

# National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MAY 2019



A Vision 2030 Flagship Project



## MAY 2019 EW PHASE

**Drought Status: ALERT**



**Maandalizi ya mapema**

## Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming: Food Crops/ Livestock	Alert	Stable
Mixed Farming: Food Crops/ Horticulture/Dairy	Alert	Improving
Mixed Farming: Irrigated Cropping/ Livestock/Food Crops	Alert	Improving
National Park	Alert	Improving
<b>County</b>	<b>Alert</b>	<b>Improving</b>
Biophysical Indicators	Value	Normal Range/ Value
Rainfall 3 Months Anomaly	78	80 - 120
VCI-3Month	20.08	35 - 50
Production indicators	Value	Normal
Crop Condition (maize)	Knee high	Flowering
Livestock Body Condition for cattle	Good	Good
Milk Production per HH/ day	4.6	3.2 Litres
Livestock Migration Pattern	Normal	No Migration
Access Indicators	Value	Normal
Terms of Trade (Casual labour Vs maize prices)	75.4	45.3
Milk Consumption per HH/ day	1.2	1.4 Litres
Return HHs distance to water sources	2.6	1.9 Km
Water source return distance from grazing areas	2.8	3.5 Km
Cost of water (20 litres)	3.00	< Kshs 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	0	<3.0

### Drought Situation & EW Phase Classification

#### Biophysical Indicators

- The County experienced rains below the normal range (3 Months Anomaly).
- The rains were moderate characterised by uneven spatial distribution.
- A total of seventeen days of rainfall was recorded in the highlands and nine days rainfall in the lowlands.
- The county vegetation greenness condition was below the normal range (3 Months VCI 20.08). Voi and Mwatate Sub Counties exhibited severe vegetation deficit.

#### Socio Economic Indicators (Impact Indicators)

##### Production Indicators

- Farmers were busy weeding both in the highlands and lowlands. Crops in the field are maize, beans, cowpeas and green grams.
- 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 below normal.
- Return distances to water sources were above normal range.
- Distances to water sources from grazing areas were below normal.

##### Utilization Indicators

- The proportion of children at risk of malnutrition remained within the long term average 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>▪ Flash 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>▪ Flash floods - Taveta</li> </ul>								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

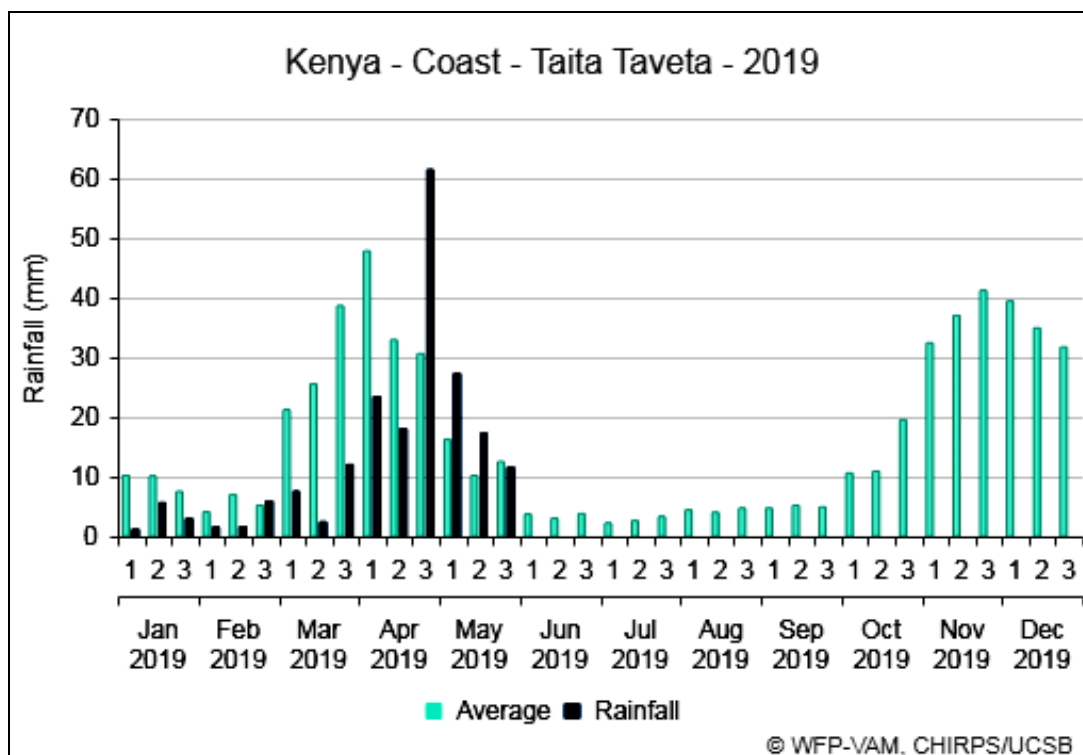
# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- The long rains season started late on the March 30, 2019 instead of normal onset in the second week of March.
- The county experienced moderate rains in the month under review. The rains were uneven in terms of spatial distribution.
- Mwarungu station located in the highlands of Taita Sub County recorded seventeen wet days totalling 138.6 mm while Rukanga station, Voi Sub County and Mwachawaza station, Mwatate Sub County both located in the lowlands recorded 160 mm and 80.9 mm for seven and nine wet days respectively. Taveta Sub County recorded eight wet days totalling 79.8 mm in Challa station and 52 mm in Eldoro station.

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- According to WFP-VAM, Climate Hazards Group InfraRed Precipitation with Station Data (CHIRPS) indicated a three months rainfall anomaly of 78 percent.
- The rains were realized throughout the month and recorded at 56.1 mm with first twenty days of the month recording the highest amount of rainfall surpassing LTA by 69%.

