

National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR APRIL 2019



A Vision 2030 Flagship Project



APRIL 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
County	Alert	Improving

Drought Situation & EW Phase Classification

Biophysical Indicators

- The County registered late onset of long rains and during the month under review the rains were below the normal range.
- The rains were moderate characterised by uneven spatial and poor temporal distribution.
- A total of twelve days of rainfall was recorded in the highlands and seven days rainfall in the lowlands.
- Flash floods were reported in Maungu, Voi Sub County and Njoro in Taveta Sub County.
- The county vegetation greenness condition was below the normal range (3 Months VCI 20.46). Mwatate Sub County exhibited severe vegetation deficit.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Farmers planted maize and beans in the highlands while in the lowlands farmers planted maize, cowpeas and green grams.
- Livestock body condition was good for all species.
- Milk production per HH per day was within the normal range.

Access Indicators

- Terms of Trade were favourable and above the normal range.
- Milk consumption per HH per day was within the normal range.
- 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 an implication of improved nutrition status.

Biophysical Indicators	Value	Normal Range/ Value
Rainfall 3 Months Anomaly	65	80 - 120
VCI-3Month	20.46	35 - 50
Production indicators	Value	Normal
Crop Condition (maize)	Planting	Weeding
Livestock Body Condition for cattle	Good	Good
Milk Production per HH/ day	3.3	3.3 Litres
Livestock Migration Pattern	Normal	No Migration
Access Indicators	Value	Normal
Terms of Trade (Casual labour Vs maize prices)	81.9	46.4
Milk Consumption per HH/ day	1.1	1.1 Litres
Return HHs distance to water sources	2.9	2.0 Km
Water source return distance from grazing areas	4.4	3.7 Km
Cost of water (20 litres)	3.00	< Kshs 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	0.3	<3.0

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 Flush floods - Taveta 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

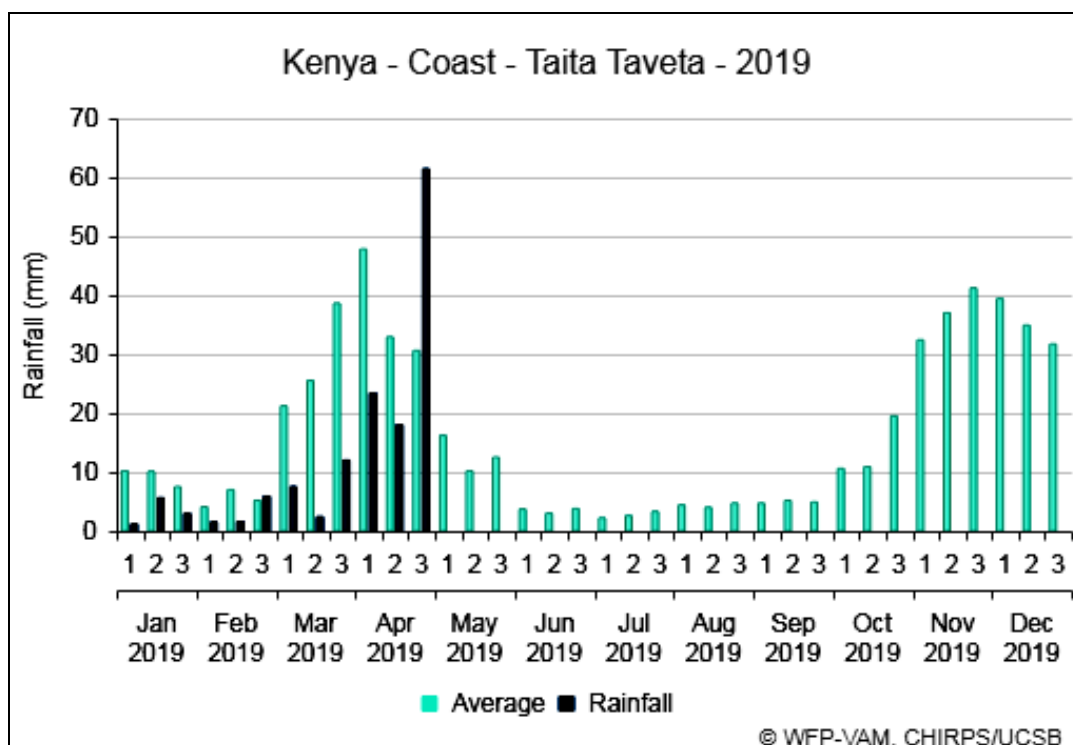
1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The onset was late on the March 30, 2019 instead of normal onset in the second week of March.
- The county recorded moderate rains in the month under review. Mwarungu station located in the highlands of Taita Sub County recorded twelve wet days totalling 123 mm while Rukanga station, Voi Sub County and Mwachawaza station, Mwatate Sub County both located in the lowlands recorded 102 mm and 91 mm for seven and five wet days respectively. Taveta Sub County recorded four wet days totalling 35.2 mm at Challa station.
- The rains were characterised by uneven spatial and poor temporal distribution with some areas in the lowland reporting no rains: Mgeno, David Kayanda

