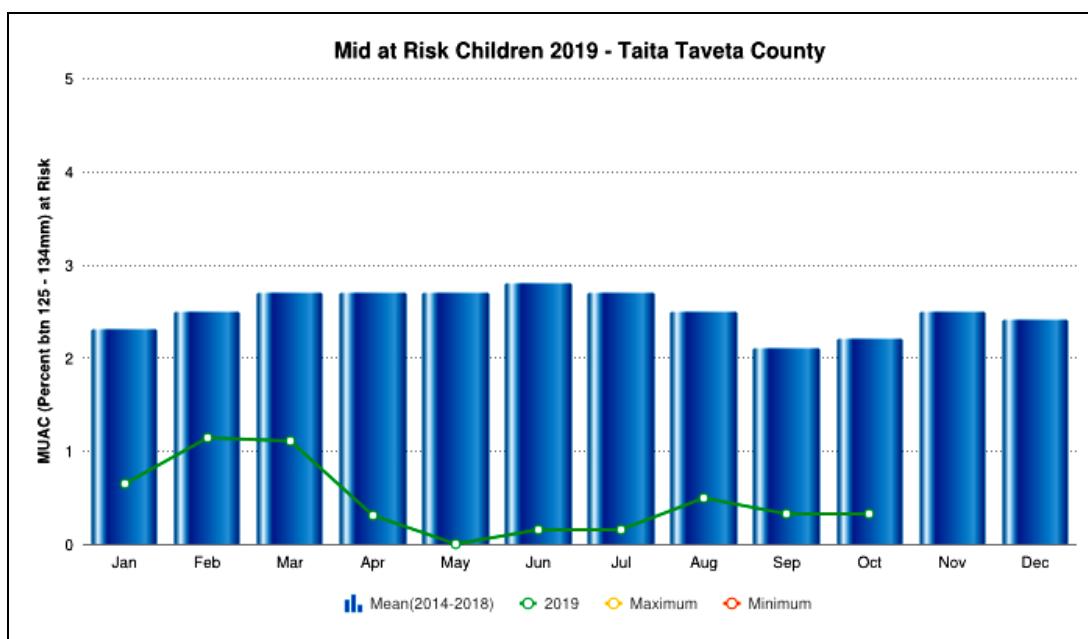
- The mean FCS score was high in the mixed farming: irrigated cropping/ livestock livelihood zone recorded at 85.7 while mixed farming: horticulture/ dairy livelihood zone and mixed farming: food crop/ livestock livelihood zone recorded the lower values of 45.5 and 42.2 respectively. In all the zones most households consumed three food groups i.e. maize, pulses and vegetables and in addition meat and milk was served during the seven days recall period.



n=210HHs

5.3 HEALTH AND NUTRITION STATUS

- A total of 608 children below five years were sampled for MUAC measurement where proportion of male and female was at 58 and 42 percent respectively.