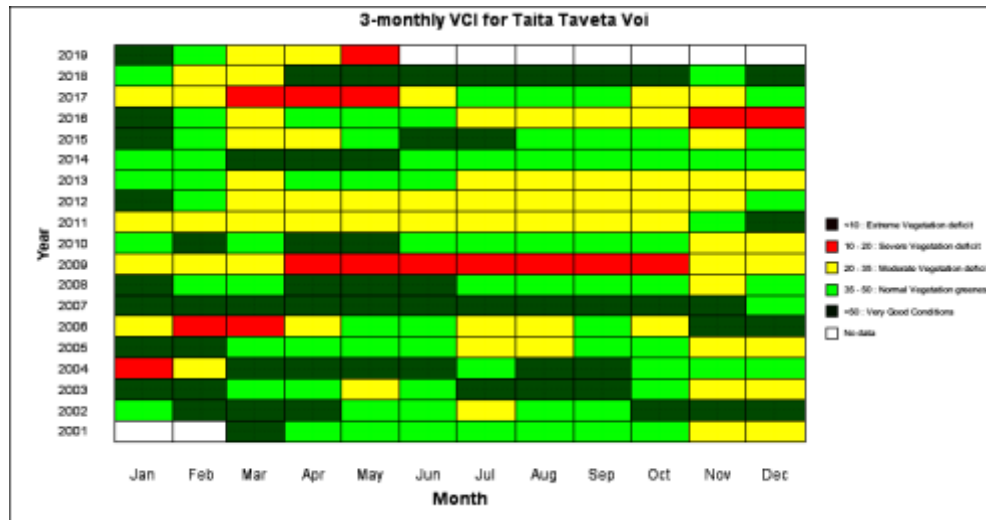
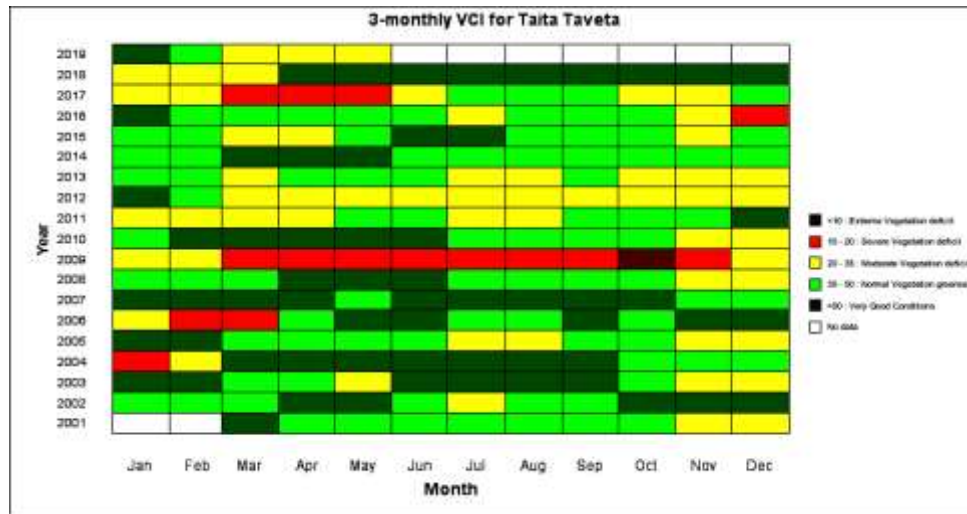


## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

- The vegetation greenness condition in the county was below normal as depicted by a 3 months vegetation condition index (3M - VCI) value of 20.08.
- The most affected in terms of vegetation greenness were Voi and Mwatate Sub Counties which had 3M - VCI values of 17.04 and 19.03 indicative of being in the severe vegetation deficit band while Taveta and Taita Sub Counties had 3M - VCI values of 21.67 and 27.70 respectively indicative of being in the moderate vegetation deficit band.



#### 2.1.2 Pasture

- From the sampled communities 71 and 29 percent reported pasture condition to have been good and fair respectively. Pasture condition was reported to be normal compared to similar season in the previous year.
- In comparison to the previous month pasture improved and no respondent reported pasture to be in poor condition.

- Areas that reported pasture to be in fair condition were lower zone of Mwaroko, Sangenyi, Kishushe and Paranga, Taita Sub County; Mgeno, 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 and mixed farming: irrigated cropping/ livestock livelihood zones situated in the lowlands of the county.

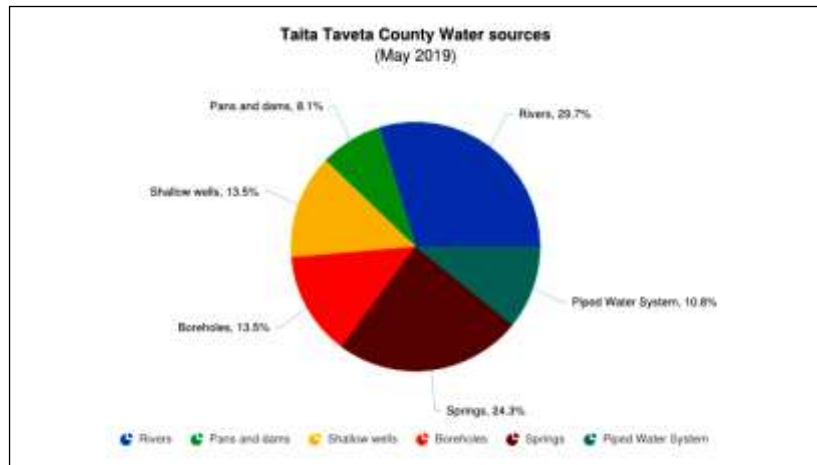
### 2.1.3 Browse

- 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 improved given that the number of respondents reporting good vegetation condition rose by 51 percent.
- From community interviews 76 percent of respondents reported browse condition was normal for this time of the year while 22 percent reported browse condition to be above normal.
- Browse condition is expected to cater for livestock for the next four months.