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 63 percent.
- The precipitation was spread across the month and recorded at 102.8 mm with last ten days of the month recording the highest amount of rainfall surpassing LTA by 101%.

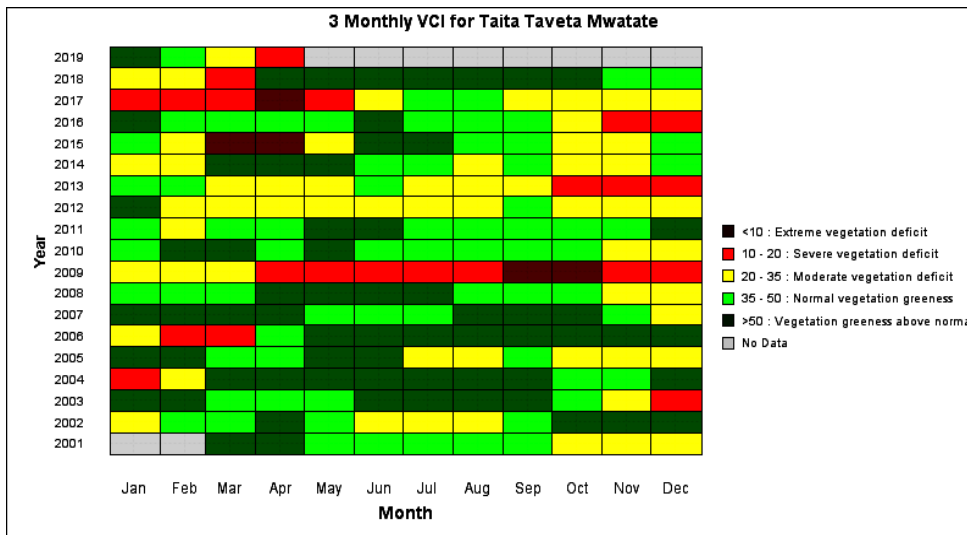
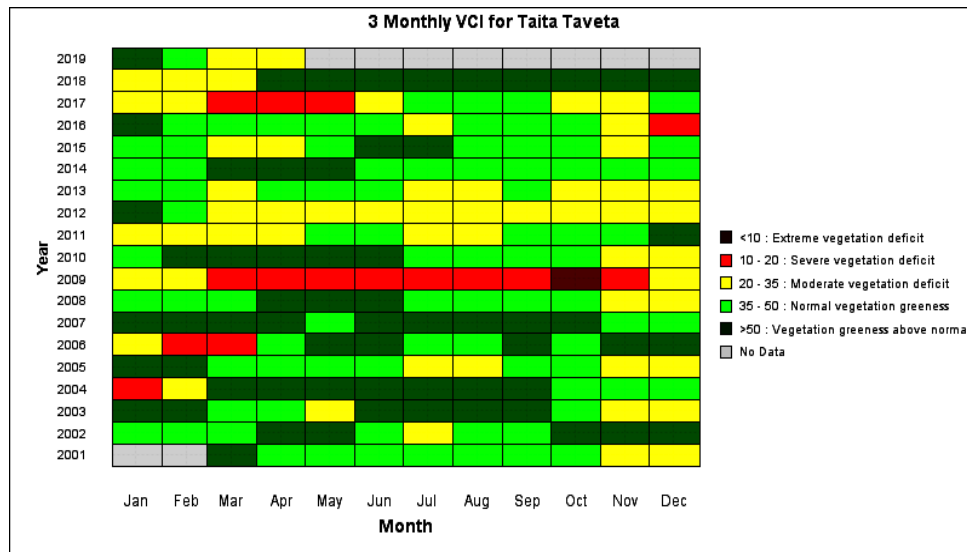


