

National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR JULY 2019



A Vision 2030 Flagship Project



JULY 2019 EW PHASE



Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming: Food Crops/ Livestock	Normal	Deteriorating
Mixed Farming: Food Crops/ Horticulture/Dairy	Normal	Deteriorating
Mixed Farming: Irrigated Cropping/ Livestock/Food Crops	Normal	Stable
National Park	Normal	Deteriorating
County	Normal	Deteriorating
Biophysical Indicators	Value	Normal Range/ Value
Rainfall 3 Months Anomaly	108	80 - 120
VCI-3Month	53.08	35 - 50
Production indicators	Value	Normal
Crop Condition (maize)	Withered	Harvesting
Livestock Body Condition for cattle	Good	Good
Milk Production per HH/ day	3.5	3.0 Litres
Livestock Migration Pattern	Normal	Normal
Access Indicators	Value	Normal
Terms of Trade (Casual labour Vs maize prices)	68.4	56.2
Milk Consumption per HH/ day	1.1	0.9 Litres
Return HHs distance to water sources	2.6	2.4 Km
Water source return distance from grazing areas	3.7	3.3 Km
Cost of water (20 litres)	3.00	< Kshs 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	0.2	<3.0

Drought Situation & EW Phase Classification

Biophysical Indicators

- The County experienced light rains coupled with low temperatures. The rains were reported in the highlands and were within the normal range (3 Months Anomaly).
- The county vegetation greenness condition was above the normal range (3 Months VCI 53.08).

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Maize crop failed in the lowlands due to moisture stress and highland farmers expect below normal harvest. Also, minimal harvests were realized for green grams, cowpeas and beans due to unfavorable rainy season.
- Livestock body condition was good for all species.
- Milk production per HH per day was above normal.

Access Indicators

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

Utilization Indicators

- The proportion of children at risk of malnutrition remained 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

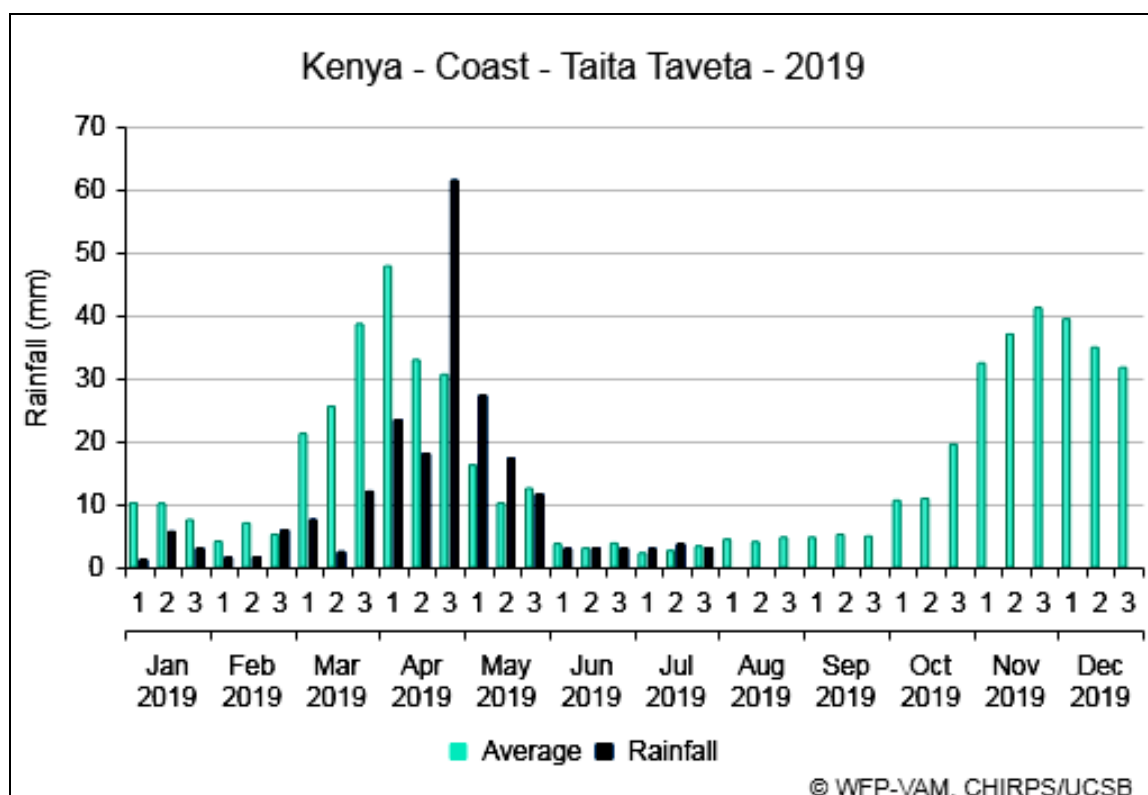
1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The county experienced light rains and low temperatures in the month under review mainly in the highlands of the County.
- No rainfall was recorded in the lowlands of the county.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- According to WFP-VAM, Climate Hazards Group InfraRed Precipitation with Station Data (CHIRPS) indicated a one month's rainfall anomaly of 108 percent.
- The precipitation was spread across the month and recorded at 8.6 mm.
- The rainfall amounts were above the long term averages by six percent.

