

# National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2019



A Vision 2030 Flagship Project



## JANUARY 2019 EW PHASE



## Early Warning Phase Classification

| Livelihood Zone  | Phase         | Trend               |
|--|---------------|---------------------|
| Mixed Farming: Food Crops/<br>Livestock                    | Normal        | Deteriorating       |
| Mixed Farming: Food Crops/<br>Horticulture/Dairy           | Normal        | Stable              |
| Mixed Farming: Irrigated Cropping/<br>Livestock/Food Crops | Normal        | Stable              |
| National Park  | Normal        | Stable              |
| <b>County</b>  | <b>Normal</b> | <b>Stable</b>       |
| Biophysical Indicators                                     | Value         | Normal Range/ Value |
| Rainfall (% of Normal)                                     | 104           | 80 - 120            |
| VCI-3Month   | 52.45         | 35 - 50             |
| Production indicators                                      | Value         | Normal              |
| Crop Condition (maize & legumes)                           | Good          | Good                |
| Livestock Body Condition for cattle                        | Good          | Good                |
| Milk Production per HH/ day                                | 3.4           | 3.0 Litres          |
| Livestock Migration Pattern                                | No Migration  | No Migration        |
| Access Indicators  | Value         | Normal              |
| Terms of Trade (ToT)                                       | 151.1         | 109.6               |
| Milk Consumption per HH/ day                               | 1.2           | 1.1 Litres          |
| Return HHs distance to water sources                       | 2.4           | 2.3 Km              |
| Water source return distance from grazing areas            | 3.6           | 4.0 Km              |
| Cost of water (20 litres)                                  | 3.00          | < Kshs 5.00         |
| Utilization indicators                                     | Value         | Normal              |
| Nutrition Status, MUAC (% at risk of malnutrition)         | 0.6           | <3.0                |

### Drought Situation & EW Phase Classification

#### Biophysical Indicators

- The rains recorded during the month under review were within the normal range.
- The off season light rains were realized mainly in the highlands of the county.
- The county vegetation condition index was above normal. The VCI for the four Sub Counties depicted vegetation greenness above normal.

#### Socio Economic Indicators (Impact Indicators)

##### Production Indicators

- Crop condition of maize & legumes was good.
- 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 the normal range.
- Distances to water sources from grazing areas were below the normal range.

##### Utilization Indicators

- The proportion of children at risk of malnutrition remained within the normal range an implication of improved nutrition status.

### Seasonal Calendar

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

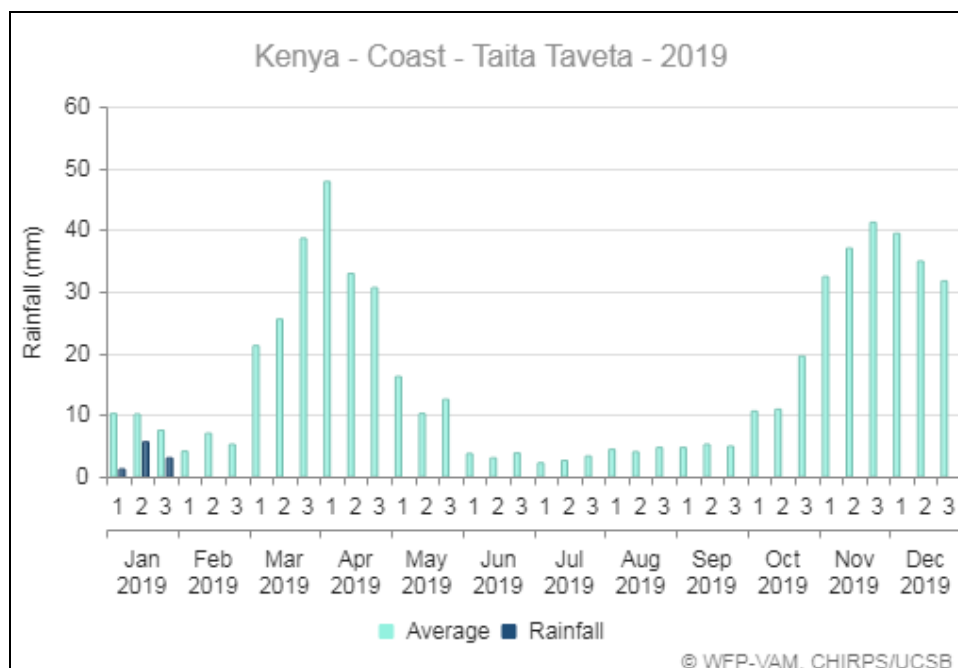
# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- The county recorded light rains that were characterised by uneven spatial distribution.
- Mwarungu station located in the highlands of the county recorded three wet days during the first week of the month totalling 14.2 mm while Challa and Rukanga stations situated in the lowlands recorded 17mm in two days during the second week.
- The timing of the precipitation was normal but the amounts were below the long term average more so in the mixed farming livelihood zone; Horticulture and Dairy.

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- According to WFP-VAM, Climate Hazards Group InfraRed Precipitation with Station Data (CHIRPS) indicate a one month's rainfall anomaly of 52 percent.
- The precipitation was spread across the month with the second Dekad recording the highest amount of 5.6 mm compared to 1.2 and 3mm in Dekad one and three respectively.
- The amounts in were below the long term averages for dekad one, two and three by 88.2 percent, 44.6 percent and 60 percent respectively.