2. IMPACTS ON VEGETATION AND WATER

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 20.46.
- The most affected in terms of vegetation greenness was Mwatate Sub County which had 3M - VCI values of 18.74 indicative of being in the severe vegetation deficit band while Taveta, Voi and Taita Sub Counties had 3M - VCI values of 22.14, 20.5 and 21.15 respectively indicative of being in the moderate vegetation deficit band.



2.1.2 Pasture

- From the sampled communities 15, 75 and 10 percent reported pasture condition to have been good, fair and poor respectively. Pasture condition was reported to be below normal compared to similar season in the previous year.

- In comparison to the previous month no significant change was noted. However, the situation is expected to improve due to the rains realized during the month under review.
- Areas that reported pasture stress were lower zone of Mgeno, Msau and Kighombonyi in Mwatate Sub County, Wumingu/ Kishushe Ward, Taita Sub County and Mata and Challa Wards, Taveta Sub County.
- Pasture variation by livelihood zone indicated the situation was better in the mixed farming: horticulture/ dairy compared to mixed farming; food crops/ livestock livelihood zone.

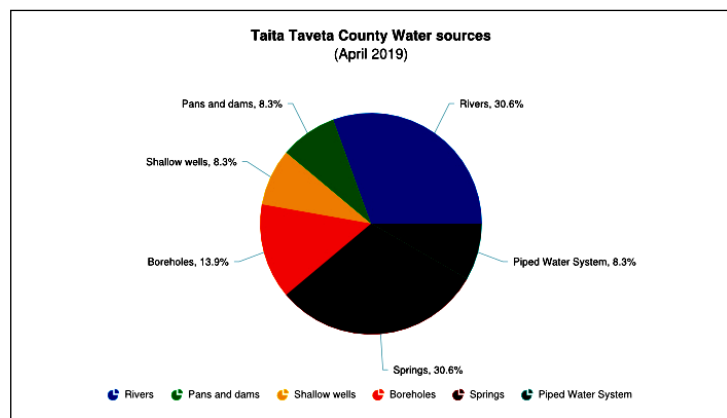
2.1.3 Browse

- From community interviews 30, 60 and 10 percent of the respondents reported browse situation to have been good, fair and poor 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 13 percent.
- From community interviews 65 percent of respondents reported browse condition was below normal for this time of the year while 35 percent reported browse condition normal.
- Browse condition is expected to improve due to ongoing long rains.

2.2 WATER RESOURCE

2.2.1 Sources

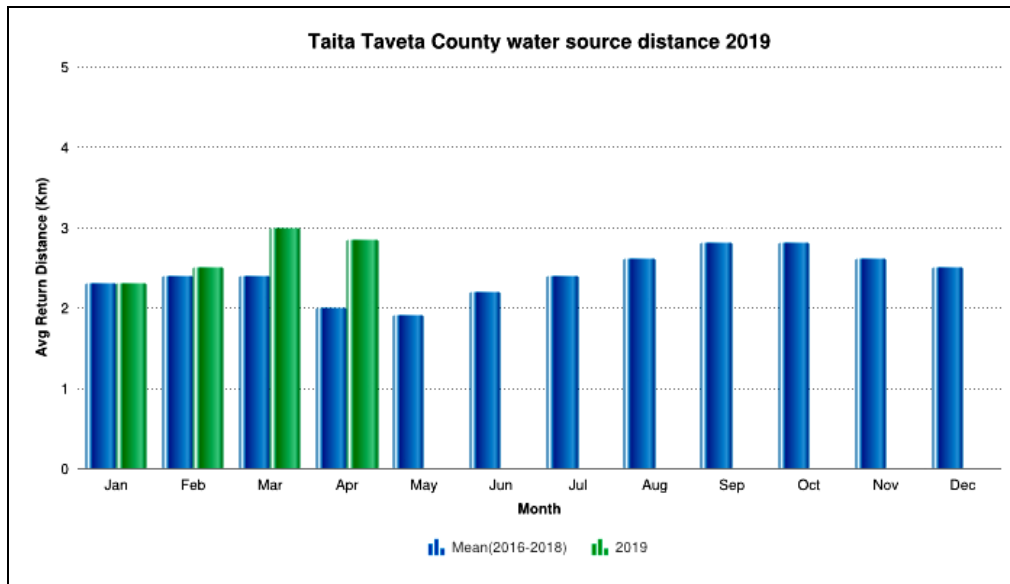
- The three main sources of water in use by both households and livestock were rivers, springs and boreholes and were relied upon by 30.6, 30.6 and 13.9 percent of the households respectively. Other sources included piped water systems, shallow wells and pans.