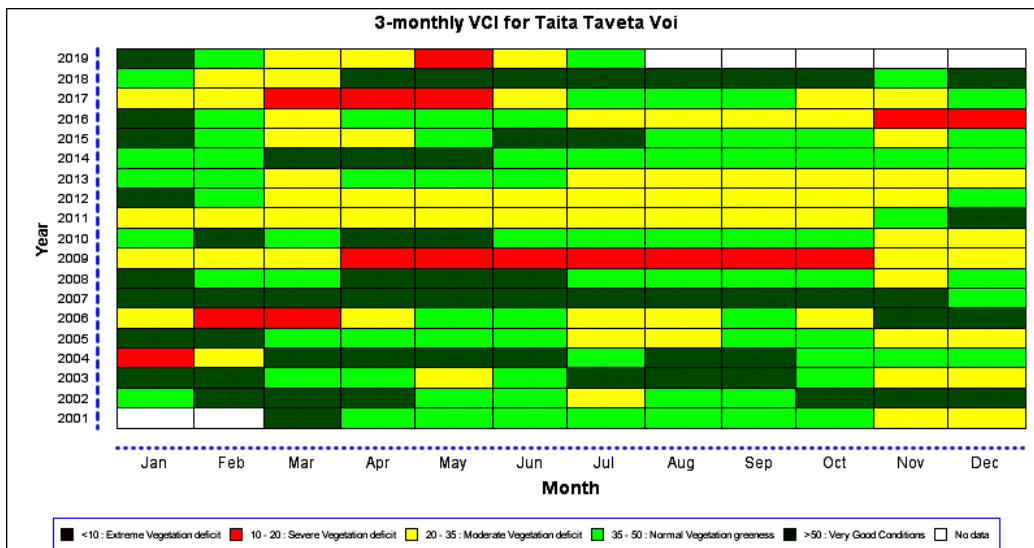
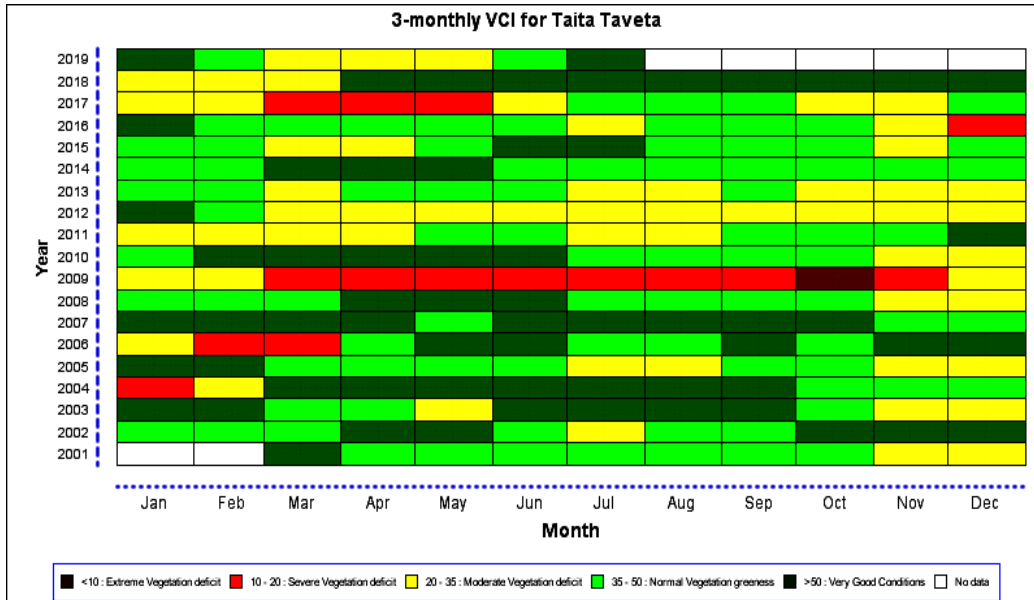


2. IMPACTS ON VEGETATION AND WATER

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 53.08.
- All the other sub counties were in the very good condition band in terms of vegetation greenness in exception of Voi Sub County which was in the normal vegetation greenness band with 3M - VCI value of 41.33.



2.1.2 Pasture

- From the sampled communities 29, 57 and 14 percent reported pasture condition was good, fair and poor respectively. Compared to similar season in the previous year respondents reported situation to be normal in the areas that received good rains and below normal where minimal rains were realized.

- In comparison to the previous month pasture situation has deteriorated and mainly in the lower parts of the county that did not receive good rains during the season. These areas are lower parts of Ngolia Ward and Marungu Ward in Voi Sub County; Mwaroko, Sangenyi, lower parts of Wumingu/Kishushe Ward in Taita Sub County; Mgeno, Mwachabo, Mzwanenyi, Msau and Kighombonyi in Mwatate Sub County, and Mata and Challa Wards in Taveta Sub County.
- Pasture variation by livelihood zone indicated the situation was better in the mixed farming: horticulture/ dairy located in the highlands compared to mixed farming; food crops/ livestock livelihood zone in the lowlands. Mixed farming: irrigated cropping/ livestock livelihood zone farmers practise zero grazing and rely on crop residues and grass along the drainage canals.

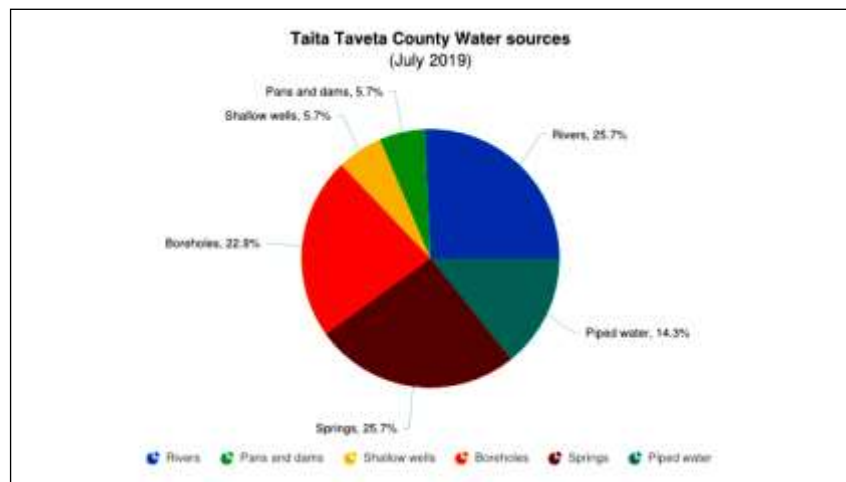
2.1.3 Browse

- From community interviews 33, 62 and five percent of the respondents reported browse situation to have been good, fair and poor respectively.
- Compared to the previous month, the browse situation deteriorated given that the number of respondents reporting good vegetation condition dropped by 33 percent.
- From community interviews 95 percent of respondents reported browse condition was normal for this time of the year while five percent reported browse condition to be above normal.
- Available browse is expected to cater for livestock for the next three months.