## 2.2 WATER RESOURCE

### 2.2.1 Sources

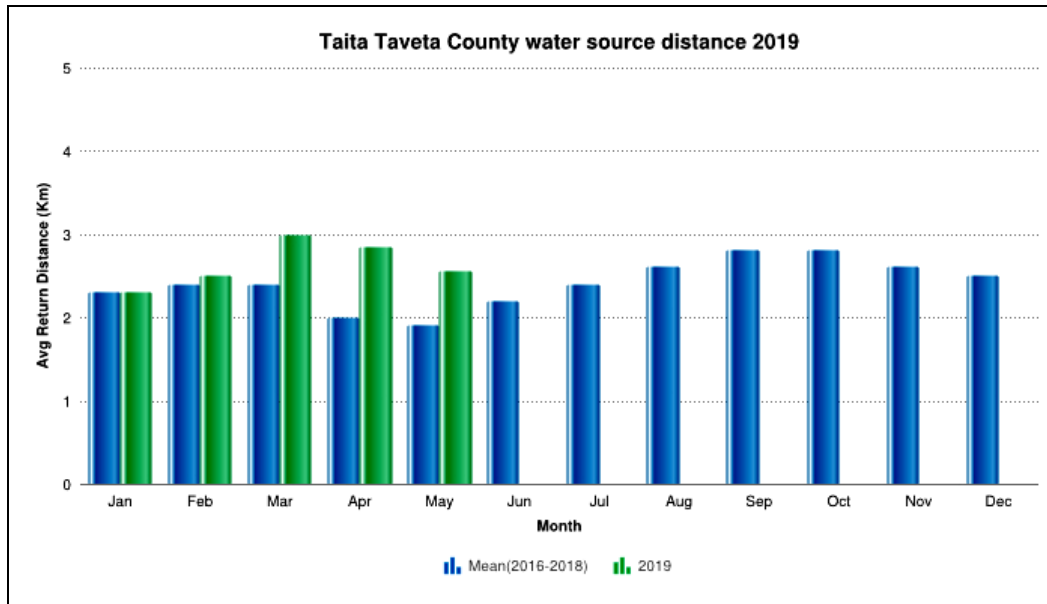
- The three main sources of water in use by both households and livestock were rivers, springs and piped water systems and were relied upon by 29.7, 24.3 and 10.8 percent of the households respectively. Other sources included boreholes, shallow wells and water pans.



- The sources remained the same compared to the previous month though the percentage of households that relied on springs as their main source of water decreased by six percent given that water was reaching households through piped systems.
- Water situation is expected to remain normal for the next three months due to recharge of water sources in the county.

### 2.2.2 Household Access and Utilization of Water

- The average return distance from households to main water sources decreased to 2.6 km from 2.9 km posted in the previous month and above long term average by 37 percent. The decrease in distance was due to water availability at household levels being harnessed from the rains.
- Piped water systems in the county functioned normally due to recharge of major springs both in the highlands and lowlands.

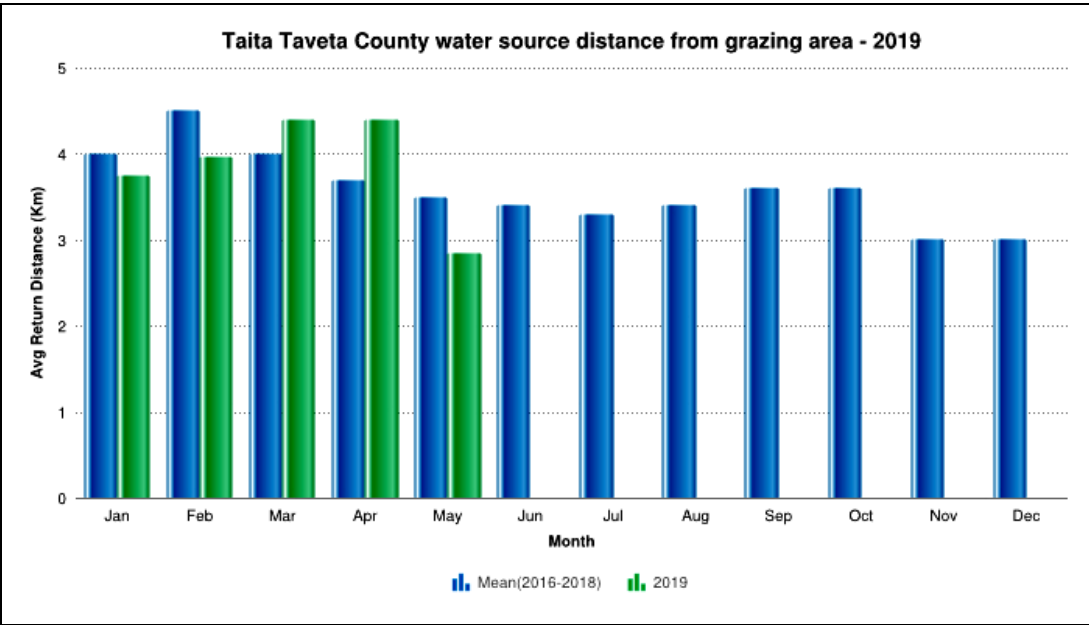


n=21Key Informants

- Water consumption per person per day remained at 21, 19 and 10 litres in mixed farming: horticulture/ dairy livelihood zone, mixed farming: irrigated cropping/ livestock livelihood zone and mixed farming: food crops/ livestock livelihood zone respectively as posted in the past month.
- Households purchasing water was at 64 percent down from 79 percent and price per 20 litre Jerry can ranged between Kshs 1 - 5 at source across all livelihood zones and 15 - 30 Kshs from vendors in Kishushe, Mata, Chunga Unga, Mwakitau, Mwakajo, Kisimenyi and Ngambenyi. The cost of transportation was pegged on distance.
- An estimated 18 percent of the sampled households treated water before drinking. Out of these 76, 19 and 5 percent practised use of water treatment chemicals, boiling and filtration respectively.
- Relative variation by livelihood zones of households treating water before drinking was as follows; Food crop/ livestock zone three percent, Horticulture/ dairy ten 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 decreased to 2.8 km from 4.4 km reported in the previous month and below long term average by nine percent as indicated in the graph below. This was due to recharge of water sources near grazing zones.
- In all livelihood zones frequency of watering was maintained at once per day for cattle and goats compared to the previous 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