- The sources remained the same compared to the previous month though the percentage of households that relied on shallow wells as their main source of water decreased by five percent.
- Water situation is expected to improve due to recharge of water sources from the rains being realized in the county.

2.2.2 Household Access and Utilization of Water

- The average return distance from households to main water sources was 2.9 km reflecting a decrease of 0.3 km from the previous month and above long term average by 45 percent. The slight decrease in distance was due to recharge of open water sources and water harvesting at household level from rains being realized.
- Major springs situated in the highlands are expected to recharge due to rains therefore improving piped water systems mainly in the mixed farming: food crop/ livestock livelihood zone.

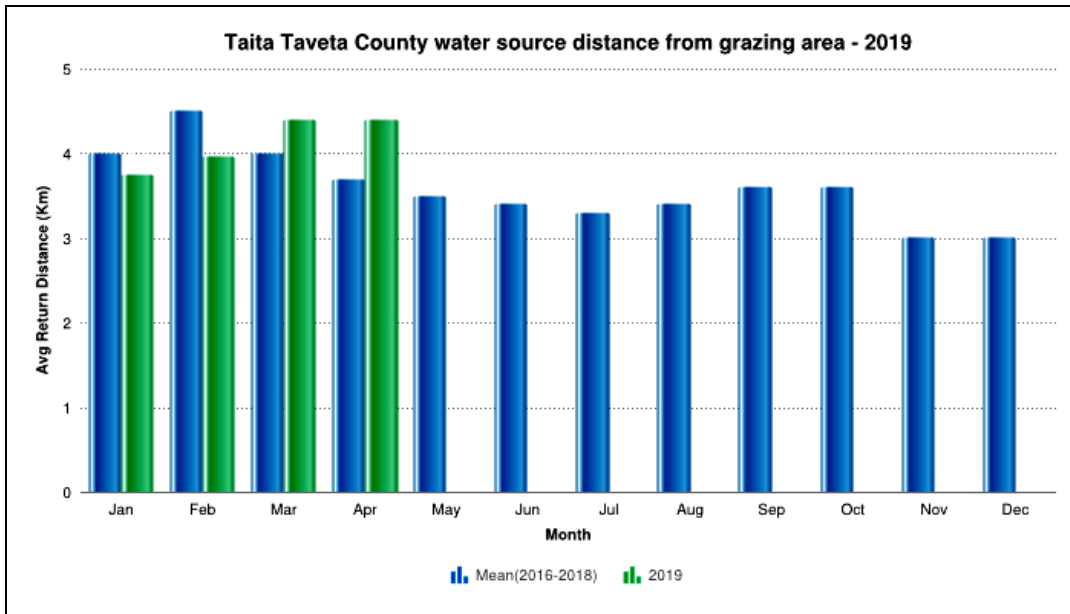


n=21Key Informants

- Water consumption per person per day was 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.
- Households purchasing water was at 79 percent down from 81 percent and price per 20 litre Jerry can was normal and ranged between Ksh. 2-5 at source across all livelihood zones and 20-40 Kshs from vendors in Kishushe, Mata, Chunga Unga, Alia, Mwakitau, Ngolia and Ngambenyi. The cost of transportation depended on distance.
- An estimated 20 percent of the population treated water before drinking. Out of these 71 and 29 percent practised use of water treatment chemicals and boiling respectively.
- Relative percentage for water treatment before drinking was; Food crop/ livestock zone five 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 remained at 4.4 km as posted in the previous month and above long term average by 19 percent as indicated in the graph below.
- 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