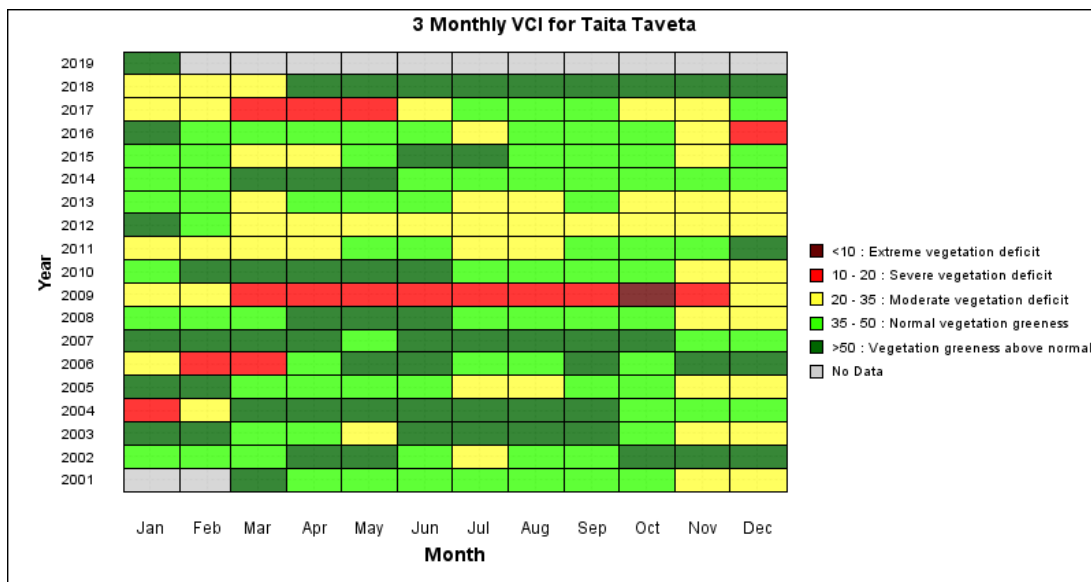


## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

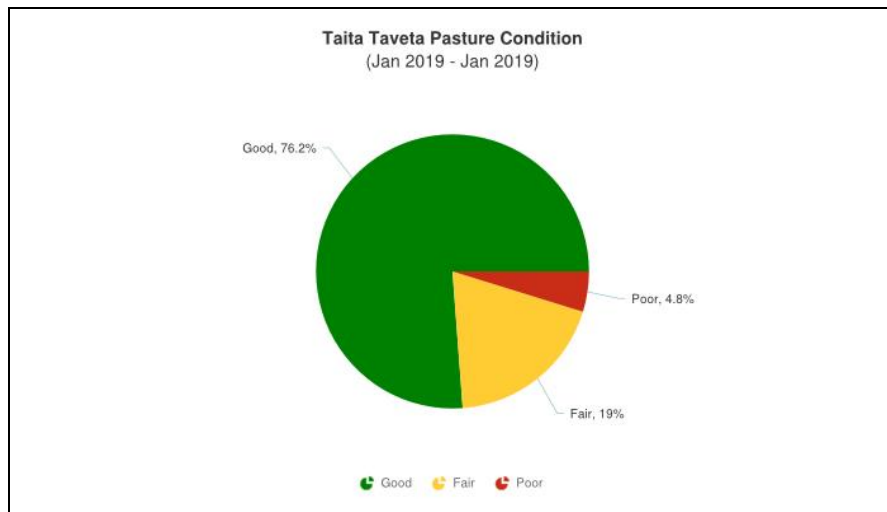
- The 3-month vegetation greenness condition in the county was above normal as depicted by a vegetation condition index (VCI) value of 52.45.
- The current situation is attributed to the effects of the heavy rains that were experienced in the county during the month of December and part of January and is in sync with the 3-months rainfall estimates anomaly of 104 percent (CHIRPS)
- In the mixed farming: food crops/ livestock livelihood zone comprising mainly Voi and Mwatate Sub Counties, the vegetation greenness slightly deteriorated compared with previous month.
- Slight improvement was noted in the mixed farming: horticulture/ dairy livelihood zone comprising of Taita Sub County.
- All the four Sub Counties VCI depicted vegetation greenness above normal.
- The current vegetation conditions being experienced were much better compared with similar time last year as shown in the matrix below.



#### 2.1.2 Pasture

- Deterioration of pasture condition was noticeable in the month under review compared to last month given that there was a reduction in the number of respondents who reported pasture condition was good from 87% to 76.2% and an increment in those who reported fair pasture condition from 13% to 19%.
- More importantly in the mixed farming: food crops/ livestock livelihood zone respondents reported pasture condition was poor compared to last month when all respondent reported only good and fair.
- Areas reporting poor and fair pasture condition were in Challa and Mboghoni Wards respectively.

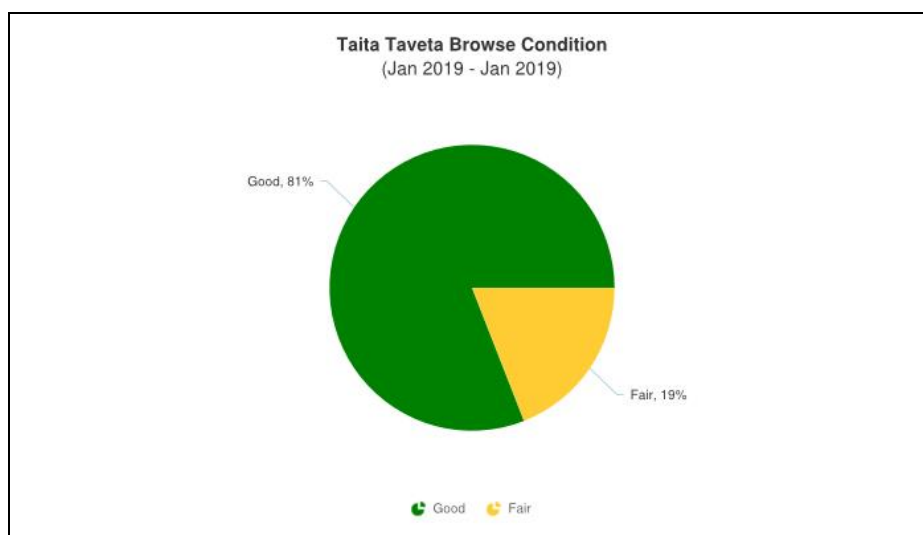
- The standing pasture in the grazing areas is mostly lush but few farmers have fodder harvested from previous season.
- Pasture condition is normal for this time of the year and estimated to last for approximately three months in the mixed farming: food crops/ livestock livelihood zone and four months in the mixed farming: horticulture/ dairy livelihood zone.