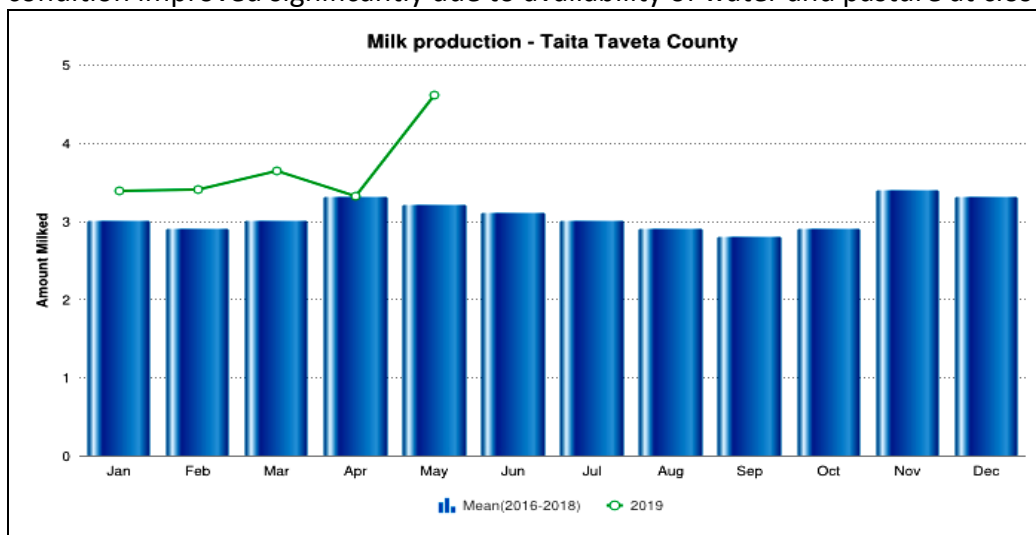
- The livestock body condition for all species was good across the county.
- Livestock body condition is expected to be in good status for the next four month.

##### 3.1.2 Livestock Diseases

- No abnormal disease outbreak was reported.

##### 3.1.3 Milk Production

- The average milk production per household per day rose to 4.6 litres from 3.3 litres posted in the previous month and was mainly from cattle. The sharp rise was reported in Wumingu where this is the calving season and in Bura Ward where cattle body condition improved significantly due to availability of water and pasture at closer range.



n=210 HHs

- Milk production for the month under review was above normal by 44 percent.
- Relatively, quantity of milk produced per household per day was highest in the mixed farming: horticulture/ dairy livelihood zone at eight litres, in the mixed farming: irrigated cropping/ livestock livelihood zone at four litres and lowest at two litre in the mixed farming: food crop/ livestock livelihood zone compared to six, three and one litres respectively recorded in the past month.

#### 3.2 RAIN-FED CROP PRODUCTION

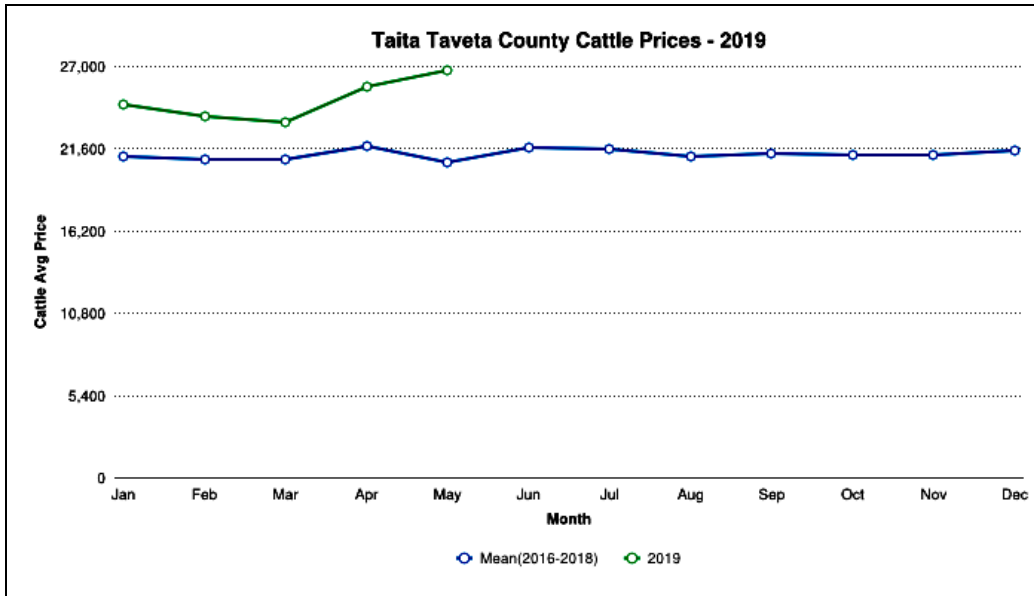
##### 3.2.1 Stage and Condition of food Crops

- Not many farmers in the lowlands have planted this season. The main food crops grown were maize, beans, cowpeas and green grams. Most maize crop was at the knee high stage, beans, green grams and cowpeas were at the flowering stage. Most crop in the field is in good condition.
- During the month under review key observations were captured; most farmers were busy weeding both in the highlands and lowlands, famers in Mwaroko, Sangenyi, Paranga and Mlilo had not planted and in Challa (rain fed), Kishushe and Mwachabo crops were at the germination stage.