2.2 WATER RESOURCE

2.2.1 Sources

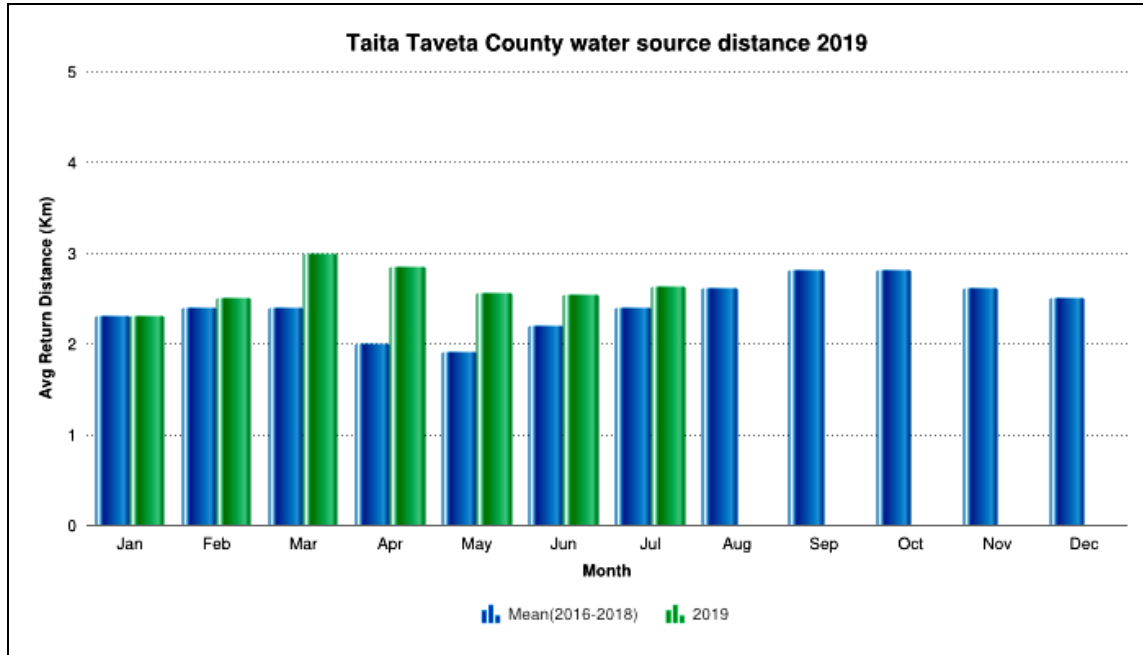
- The four main sources of water in use by both households and livestock were rivers, springs, boreholes and piped water systems and were relied upon by 25.7, 25.7, 22.9 and 14.3 percent of the households respectively. Other sources included shallow wells and water pans.



- Proportion of those using boreholes and piped water systems increased by five and three percent respectively while those relying on water pans dropped by five percent.
- Water situation is expected to remain normal in the highlands for the next three months and one to two months in the lowlands. However, areas that did not receive good rains reported water stress; Sangenyi, Mwaroko, Kishushe, Mbaramghondi, Mgeno and Orkung.

2.2.2 Household Access and Utilization of Water

- The average return distance from households to main water sources increased to 2.6 km from 2.2 km posted in the previous month and above long term average by eight percent. The increase in distance was due to breakdown of water facility (Wusi Ward) and drying up of water sources especially water pans with low holding capacity and those located in areas that did not receive adequate rains.



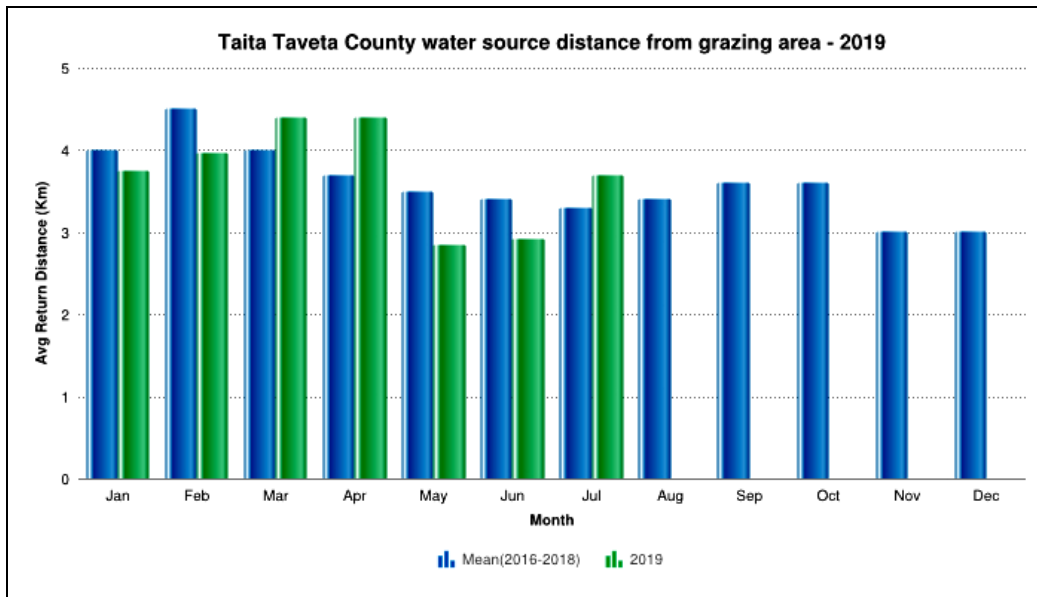
n=21Key Informants

- Water consumption per person per day remained at 23, 19 and 9 litres in mixed farming: horticulture/ dairy livelihood zone, mixed farming: irrigated cropping/ livestock livelihood zone and mixed farming: food crops/ livestock livelihood zone respectively.
- Proportion of households purchasing water remained at 71 percent as posted in the previous month and price per 20 litre Jerry can ranged between Kshs 1 - 5 at source across all livelihood zones and Kshs 10 - 20 from vendors in Orkung, Chunga Unga, Mwakajo, Kisimenyi and Ngambenyi due to varying distances.
- An estimated 21 percent of the sampled households treated water before drinking. Out of these 88, 7 and 5 percent practised use of water treatment chemicals, boiling and filtration respectively compared to 92 and 8 percent that used water treatment chemicals and boiling respectively posted in the previous month.
- Households treating water before drinking by livelihood zone was as follows; Food crop/ livestock zone six percent, Horticulture/ dairy 13 percent and irrigated cropping/ livestock 100 percent.

2.2.3 Livestock Trekking Distance to Water Sources from Grazing Areas

- Return distance to water source from grazing areas increased to 3.7 km from 2.9 km posted in the previous month and below long term average by 12 percent as indicated in the graph below. The increase was due to drying up of water pans at the grazing areas.