n=21Key Informants

### 2.1.3 Browse

- From community interviews 81 and 19 percent of the respondents reported browse situation to have been good and fair respectively.
- Compared to the previous month, the browse situation slightly declined as reflected by the drop in the number of respondents reporting good vegetation condition by 15 percent.
- Cases on elephant movement in Sagalla ward restricted access to browse in localised areas bordering Tsavo National Park namely; Kajire, Mwambiti and Mwakoma sub locations
- The available browse is expected to last three to four months

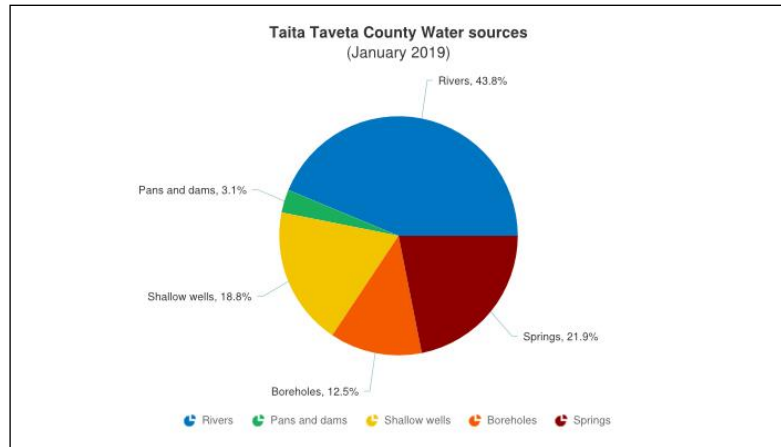


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## 2.2 WATER RESOURCE

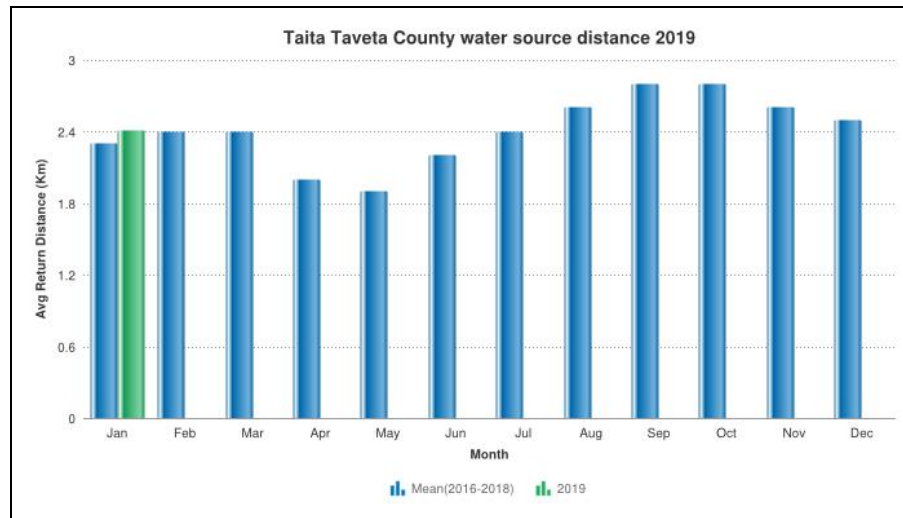
### 2.2.1 Sources

- The three main sources of water in use by both households and livestock were rivers, springs and shallow wells and were relied upon by 43.8, 21.9 and 18.8 percent the households respectively. Other sources included boreholes and Pans and Dams
- The sources remained the same compared to the previous month though slight changes in the numbers relying on each source were observed. The percentage of households that relied on rivers as their main source of water increased by five percent.
- The available water is expected to last four months in the mixed farming: irrigated cropping/ livestock livelihood zone and three months in Mixed farming livelihood zone; food crop and livestock.