#### 4. MARKET PERFORMANCE

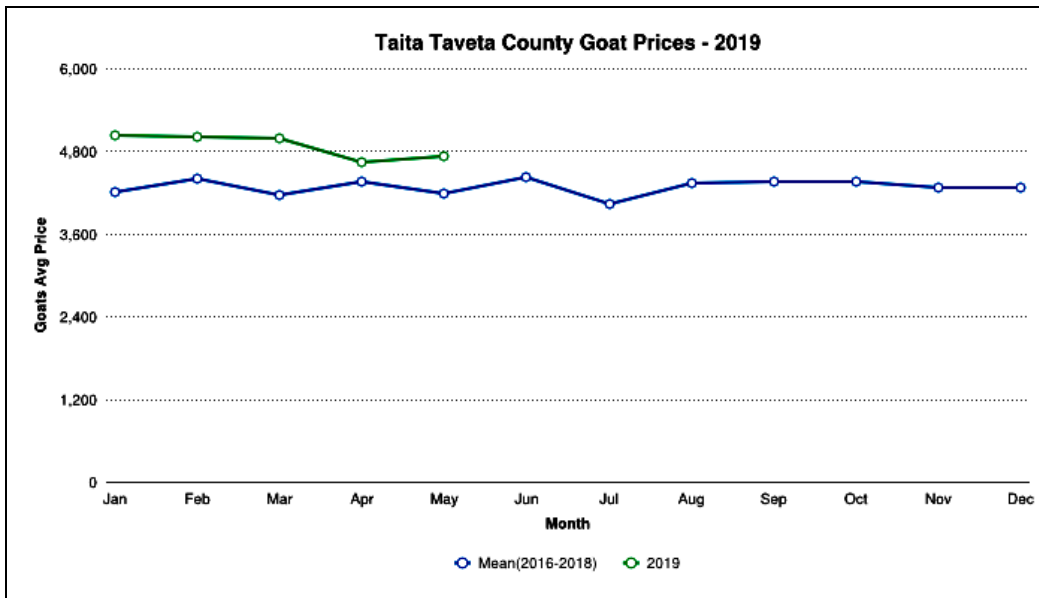
##### 4.1 LIVESTOCK MARKETING

##### 4.1.1 Cattle Prices



- The average market price of a three year old bull rose by four percent to Kshs 26,700 compared to the previous month. Prevailing good body condition for cattle established good prices in the County.
- The highest prices were reported in the horticulture/ dairy livelihood zone of Kshs 30,000, the lower prices were reported in mixed farming: food crops/ livestock at Kshs 27,000 and mixed farming: irrigated cropping/ livestock livelihood zone at Kshs 22,000.
- Compared to the long term mean, the county average price was higher by 30 percent.

##### 4.1.2 Goat Prices



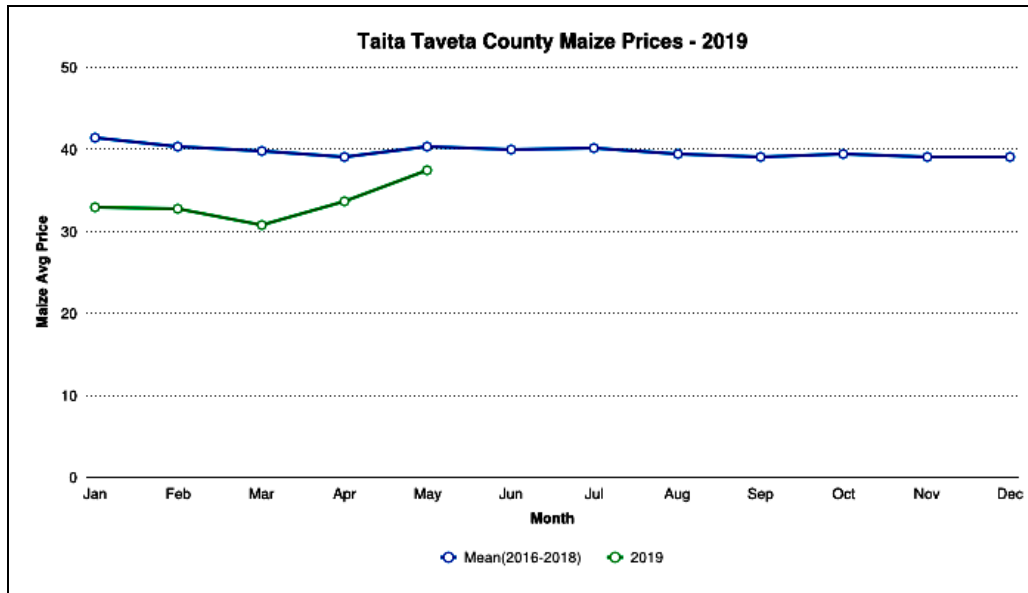
- The county average market price of a two year old goat was at Kshs 4,700 compared Kshs 4,600 posted in the past month.



- 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 at Kshs 4,600 and Kshs 3,900 respectively. 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 twelve percent.

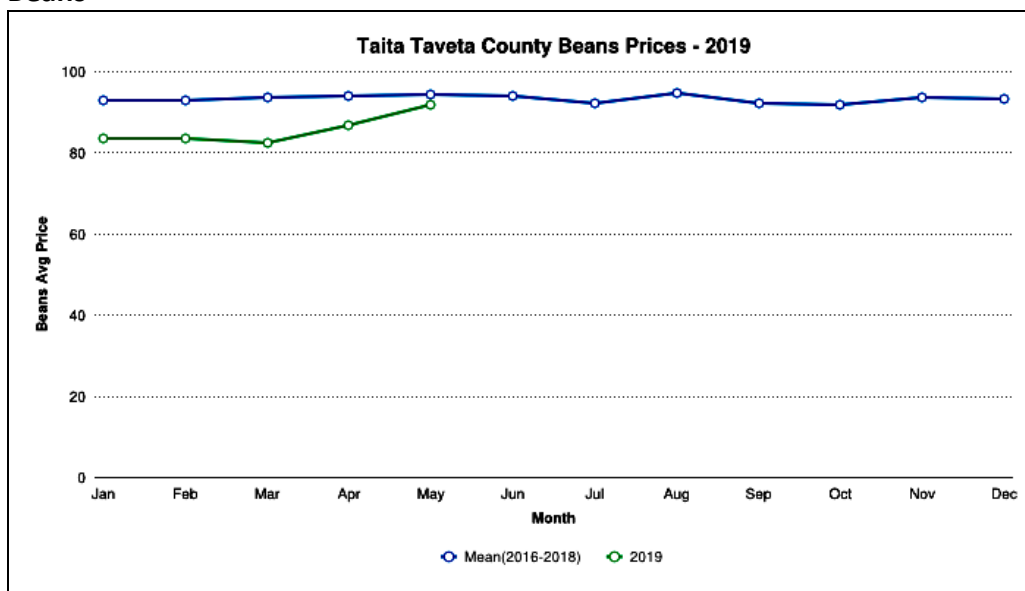
## 4.2 CROP PRICES

### 4.2.1 Maize



- The average market price of a kilo of maize rose by 11 percent to Kshs 37.40 compared to the previous month and below long term average by seven percent.
- The price hike 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: horticulture/ dairy livelihood zone and mixed farming: food crops/ livestock livelihood zone recording high prices at Kshs 38.00 (Mghambonyi, Ghazi, Rukanga, Mwatate and Bura markets). Mixed farming: irrigated/livestock livelihood zone, areas of irrigation zone in Chumvini and Taveta markets in Taveta Sub County reported lowest prices of Kshs 33.00 per kilo.