5.3.1 Nutrition Status

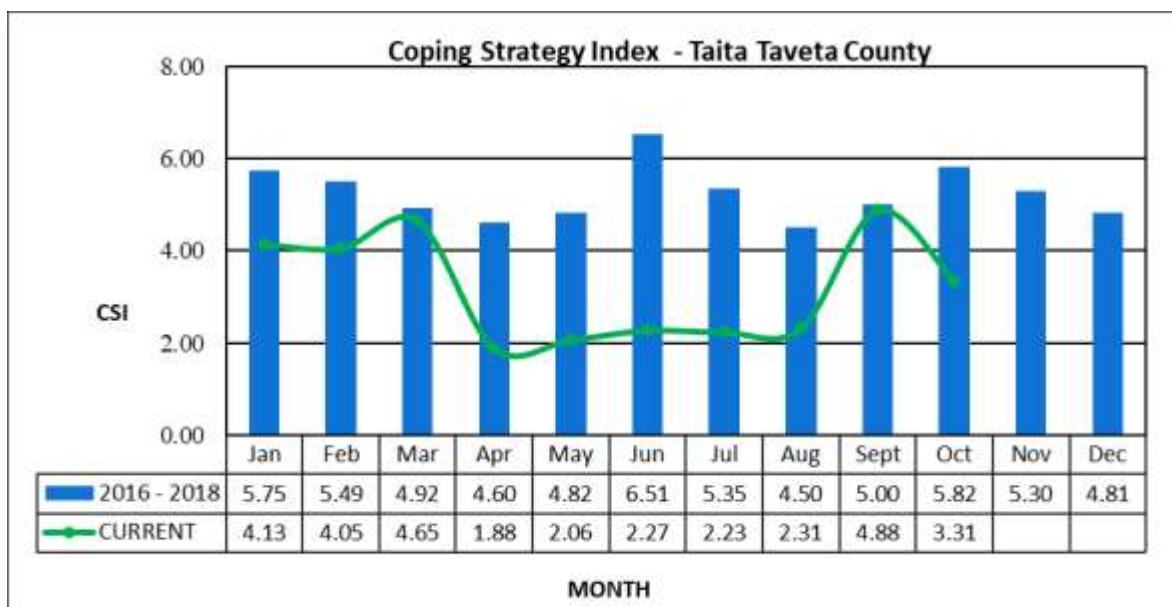
- The proportion of children at risk of malnutrition (125 – 134 mm) remained stable at 0.3 similar to the previous month due to ongoing health and nutrition interventions.
- No cases of GAM by MUAC (moderate 115-124mm) and (Severe<115) were recorded.
- The current proportion of MUAC (125 - 134) was lower than LTM by 86 percent.
- Across all livelihood zones nutrition status of children below five years remained good in the seven sampled sentinel sites.

5.3.2 Health

- Out of the 608 sampled children, 2.3 percent were reported to be ailing from fever with chills like malaria.

5.4 COPING STRATEGIES

- The average Coping Strategy Index (CSI) decreased to 3.31 compared to 4.88 posted in the previous month and relatively same to the long term average. The slight decrease in consumption based coping strategies can be attributed to availability of green leafy vegetables emanating from the rains.
- Generally, most sampled households employed consumption based coping strategies that were within the normal range.
- The current CSI indicate that households were coping more compared to similar period last year where CSI was at 3.06.
- Highest CSI was recorded in mixed farming: food crop/ livestock livelihood zone at 4 while in the mixed farming: horticulture/ dairy livelihood zone CSI was at 3. None of the consumption based coping strategies were employed by households in the mixed farming: irrigated cropping/ livestock livelihood zone.
- The graph below show trend of consumption based coping strategy index in the county.



n=210HHs

6. CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD AND NON FOOD INTERVENTIONS

6.1.1 Sectoral

Intervention	Activities	Implementers
Health and Nutrition Sector		
Agriculture and Livestock Sector		
Improved livestock health and nutrition	<ul style="list-style-type: none">• Vaccination of LSD and FMD	Department of veterinary services
Intensified sensitisation campaigns to famers to grow DTCs	<ul style="list-style-type: none">• Sorghum and green grams promotion under KCEP CRAL	Dept of Agriculture

7. EMERGING ISSUES

7.1 Insecurity/ Conflict/ Human Displacement

- Minor cases of human wildlife conflict in Bura were reported in the month under review.

7.2 Migration

- No cases of in migration were reported in the month under review.

7.3 FOOD SECURITY PROGNOSIS

- Monthly forecast released by the Kenya Meteorological Department projects November as the peak of the rainy season and likely to be characterized by a dry spell during the first week followed by light to moderate rains during the second week and eventually heavy rains with episodes of flash floods during the third and fourth week.
- Soil moisture will be adequate to support various crops planted during this period with minimal water logging effects.
- Current prices of food crops will continue to increase as stocks diminish.
- Milk production will likely stabilize or increase with increased access to forage and water.
- Availability of casual labor opportunities and wage rates in the farms are likely to increase and stabilize the terms of trade.
- Body condition of livestock likely to remain stable till end of the month.
- Forage and water condition likely to improve till end of the season.

8. RECOMMENDATIONS

Agriculture and Livestock Sector

- Post-harvest management and aflatoxin surveillance with focus to the harvest of the irrigated crop harvest and food stocks supplies in the markets.
- Crop protection against pest and diseases.

- Intensify campaigns on pasture harvesting
- Intensify campaigns on soil fertility management
- Sensitisation on flash flood management

Health and Nutrition

- Household level water treatment and storage to increase access to safe drinking water.