### 2.2.2 Household Access and Utilization of Water

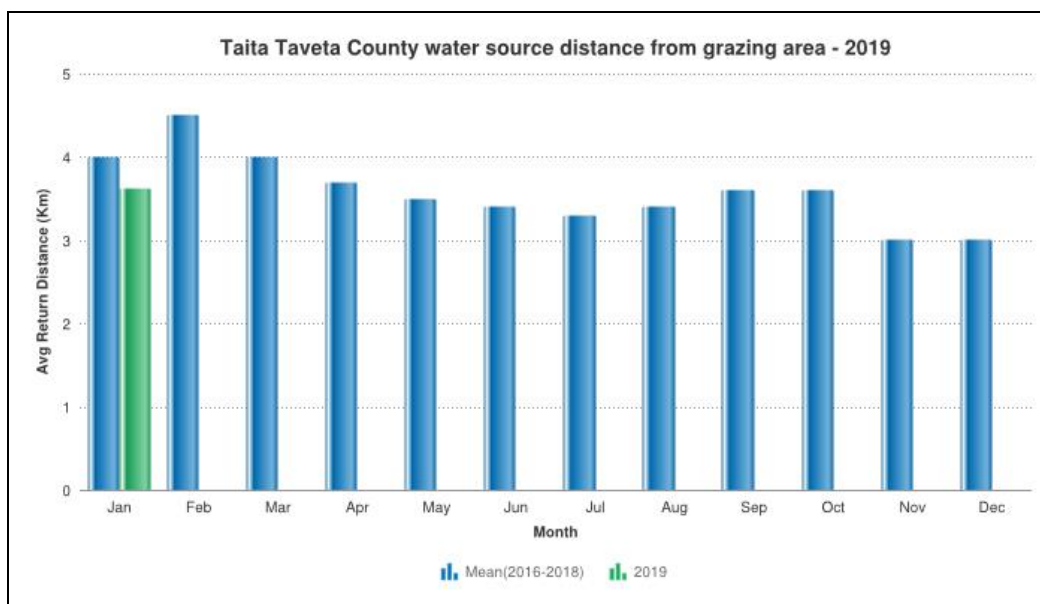
- Access to water for household use remained at 2.4 km as posted in the previous month.
- Water situation is still good due to availability of water at household level harvested during the rainy season plus open water sources.
- Compared to the long term average the current distance is longer by 4.2 percent.
- In the mixed farming: horticulture/ dairy livelihood zone water consumption per person per day was at 20 litres while in the mixed farming: irrigated cropping/ livestock livelihood zone was recorded at 15 litres.
- In the mixed farming: food crops/ livestock livelihood zone utilization of water per person per day was lowest due to few water points and additional cost of transporting water to their households.
- Transportation cost of a 20 litres jerry can ranged between Kshs 8 – 30. Bura Ward areas of Mwakitau reported the highest cost at Kshs 30 while Ngolia lowest at Kshs 8.
- The average cost of 20 litre jerry can at water kiosks was at Kshs 3 which is normal at this time of the year. 61 percent purchased water same as last month.
- In the mixed farming: horticulture/ dairy livelihood zone only 40 percent of households interviewed treated water through use of chemicals and boiling while in the mixed farming: irrigated cropping/ livestock livelihood zone, 63.3 percent used chemicals to treat water and 36.7 percent practised boiling.
- Water treatment was minimal in mixed farming: food crops/ livestock livelihood zone where 9.3 percent of households interviewed treated water through filtration, use of chemical and boiling.



n=210HHs

### 2.2.3 Livestock Trekking Distance to Water Sources from Grazing Areas

- Return distance to water source from grazing areas increased to 3.6 km from 2.9 km posted in the previous month.
- However, the distance trekked was within the seasonal ranges of 4.0 km compared to the long term mean
- The graph below illustrate trend of distances trekked by livestock to access water from grazing areas.
- In mixed farming: food crops/ livestock livelihood zone, frequency of watering was maintained at once per day for cattle and goats compared to the previous month.
- In the horticulture/ dairy livelihood zone watering for cattle and sheep was twice a day while irrigated cropping livelihood zone remained once per day for both cattle and goats.



n=21Key Informants

### 3. PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

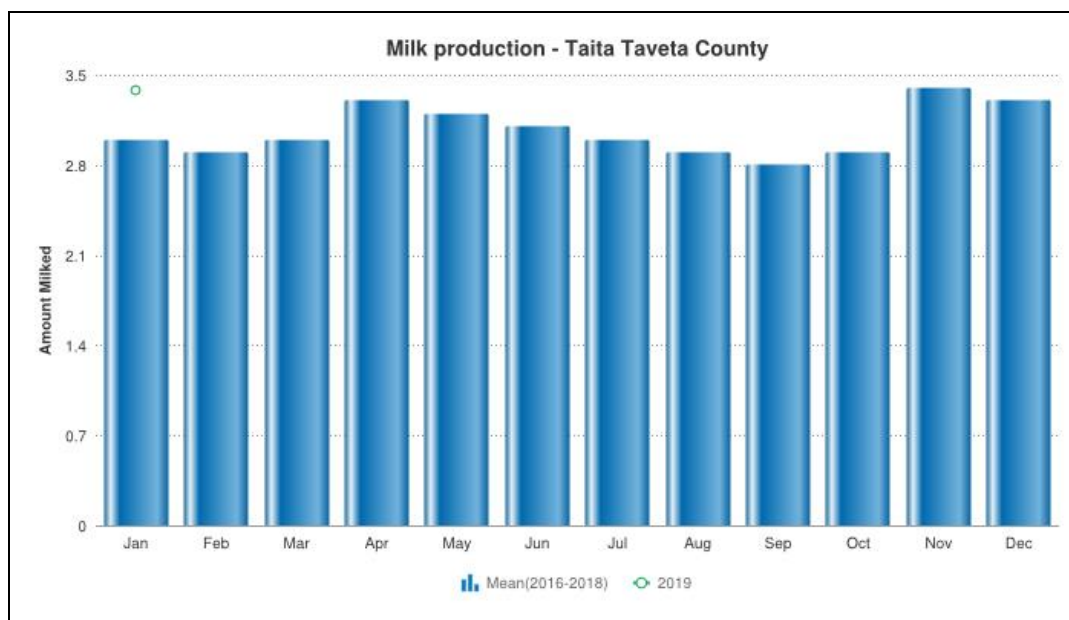
- In all livelihood zones livestock body condition was good for all species as was reported in the previous month.
- Compared to similar previous period both cattle and goats body are good.
- Livestock body condition improved compared to the previous month due to available pasture and browse.

##### 3.1.2 Livestock Diseases

New castle disease was reported in Mboghoni Ward.