- In all livelihood zones frequency of watering was maintained at once per day for cattle and goats as compared to the past month.
- However, in the mixed farming: horticulture/ dairy livelihood zone watering for cattle and sheep was twice a day.



n=21Key Informants

3. PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

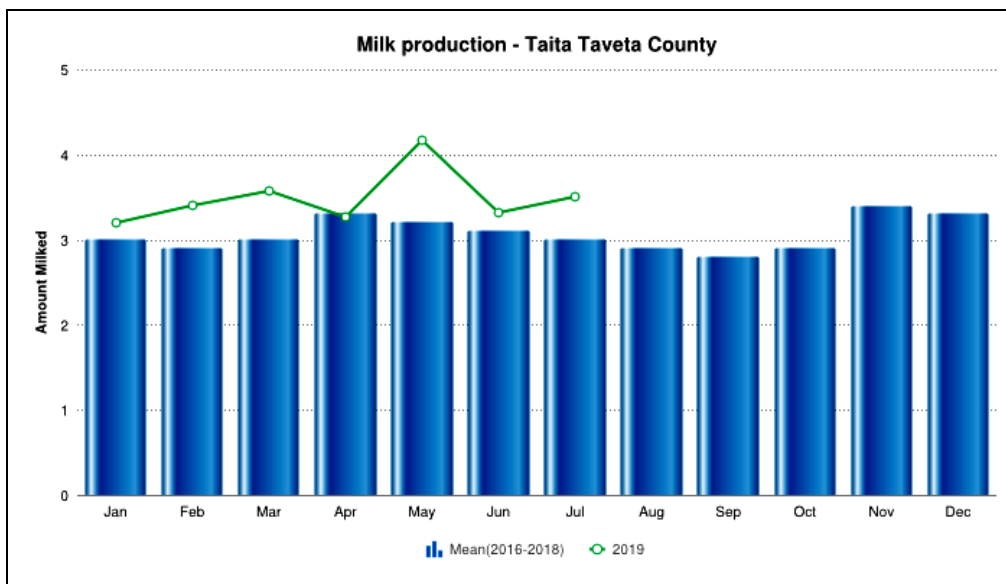
- The livestock body condition for all species was good across the county.
- In all livelihood zones more than 90 percent of cattle observed were in good smooth appearance and moderate, neither fat nor thin categories.
- Cattle body condition is expected to deteriorate mainly in areas mentioned above where pasture situation is fair.
- Compared with a similar period last year pasture condition was normal.

3.1.2 Livestock Diseases

- No abnormal disease outbreak was reported.

3.1.3 Milk Production

- The average milk production (cow) per household per day rose by 13 percent to 3.5 litres compared to the previous month. The increase was recorded in Wusi Ward where calving was reported in various households.



n=210 HHs

- Milk production for the month under review was above the normal by 17 percent.
- Relatively, quantity of milk produced per household per day remained stable compared to previous month; mixed farming: horticulture/ dairy livelihood zone at nine litres, in the mixed farming: irrigated cropping/ livestock livelihood zone at three litres and lowest at two litres in the mixed farming: food crop/ livestock livelihood zone.

3.2 RAIN-FED CROP PRODUCTION

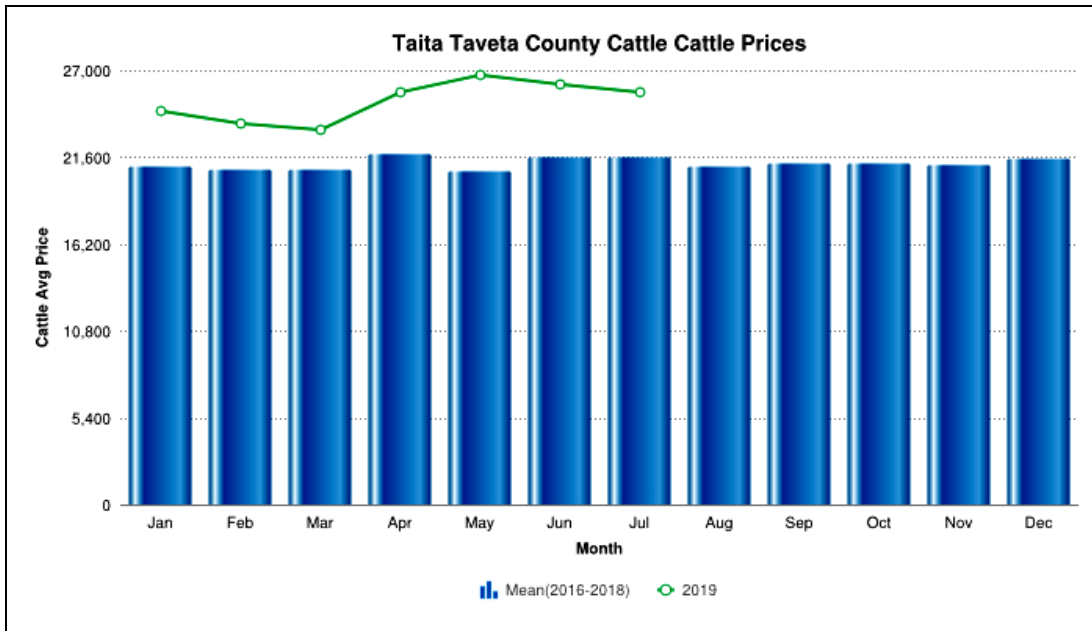
3.2.1 Stage and Condition of food Crops

- Maize crop failed especially in the rain fed lowlands and farmers are using the residue to feed their livestock. However, a few farmers from Bura and Wusi Wards and the highlands of the county realized harvests below normal.
- Minimal food stocks are expected at household level especially in the rain fed lowlands.