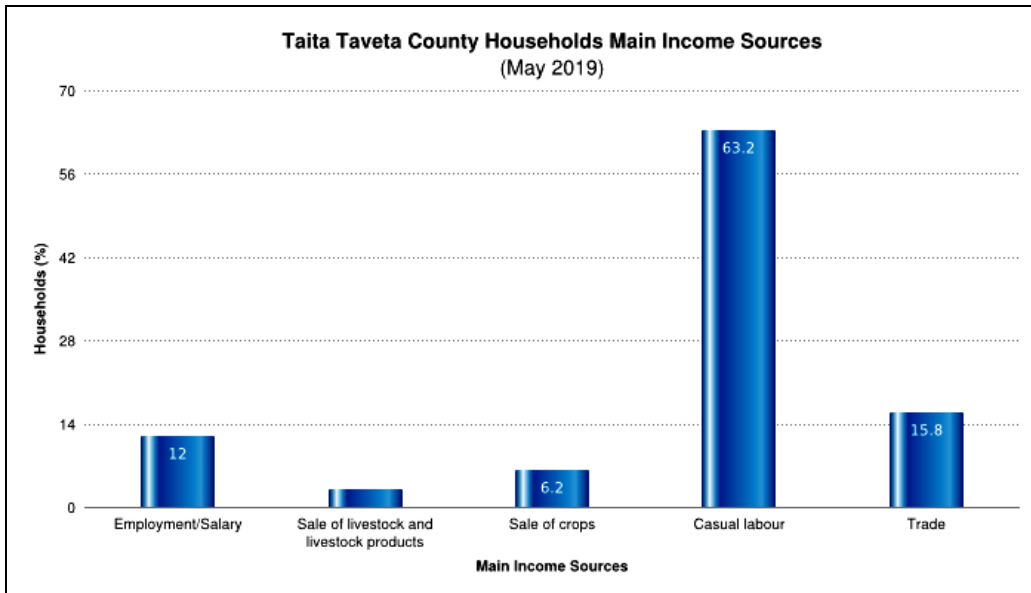
#### 4.2.2 Beans



- The average market price of a kilo of beans rose by six percent to Kshs 91.70 compared with previous month and below the long term mean by three percent. Increased demand for the product varied from depleted stocks at household level plus purchase of planting seeds.
- Across the livelihood zones the price varied with the mixed farming: food crops/ livestock livelihood zone and mixed farming: horticulture/ dairy livelihood zone recording high prices of Kshs 95.20 and Kshs 87.00 respectively (Mghambonyi, Ghazi, Rukanga, Mwatate and Bura markets). Mixed farming: irrigated/livestock livelihood zone, areas of irrigation zone in Chumvini and Taveta markets in Taveta Sub County reported lowest prices of Kshs 78.00 per kilo.

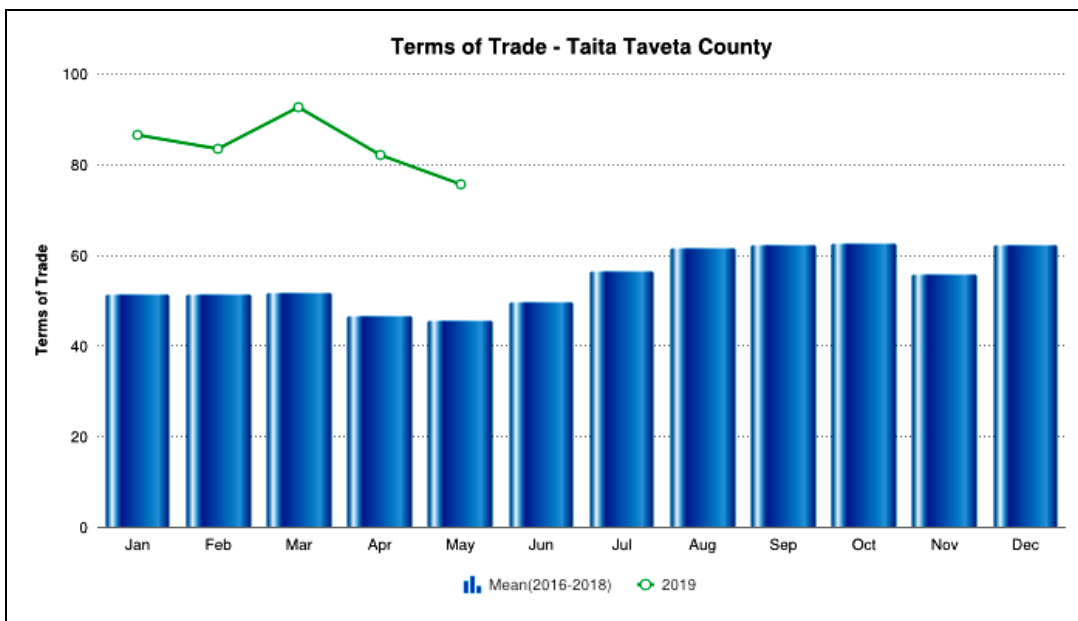
#### 4.3 INCOME

- 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.
- 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)