##### 3.1.3 Milk Production

- The average milk production per household per day was to 3.4 litres and was mainly from cattle and goats compared to 3.2 litres posted in the previous month this was mainly attributed to availability and access to fodder and water.
- Milk production for the month was above long term average by 13.3 percent.
- Relatively, quantity of milk produced was high in the mixed farming: horticulture/ dairy livelihood zone at 52 percent and lowest in the mixed farming: food crop / livestock livelihood zone milk production at 8.8 percent.
- In addition to the availability and access to fodder and water, in the Horticulture and Dairy farming livelihood zone, livestock kept is of high quality and purposely for milk production.



n=210 HHs

## **3.2 RAIN-FED CROP PRODUCTION**

### **3.2.1 Stage and Condition of food Crops**

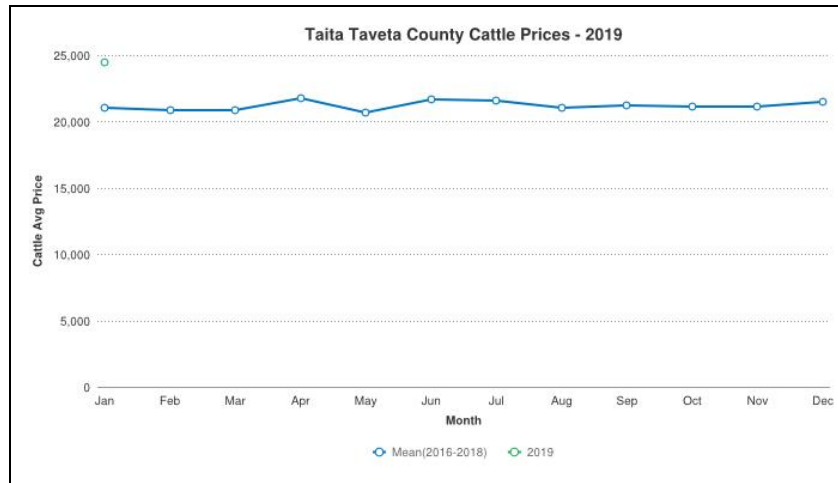
- The main food crops grown were maize, beans and green grams.
- In the mixed farming: food crop/ livestock livelihood zone most maize crop was at the grain filling stage and others were mature awaiting harvest. Farmers were harvesting beans, green grams and cowpeas.
- In the mixed farming: horticulture/dairy livelihood zone maize crop is at the drying stage. Harvesting of beans and cowpeas is ongoing.
- In the mixed farming: Irrigated cropping/ livestock livelihood zone farmers are harvesting green maize while others are planting rice.
- Overall, crop condition is good in all livelihood zones.



## 4.0 MARKET PERFORMANCE

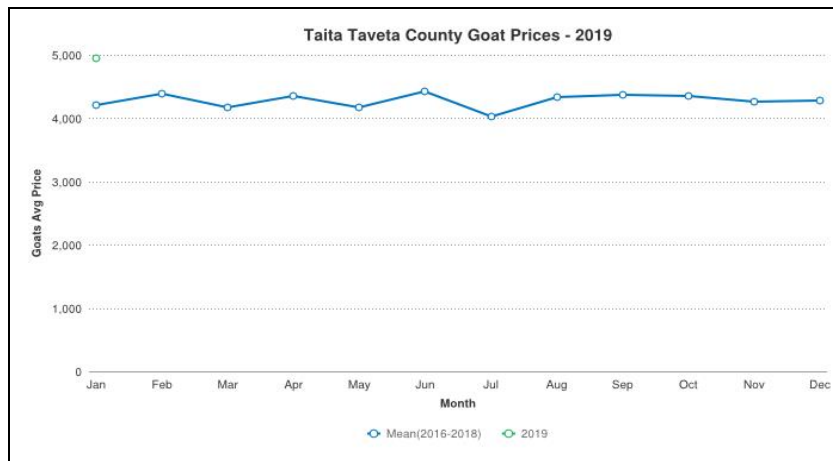
### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices



- The average market price of a three year old bull was relatively stable at Kshs 24,471 compared to the previous month and this was attributed to the prevailing good body condition of cattle across the county.
- The highest prices were reported in the horticulture/ dairy livelihood zone of Kshs 28,333, the lowest was reported in irrigated cropping/ livestock livelihood zone of Kshs 18,333. The price difference was a result of good quality dairy cattle kept in this zone and farmers practice zero grazing.
- Compared to the long term mean, the average price was higher by 16.4 percent.

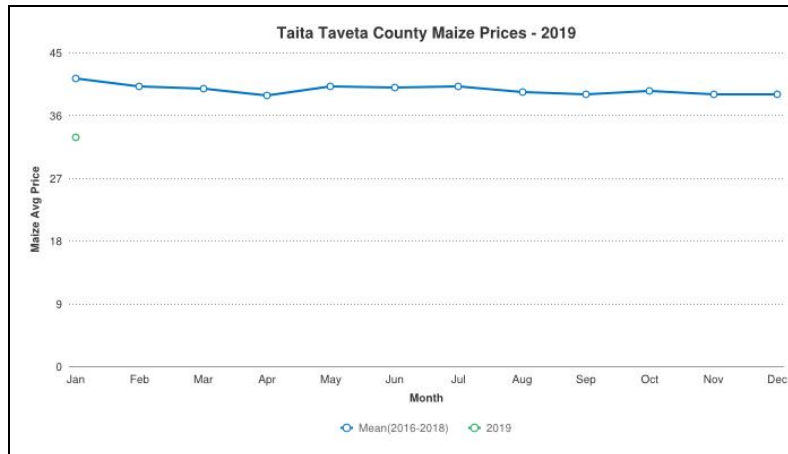
#### 4.1.2 Goat Prices



- The average market price of a two year goat was Kshs 4,947 compared to Kshs 5,000 posted in the previous month.
- The highest prices were reported in the horticulture/ dairy livelihood zone of Kshs 7,000, the lowest was reported in irrigated cropping/ livestock livelihood zone of Kshs 3,866. The price difference was a result of good body condition and better breeds.
- Compared to long term mean, the average price was higher by 16.4 percent.