4. MARKET PERFORMANCE

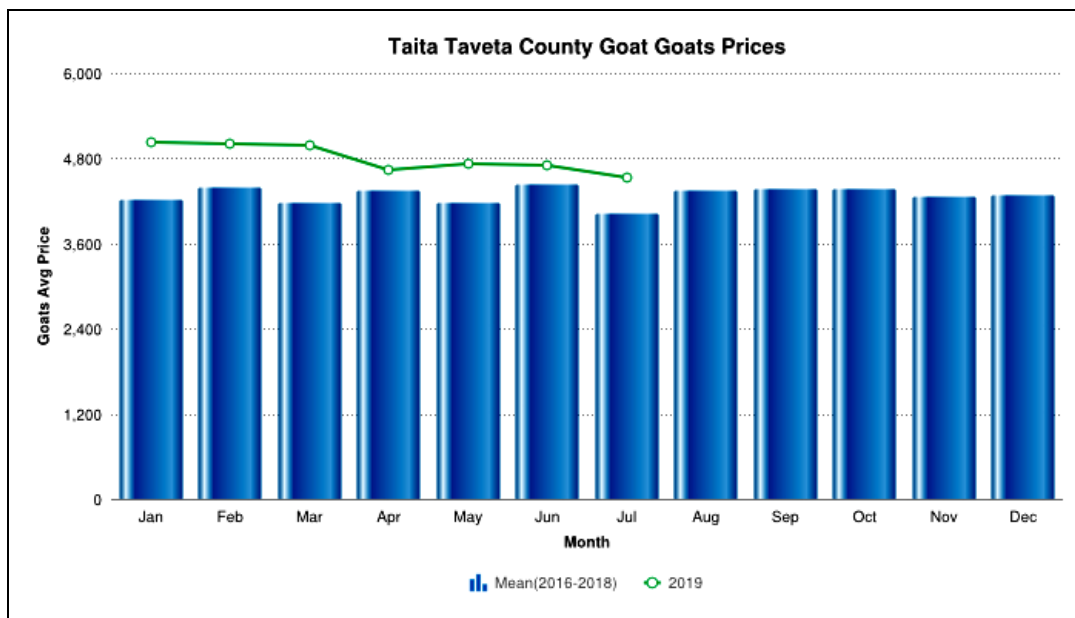
4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices



- The average market price of a three-year-old bull remained relatively stable at Kshs 26,000 compared to the previous month. Prices continued to be high due to good body condition.
- The highest prices were reported in the mixed farming: horticulture/ dairy livelihood zone of Kshs 30,000 and food crops/ livestock of Kshs 25,000 while lower prices were reported in mixed farming: irrigated cropping/ livestock livelihood zone at Kshs 22,000.
- Compared to the long term mean, the county average price was higher by 19 percent.

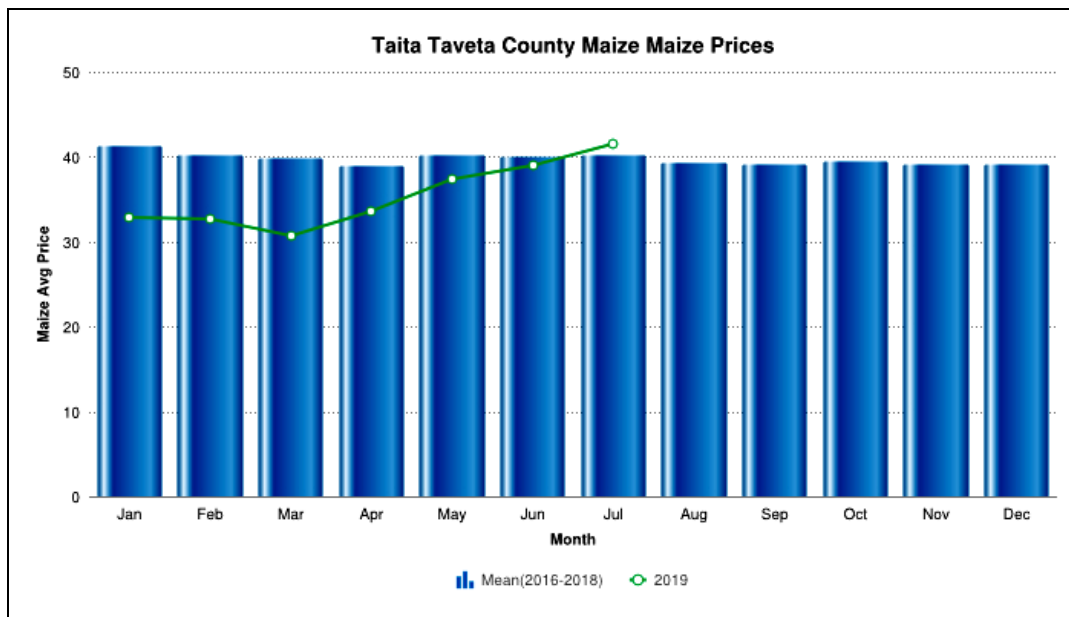
4.1.2 Goat Prices



- The county average market price of a two-year-old goat decreased to Kshs 4,500 from Kshs 4,700 posted in the past month.
- The highest prices were reported in the mixed farming: horticulture/ dairy livelihood zone of Kshs 6,000, the lower prices were reported in mixed farming: food crop/ livestock livelihood zone and mixed farming: irrigated cropping/ livestock livelihood zone each at Kshs 4,000. The difference in price is due to improved breeds kept mainly in the highlands of the county.
- Compared to long term mean, the average price was higher by 12 percent.

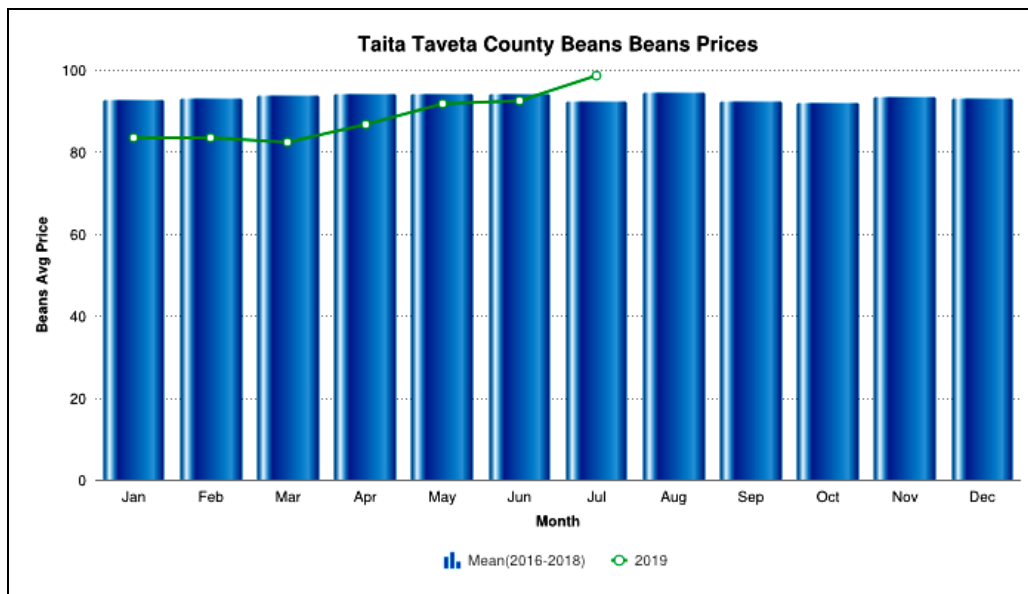
4.2 CROP PRICES

4.2.1 Maize



- The average market price of a kilo of maize rose by six percent to Kshs 41 compared to the previous month and above the long term average by three percent.
- The increase in price was a result of increased in demand for the product in the markets given that most households have depleted their maize stocks.
- Across the livelihood zones the price varied with the mixed farming: food crops/ livestock livelihood zone (Ghazi, Rukanga and Mwatate markets) recording high prices of Kshs 43.00; mixed farming: horticulture/ dairy livelihood zone (Mghambonyi) of Kshs 40; Mixed farming: irrigated/livestock livelihood zone (Mboghoni, Challa, Chumvini and Taveta markets) in Taveta Sub County reported lowest prices of Kshs 35.00 per kilo.