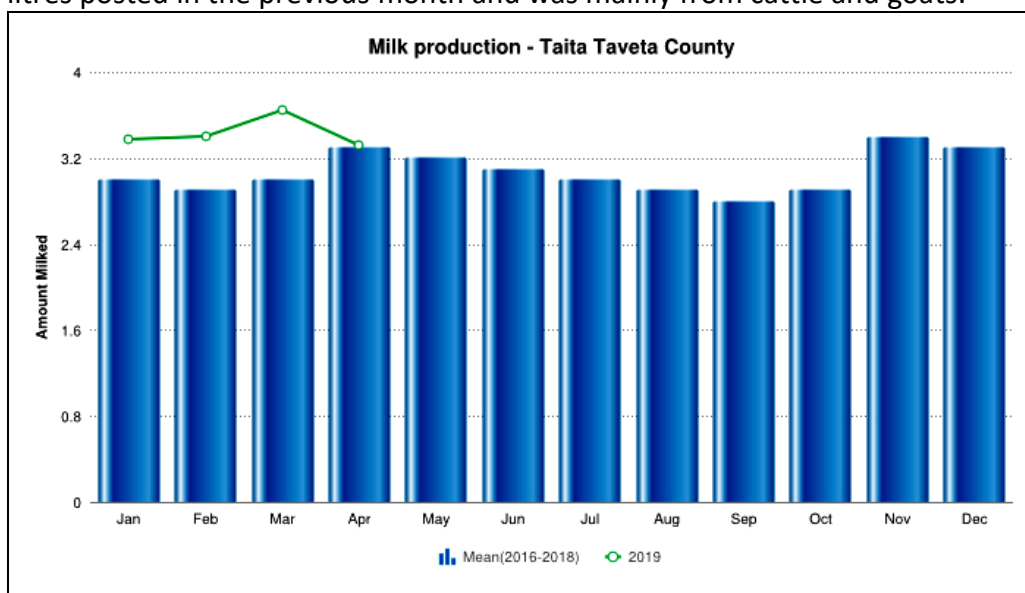
- The livestock body condition for all species was good across the county except in rain fed areas of Taveta Sub County and Mgeno in Mwatate Sub County where cattle body condition was ranging from fair to poor.
- Livestock body condition is expected to improve in areas where rains are being realized.

3.1.2 Livestock Diseases

- No abnormal disease outbreak was reported.

3.1.3 Milk Production

- The average milk production per household per day was at 3.3 litres compared to 3.6 litres posted in the previous month and was mainly from cattle and goats.



n=210 HHs

- Milk production for the month under review was within the normal range.
- Relatively, quantity of milk produced per household per day was highest in the mixed farming: horticulture/ dairy livelihood zone at six litres, in the mixed farming: irrigated cropping/ livestock livelihood zone at three litres and lowest at one litre in the mixed farming: food crop/ livestock livelihood zone.