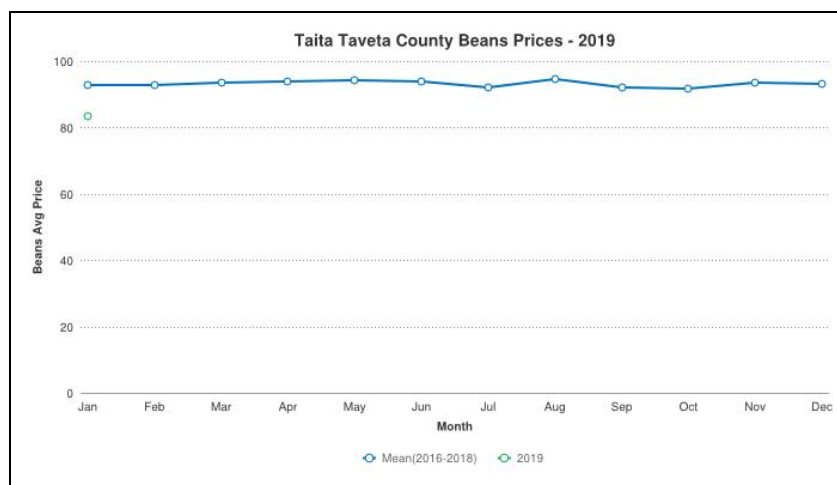
## 4.2 CROP PRICES

### 4.2.1 Maize



- The average market price of a kilo of maize was recorded at Kshs 32.8 in the month under review.
- A stable trend of prices was maintained compared to the previous month. The stable price is a result of ongoing harvest and retailers have maintained the same stock at low prices
- Across the livelihood zones the price varied with the mixed farming: irrigated /livestock livelihood zone, areas of Challa and Eldoro in Taveta Sub County recording low price of Kshs 30.00. In the mixed farming: food crops/livestock livelihood zone (Mwakajo, Rukanga and Mwachawaza) reported prices at Kshs 33 per kilo.
- Compared to the long term average the current price was below normal.

### 4.2.2 Beans



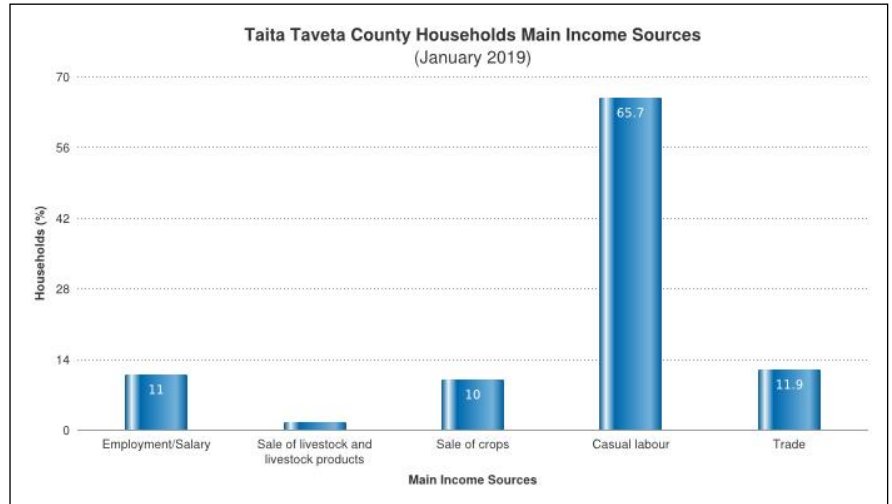
- Average market price of a kilo of beans was Kshs 83.50 compared to Kshs 84.20 posted in the previous month. The slight drop in price is a result of ongoing harvesting.
- Lowest prices were recorded in mixed farming: irrigated cropping/livestock livelihood zone; Challa at Kshs 50 - 60 due to harvests from irrigation schemes, while high prices

were recorded in the mixed farming: food crops/livestock livelihood zone of Kshs 87.50 to 100 in Mwakajo, Mwachawaza and Rukanga markets.

- The current trading price was within the seasonal ranges compared to the long term mean.

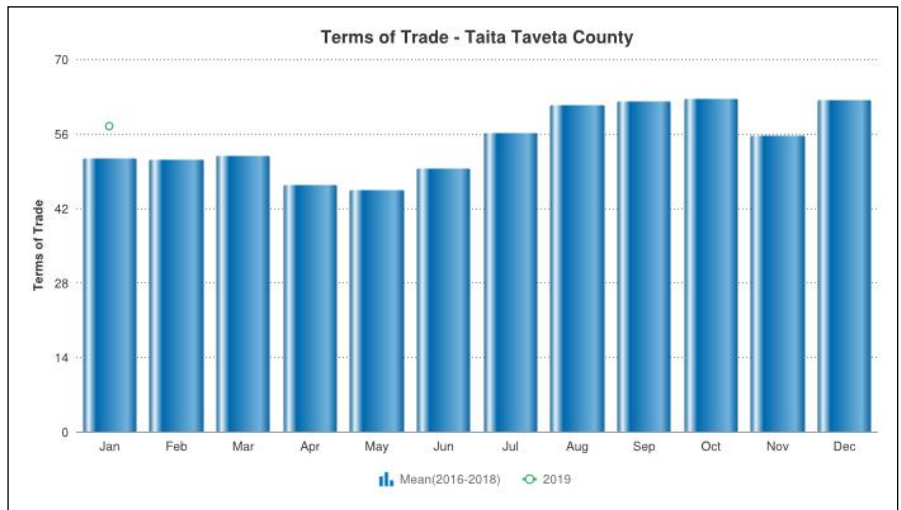
### 4.3 INCOME

- Household main source of income were casual labour. Others were trade, sale of crops, employment and sale of livestock products at lower proportions.
- Sale of livestock products and crops were on an upward trend compared to previous months.
- Casual labour opportunities were available in the sisal and banana plantations, irrigation schemes, mining sector, herding, ranches, building sites and town centres.