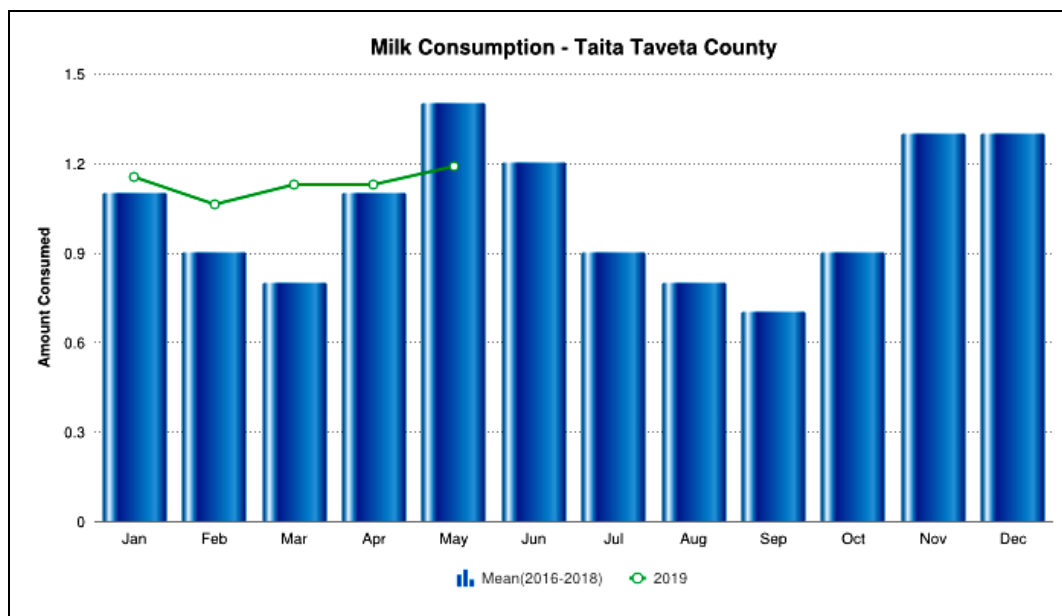


- The Terms of Trade ratio dropped by eight percent to 75.4 compared with the previous month and 66 percent above the long term mean implying an improved purchasing power compared to normal times.
- In comparison with the previous month, earnings accrued from casual labour reduced purchase of maize by six kilograms due to increase maize prices.
- Highest ratio was recorded in mixed farming: irrigated cropping/livestock livelihood zone; Challa of 88.4 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 59.9. Mixed farming: horticulture/ dairy livelihood zone stood at 77.9.

## 5. FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

- Milk consumption per household per day was at 1.2 litres compared to 1.1 litres posted in the previous month and lower than long term mean by seventeen percent.

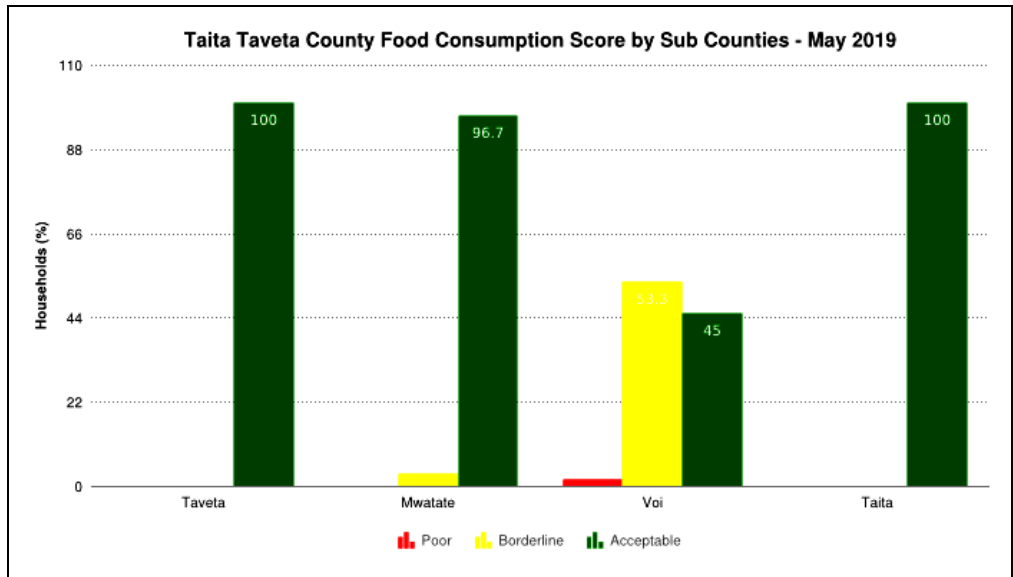


n=210 HHs

- Milk production per household per day in regard to livelihood zones; mixed farming: food crops/livestock (1.4 litres), mixed farming: horticulture/ dairy (1.2 litres) and mixed farming: irrigated cropping/livestock (1.0 litre).

### 5.2 FOOD CONSUMPTION SCORE

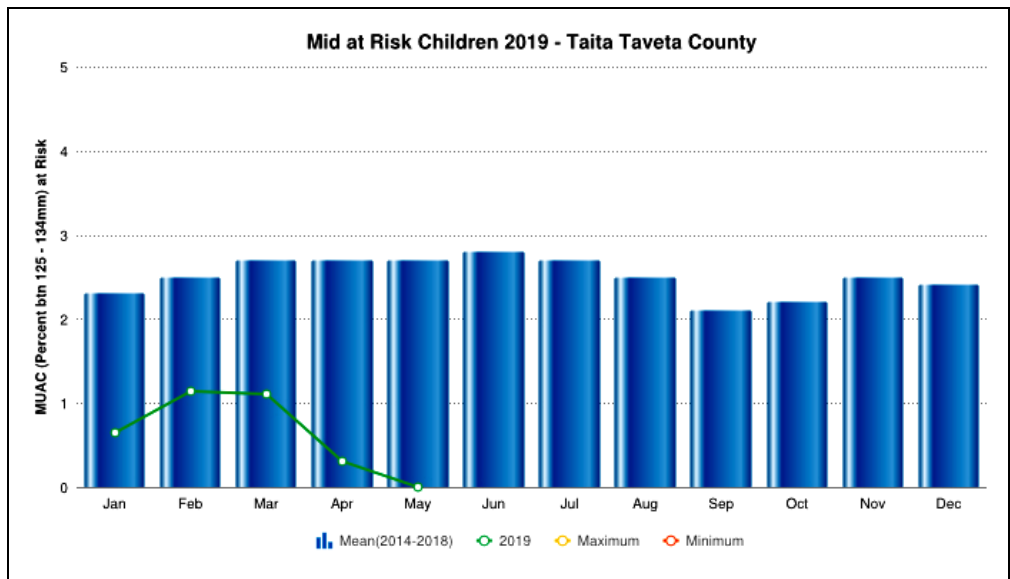
- The prevalence of households with acceptable, borderline and poor food consumption (FCS) score was 83.3, 16.3 and 0.4 percent respectively.
- Compared with previous month FCS remained relatively stable.
- Compared with similar period in 2018 where prevalence was at 0.5, 47 and 52.5 percent for poor, borderline and acceptable FCS respectively, household consumption is currently much better given that more households are in the acceptable food consumption category.
- The mean food consumption score was recorded at 61.78 compared to 59.3 posted in the previous month.
- The mean FCS score was high in the mixed farming: irrigated cropping/ livestock livelihood zone recorded at 90.30 while mixed farming: horticulture/ dairy livelihood zone and mixed farming: food crop/ livestock livelihood zone recorded the lower values of 49.63 and 44.98 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 623 children below five years were sampled for MUAC measurement where proportion of male and female was at 57 and 43 percent respectively.