3.2 RAIN-FED CROP PRODUCTION

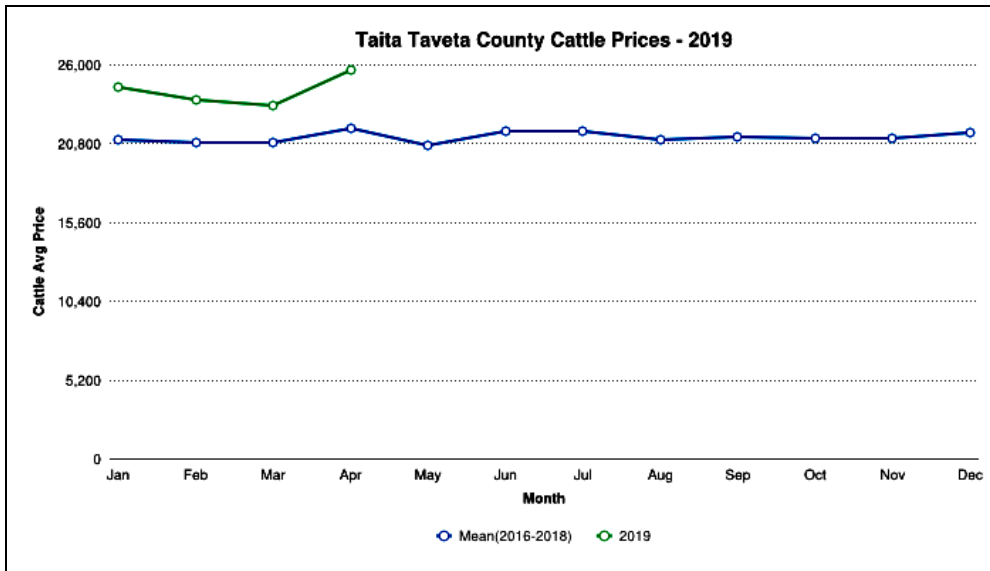
3.2.1 Stage and Condition of food Crops

- The main food crops grown were maize, beans, cowpeas and green grams. Most crops that survived moisture stress were at the germination stage.
- Apart from the highlands, in the lowlands very few framers have planted and few are currently planting this we observed in Sagalla, Marungu, Kishushe, Zungulukani Taveta rain fed sections while in Kamtonga the dry planted crop germinated following earlier showers farmers lost seeds to rotting and the few that germinated was experiencing moisture stress due to the erratic nature of the rains.

4.0 MARKET PERFORMANCE

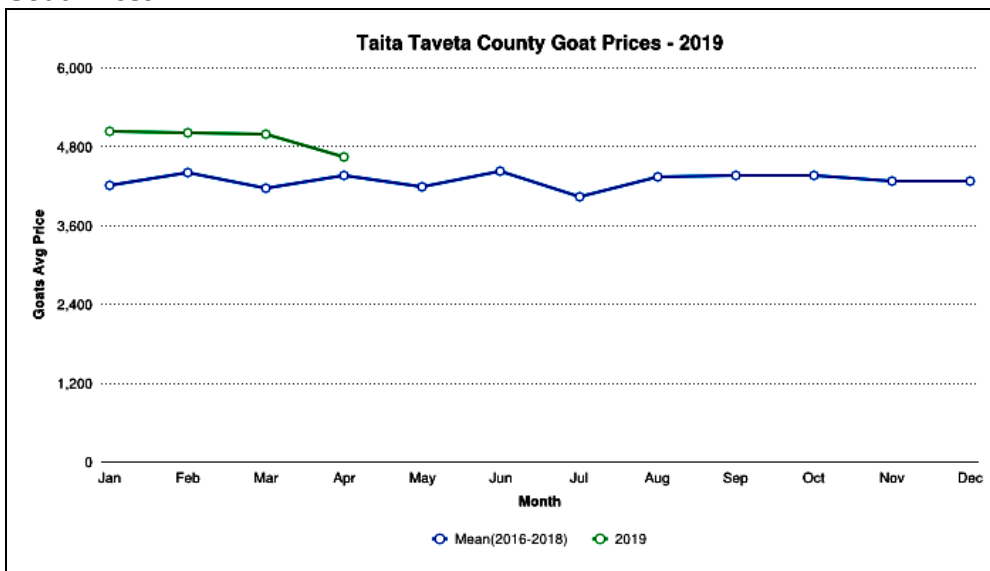
4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices



- The average market price of a three year old bull rose by 11 percent to Kshs 25,900 compared to the previous month. Cattle prices in Challa Ward went up due to good prices fetched in the newly established Tambarare cattle market in Challa Ward which is a cross border market.
- The highest prices were reported in the horticulture/ dairy livelihood zone of Kshs 28,000, the lowest were reported in mixed farming: food crops/ livestock and mixed farming: irrigated cropping/ livestock livelihood zones of Kshs 22,000. The price difference was as a result of better breeds kept in this zone plus good body condition.
- Compared to the long term mean, the county average price was higher by 19 percent.