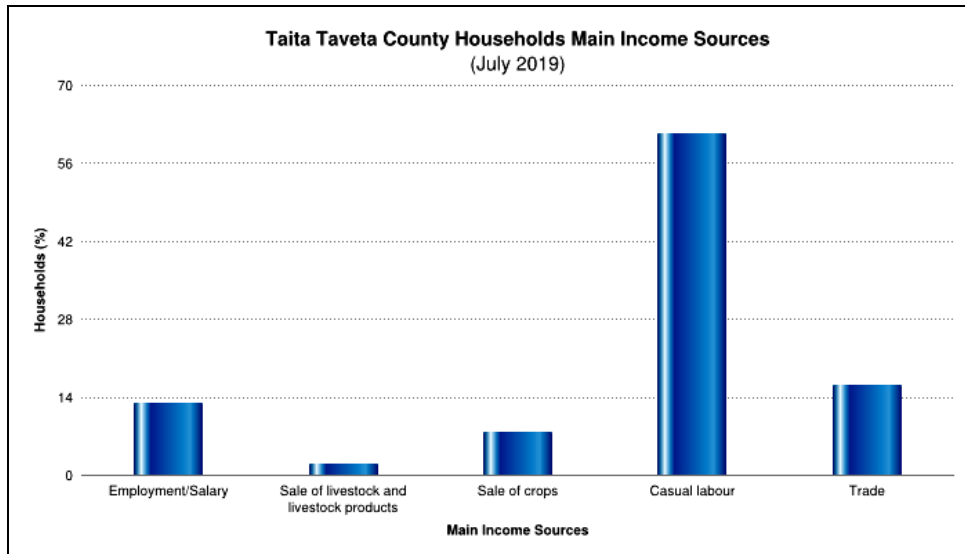
4.2.2 Beans



- The average market price of a kilo of beans rose by seven percent to Kshs 99 compared with previous month and below the long term mean by seven percent. Upward trend of price was resulted by increased demand at the markets due to bean stocks depletion at household level.
- Across the livelihood zones the price varied with the mixed farming: food crops/ livestock livelihood zone (Ghazi, Rukanga, Mwatate and Bura markets) recorded the highest price of Kshs 100; mixed farming: horticulture/ dairy livelihood zone (Mghambonyi market) of Kshs 83 and mixed farming: irrigated/livestock livelihood zone (Mboghoni, Challa, Chumvini and Taveta markets) in Taveta Sub County of Kshs 90.00 per kilo.

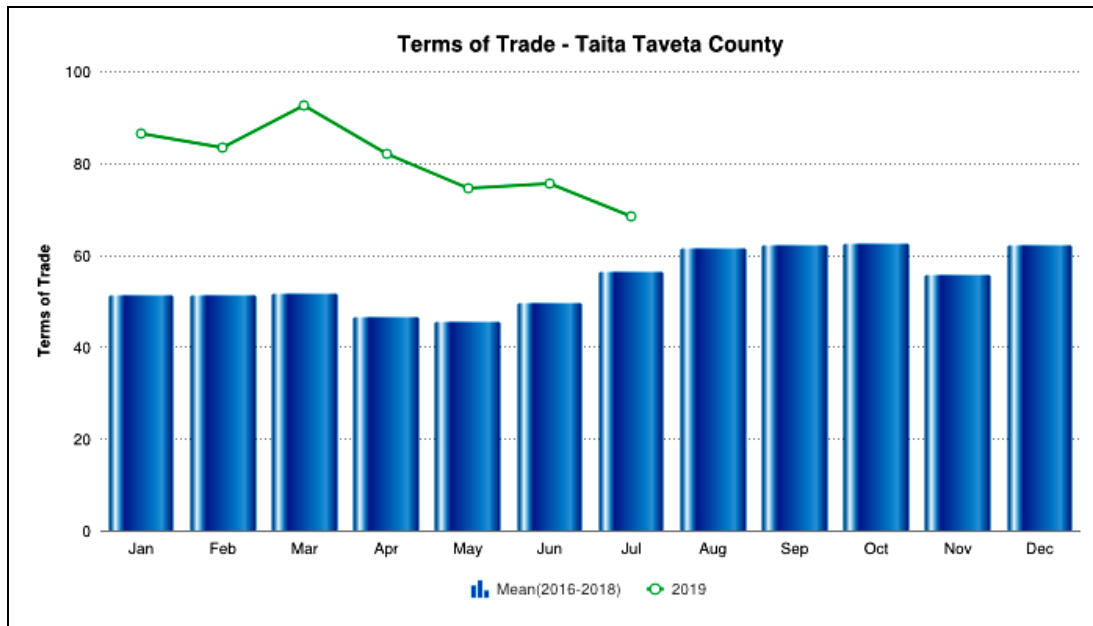
4.3 INCOME

- 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.
- Compared to previous month sources of income remained relatively stable. However, compared to a similar period last year sale of livestock and livestock products and sale of crops dropped by 69 and 12 percent respectively. Long rains in the previous year performed above normal.
- 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)