#### 5.3.1 Nutrition Status

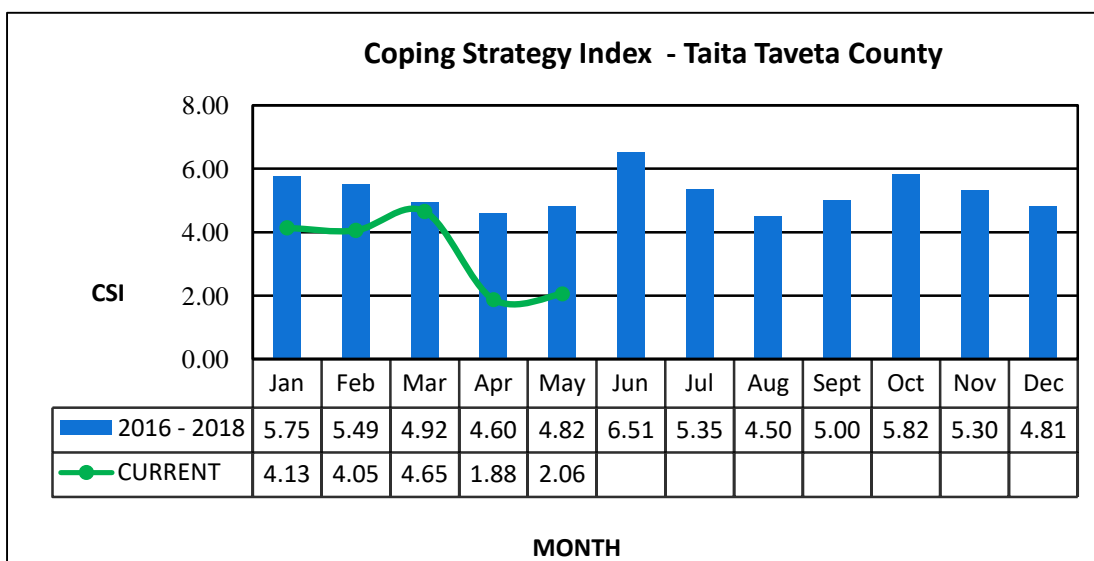
- During the month under review none of the children found to be at risk of malnutrition (125 – 134 mm).
- No cases of GAM by MUAC (115 -124 mm) and Severe<115 mm were recorded
- The current proportion of MUAC (125 - 134) was lower than LTM by 100 percent.
- Across all livelihood zones nutrition status of children below five years remained good in the seven sampled sentinel sites.

### 5.3.2 Health

- Out of the 637 sampled children three percent were reported to be ailing from fever with chills like malaria. These cases were reported in the mixed farming: food crop/ livestock livelihood zone and mixed farming: irrigated cropping/ livestock livelihood zone at 59 and 41 percent respectively.

### 5.4 COPING STRATEGIES

- The average Coping Strategy Index (CSI) for the month under review was 2.06 compared to 1.88 posted in the previous month.
- The CSI was below the long term average by 57 percent meaning household were within normal consumption based coping strategies.
- Similar period last year CSI was at 2.74 (i.e. 25 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 3.44 while mixed farming: food crop/ livestock livelihood zone CSI was at 2.75. 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
<b>Agriculture &amp; Livestock Sector</b>		
Artificial insemination	Breeds improvement	Dept of Agriculture & Livestock
<b>Irrigation Sector</b>		
Desilting of drainage canals	Desilting of Survey Kubwa and Survey Ndogo drainage canals (14 km each) in Kimorigho, Taveta Sub County	County Government
<b>Water Sector</b>		
	Equipping and Pipeline Development of Kimwa water project in Lower Sagalla completed	Coast Water Services Board
	Equipping of Zungulukani borehole	
	Construction of Ufunguo Water Pan	
	Implementation of Iriwenyi borehole	
	Manoa borehole piping	
	Dighai borehole equipping	
	Iriwenyi borehole	
<b>Multi-Sector</b>		
Coordination	Strengthening Ending Drought Emergencies Common Programming Framework	NDMA and Technical CSG

## 7. EMERGING ISSUES

### 7.1 Insecurity/ Conflict/ Human Displacement

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

### 7.2 Migration

- No abnormal livestock migration was reported.

### 7.3 FOOD SECURITY PROGNOSIS

- Crop production in the county is projected to be below normal since most farmers were caught unaware by unpredictable rains. Those who planted production is expected to be below normal due to moisture stress in the final stage of crop maturity (especially maize) and also beans are being affected by low temperatures being experienced in the highlands of the county. This scenario is expected to increase food prices in the long run.

- Positive impact on livestock and water sectors projected due to availability of water and pasture and browse at shorter distances for the next three months.
- In the next one month majority of the population are likely to be in the borderline and acceptable food consumption categories and employ normal consumption based coping strategies.
- Nutrition status is expected to remain stable and no mortalities are expected as a result of food insecurity.

## **8. RECOMMENDATIONS**

### **Agriculture and Livestock Sector**

- Disease surveillance in all stock routes and ranches in Voi and Mwatate Sub County

### **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 Sagalla, Kasigau and Ngolia Wards.