### 4.4 TERMS OF TRADE (CASUAL LABOUR VERSUS MAIZE PRICES)

- The Term of Trade decreased by 22.1 percent from 73.7 in the previous month to 57.4 in the month under review. Indicating that earnings accruing from casual labour could only manage to purchase a smaller quantity of maize compared to last month.

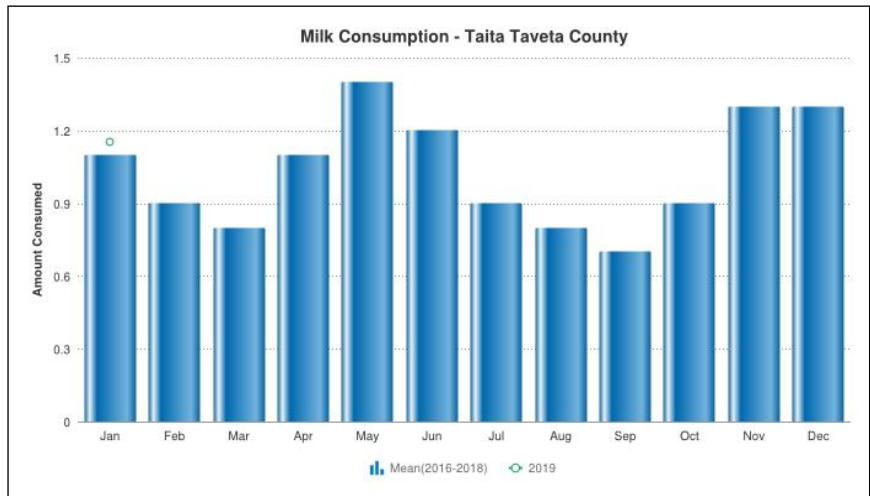


- ToT was favourable and above the LTA by 11.9 percent implying an improved purchasing power compared to normal times.
- Highest ratio was recorded in mixed farming: irrigated cropping/livestock livelihood zone; Challa of 68 where casual labour opportunities are available in the irrigation farms, while lowest ratio was recorded in the mixed farming: food crops/livestock livelihood zone of 52.
- Casual labour earnings purchased 57.4 kilograms of maize as shown in the graph above.

## 5. FOOD CONSUMPTION AND NUTRITION STATUS

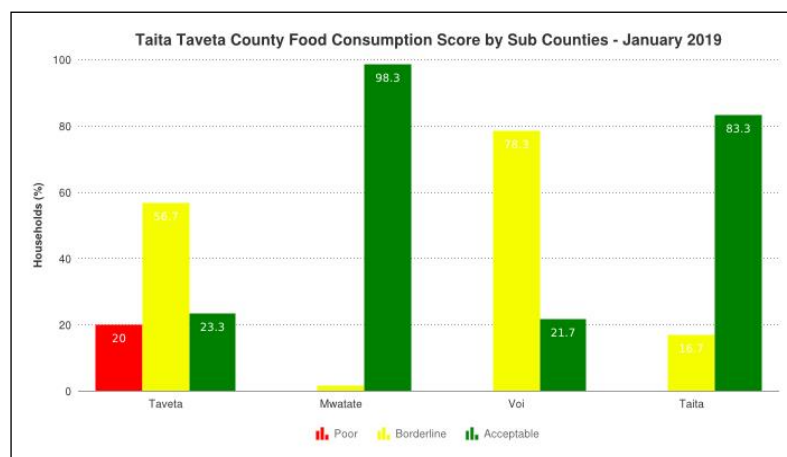
### 5.1 MILK CONSUMPTION

- Milk consumption per household per day remained at 1.2 litres compared to the previous month. Milk consumption remained relatively stable and within the long term mean.
- The quantity of milk consumed was high in Mboghoni and Wumingu Wards of 1.6 litres per household per day
- Low milk consumption was recorded in the mixed farming: food crops/ livestock livelihood zone Kasigau and Challa Wards of 1 litre per household per day.