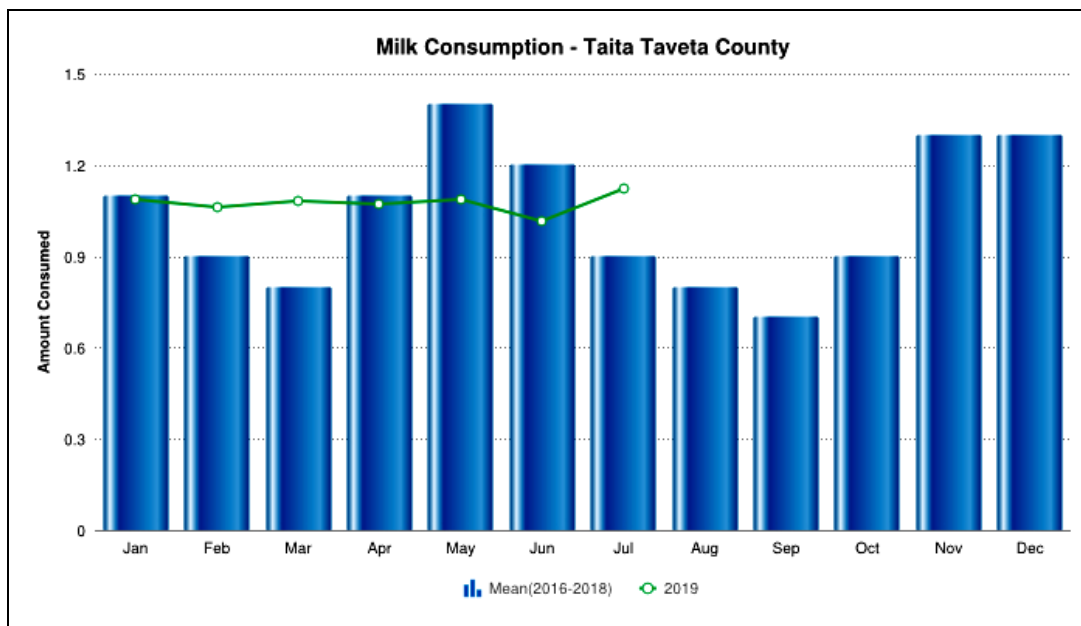


- The Terms of Trade (ToT) ratios dropped by nine percent to 68 and above the long term mean 22 percent implying an unfavourable ToT due to increased prices of maize which resulted to reduced purchasing power of household members.
- ToT ratios by livelihood zones were as follows; mixed farming: irrigated cropping/livestock livelihood zone at 103, mixed farming: food crops/livestock livelihood zone at 62 and mixed farming: horticulture/ dairy livelihood zone at 55. Low ratio of ToT in the horticulture zone was due to low wages paid to the few available casual labour opportunities. Only twenty percent of sampled households were involved in casual labouring in this zone.

5. FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- Milk consumption per household per day rose to 1.1 litres compared to 1.0 litre posted in the previous month and above the long term mean by 22 percent.



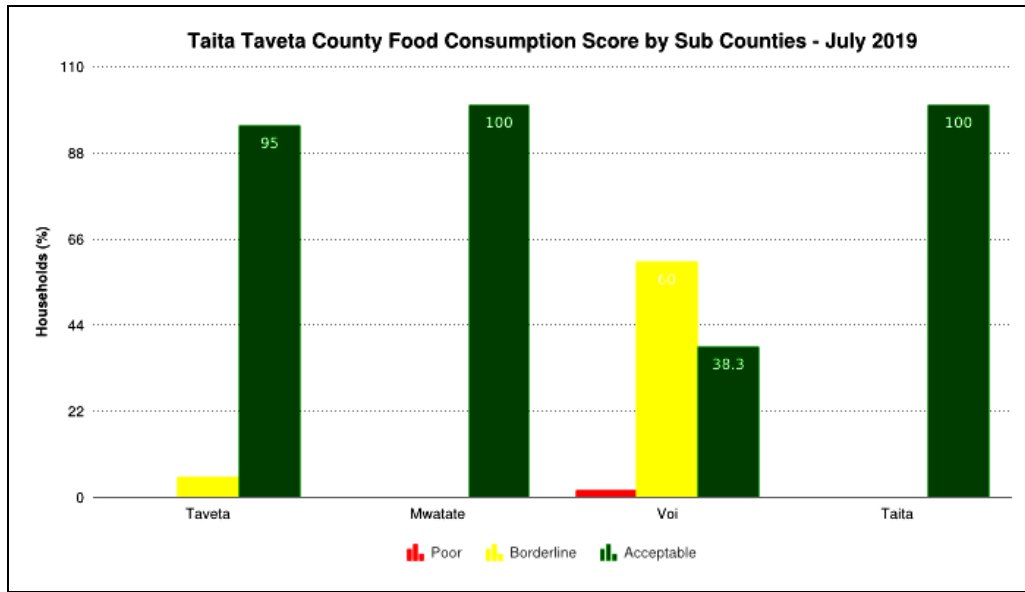
n=210 HHs

- Milk production per household per day in regard to livelihood zones; mixed farming: food crops/livestock (0.9 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 81.0, 18.5 and 0.5 percent respectively.
- Compared with previous month, food consumption in terms of dietary diversity in Voi Sub County dropped where 0.5 percent of households categorized to be in borderline FCS moved to poor FCS.
- Compared with similar period in 2018 where prevalence was at 51, 48 and one percent for borderline, acceptable and poor FCS respectively, household consumption is currently much better given that more households are in the acceptable food consumption category.
- The current mean food consumption score stood at 56.17 compared to 60.09 posted in the previous month and the drop was reflected in Voi Sub County where food consumption patterns deteriorated.
- The mean FCS score was high in the mixed farming: irrigated cropping/ livestock livelihood zone recorded at 75.93 while mixed farming: horticulture/ dairy livelihood zone and mixed farming: food crop/ livestock livelihood zone recorded the lower values of 47.52 and 45.06 respectively. In all the zones most households consumed three food

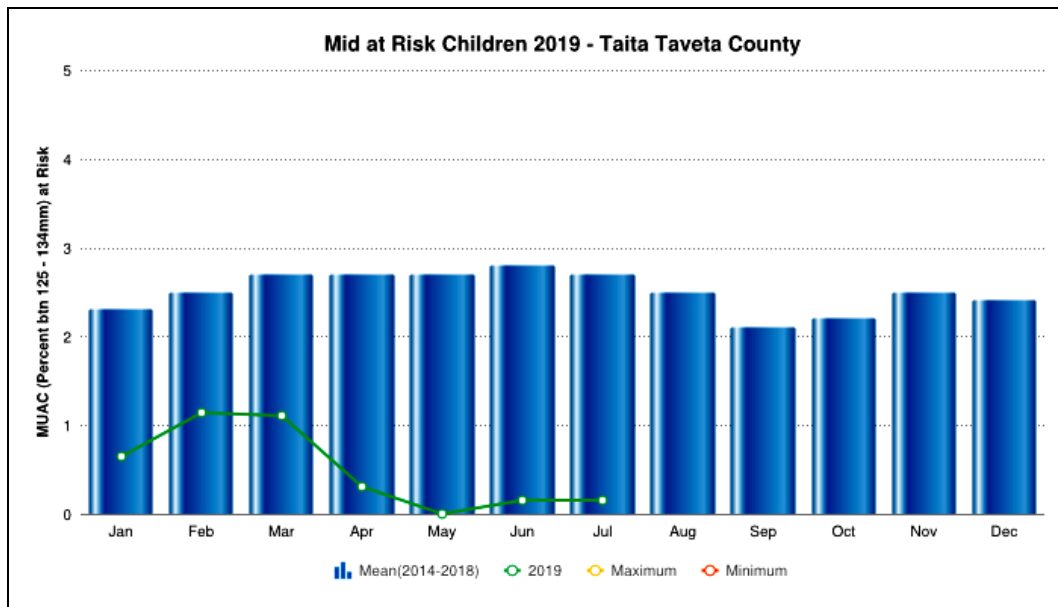
groups i.e. maize, pulses and vegetables and in addition meat and milk was served during the seven days recall period.