### 5.2 FOOD CONSUMPTION SCORE

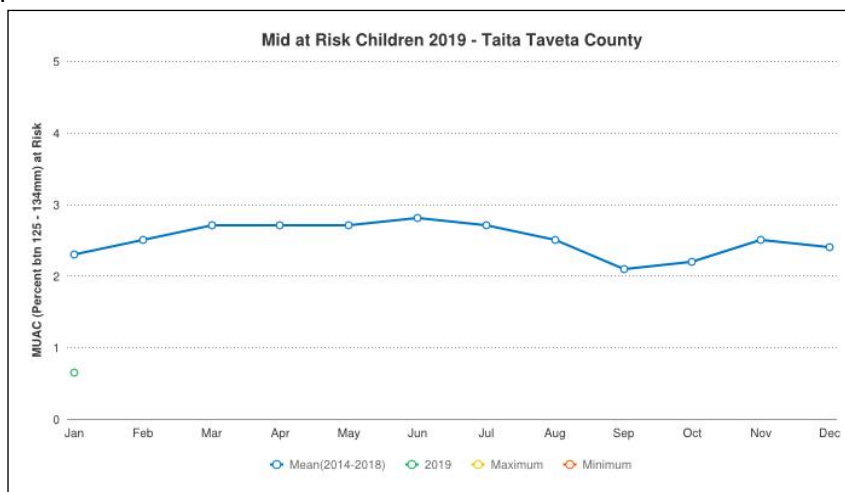
- The prevalence of households with poor, borderline and acceptable food consumption score was 5, 38 and 57 percent respectively.
- 73 percent households interviewed reported consumption of grains for six days, 69 percent of these households consumed pulses for an average of three days in a week while 60 percent consumed vegetables for an average of five days in a week.
- The aggregate food consumption score for the month under review was 36 similar to previous month.
- The FCS score was high in the mixed farming: horticulture/ dairy livelihood zone at 40 where most households consumed three food groups i.e. maize, pulses and vegetables and in addition meat and milk was served. Low score was in the mixed farming: food crops/ livestock livelihood zone where only three food groups were served and not for seven days in a week.



### 5.3 HEALTH AND NUTRITION STATUS

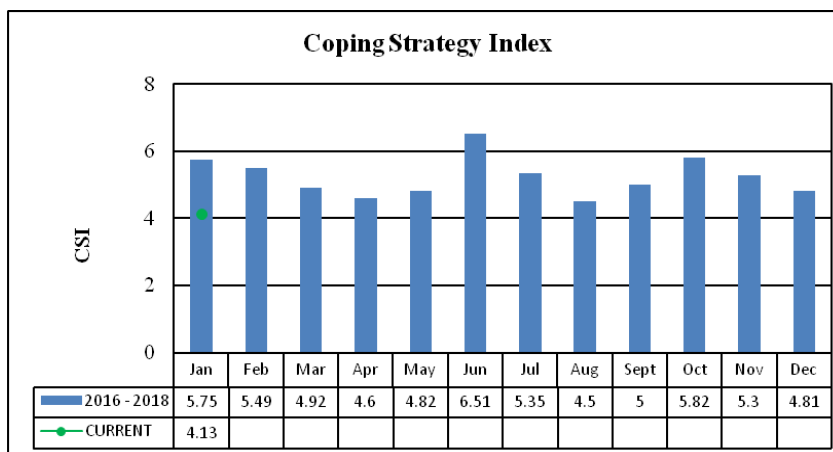
#### 5.3.1 Nutrition Status

- A total of 618 children below five years were used as the sample for MUAC out which 43 percent were female and 57 percent male
- The proportion of children at risk of malnutrition (125 – 134 mm) dropped to 0.6 percent from 1.9 percent posted in the previous month.
- GAM by MUAC (115 -124 mm) and Severe<115 mm were at 0.15 and 0.16 percent in the previous month compared to zero cases in the month under review indicative of an improvement.
- The current proportion of MUAC (125 - 134) was lower than normal of LTM by 2.3 percent.
- In all livelihood zones nutrition status of children below five years in sampled sentinel sites remained good in the month under review.



#### 5.3.2 Coping Strategies

- The average Coping Strategy Index for the month under review was recorded at 4.13 compared to 3.96 posted in the previous month.
- This slight increase demonstrates households were employing more consumption based coping strategies to meet gaps in food consumption compared to previous month.
- The two prevalent strategies reported were reduction of meals and reduction of portion sizes of meals.
- Approximately 14 percent of sampled households engaged in reduction of meals for two to three days in a week while 16 percent reduced portion of meals for two to three days in a week.
- The graph below show trend of consumption based coping strategy index in the county.



## 6.0 CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 FOOD AND NON FOOD INTERVENTIONS

#### 6.1.1 Sectoral

| Intervention        | Activities  | Implementers      |
|---------------------|---|-------------------|
| <b>Water Sector</b> |   |                   |
| Provision of water  | Truck water to Mwakitau due to broken down borehole Zungulukani and Mgeno | County Government |
|                     | Drilling of Chakaleri, Kituma and Mwashuma boreholes                      | County Government |

## 7.0 EMERGING ISSUES

### 7.1 Insecurity/ Conflict/ Human Displacement

- Marauding elephants continue causing havoc in community settlements neighbouring the park.
- Presence of herds of camels observed near community settlement areas of Sagalla and Mwatate Wards.

### 7.2 FOOD SECURITY PROGNOSIS

- The crop condition is good and farmers have started harvesting maize and legumes. Food stocks at household levels are expected to boost household members' purchasing power. An upsurge in casual labor opportunities is expected especially in the irrigation zones due to ongoing harvests and land preparations.
- Forage condition is good in terms of quality and quantity and expected to last for at least three months in all the livelihood zones. This has attributed to good livestock body condition for all species and hence productivity.
- The short rains improved water situation and most household members are trekking short distances to fetch water.
- In reference to the above mentioned factors, majority of households are unlikely to engage in severe consumption-based coping strategies.
- However, rain fed areas of Challa Ward requires close monitoring.
- Cases of human wildlife conflicts are expected to drop due to recharge of open water sources in the parks plus regeneration of pasture and natural vegetation.

## 8. RECOMMENDATIONS

### Agriculture and Livestock Sector

- Post harvest management.
- Management of crop pests in the farms.
- Promote poultry production.
- Livestock disease surveillance due to influx of camels in the county.

**Water and Irrigation Sector**

- Provision of water treatment tabs mainly in rain fed lowlands.

**Public Health and Nutrition Sector**

- Deworming for both adults and children.
- Household level water treatment.

**Peace and Security Sector**

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