n=210HHs

5.3 HEALTH AND NUTRITION STATUS

- A total of 628 children below five years were sampled for MUAC measurement where proportion of male and female was at 55 and 45 percent respectively.



5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition (125 – 134 mm) stood at 0.2 percent as recorded in the previous month.
- No cases of GAM by MUAC (115 -124 mm) and Severe<115 mm were recorded
- The current proportion of MUAC (125 - 134) was lower than LTM by 93 percent.

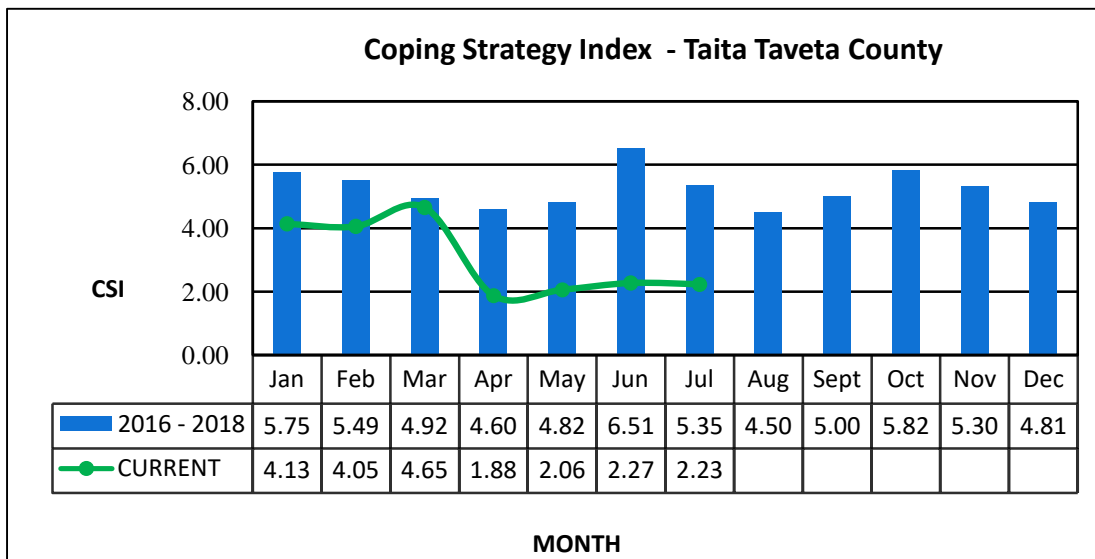
- Across all livelihood zones nutrition status of children below five years remained good in the seven sampled sentinel sites.

5.3.2 Health

- Out of the 628 sampled children two percent were reported to be ailing from fever with chills like malaria.

5.4 COPING STRATEGIES

- The average Coping Strategy Index (CSI) remained relatively stable at 2.23 compared to 2.27 posted in the previous month and below the long term average by 58 percent implying household were employing normal consumption based coping strategies.
- Similar period last year CSI was at 2.67 (i.e. 20 percent above) meaning households are better off this time of the year compared to similar period last year.
- Highest CSI was recorded in mixed farming: horticulture/ dairy livelihood zone at 3.0 while mixed farming: food crop/ livestock livelihood zone CSI was at 2.52. 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
Agriculture & Livestock Sector		
Rehabilitation of Njoro Kubwa canal	Desiltation of drainage canal and construction of floods control walls	Dept of Agriculture, Livestock & Irrigation – KCSAP
Promotion of Banana production, Transformation and Transportation	Construction of Banana Marketing and Processing Plant	Dept of Agriculture & Livestock – EU
Disease Surveillance/Control (Defence Threat Reduction)	Surveillance of Anthrax	Dept of Agriculture & Livestock - Michigan University
Water Sector		
Provision of Water	Mlilo – Kishushe water project in Wumingu/ Kishushe Ward	CWSB
Multi-Sector		
Coordination	Long Rains Food security Assessment	KFSSG and CSG

7. EMERGING ISSUES

7.1 Insecurity/ Conflict/ Human Displacement

- Marauding elephants reported in settlement areas of Mbololo, Sagalla and Kasigau Wards, Voi Sub County.

7.2 Migration

- Migration was reported in Taveta Sub County where herders have moved livestock from Jipe to Rombo and Toloha in neighbouring country of Tanzania.

7.3 FOOD SECURITY PROGNOSIS

- The county experienced maize crop failure plus production of beans, cowpeas and green grams was minimal resulting to no food stocks at household levels. Household members especially in the rain fed lowlands rely on markets where prices are on an upward trend.
- Household food consumption score is expected to deteriorate with majority of households moving to borderline food consumption score. Increased severe consumption based coping strategies are likely to be employed such as borrowing food or relying on friends and relatives hence impacting negatively on nutritional status of children under five years.

- Livestock sector is expected to deteriorate slightly in the coming month as quality and quantity of pasture is expected to deteriorate as we enter the dry season.
- The water sector is expected to remain stable in the coming month apart from a few pockets where rains performed poorly.
- No mortalities are expected as a result of food insecurity.

8. RECOMMENDATIONS

Agriculture and Livestock Sector

- Surveillance, prevention and control on FMD, LSD, RVF.
- Up scaling of fodder and pastures conservation and preservation
- Provision of post-harvest management trainings to farmers who harvested.

Public Health and Nutrition Sector

- Household level water treatment and provision of water treatment chemicals.

Peace and Security Sector

- KWS to enhance surveillance in areas bordering the park especially in Sagalla, Kasigau and Ngolia Wards.