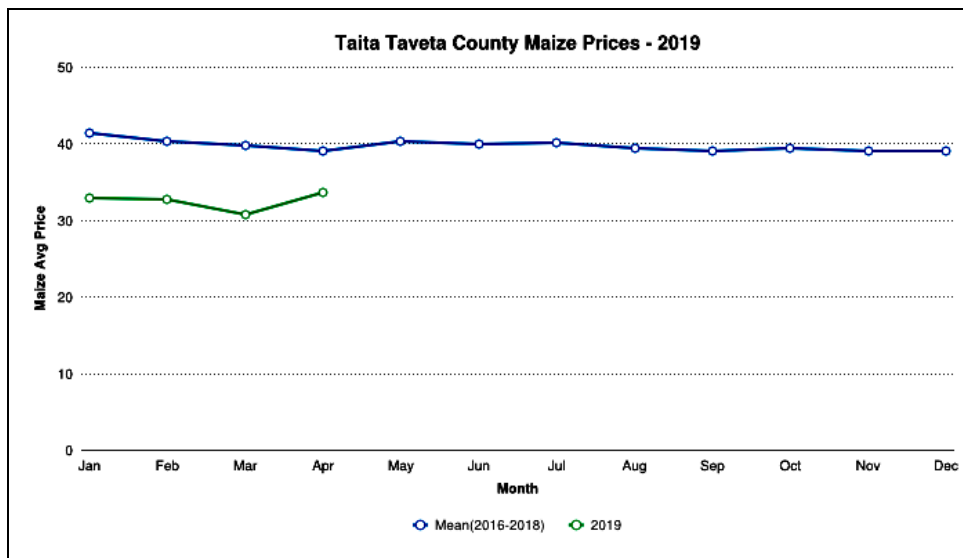
4.1.2 Goat Prices



- The county average market price of a two year goat dropped by seven percent to Kshs 4,600 compared with previous month.
- The highest prices were reported in the mixed farming: horticulture/ dairy livelihood zone of Kshs 6,000, the lowest prices were reported in mixed farming: food crop/ livestock livelihood zone and mixed farming: irrigated cropping/ livestock livelihood zone at Kshs 4,500 and Kshs 4,000 respectively. The price difference was a result of good body condition and better breeds.
- Compared to long term mean, the average price was higher by six percent.

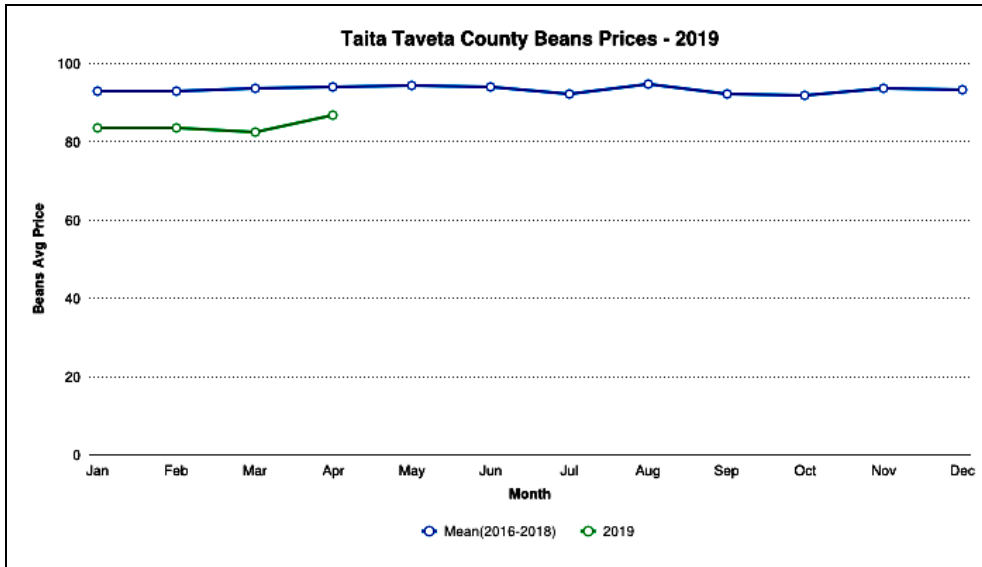
4.2 CROP PRICES

4.2.1 Maize



- The average market price of a kilo of maize rose by 10 percent to Kshs 33.60 compared with the previous month and below long term average by 14 percent.
- The increase in price was a result of dwindling maize stocks at household level that led to increase in demand for the product in the markets.
- Across the livelihood zones the price varied with the mixed farming: horticulture/ dairy livelihood zone recording lowest price of Kshs 32.00 and highest price of Kshs 33.90 was recorded in the mixed farming: food crops/livestock livelihood zone (Mwakajo, Rukanga and Mwachawaza). Mixed farming: irrigated/livestock livelihood zone, areas of irrigation zone in Challa and Eldoro in Taveta Sub County reported prices at Kshs 33.00 per kilo.

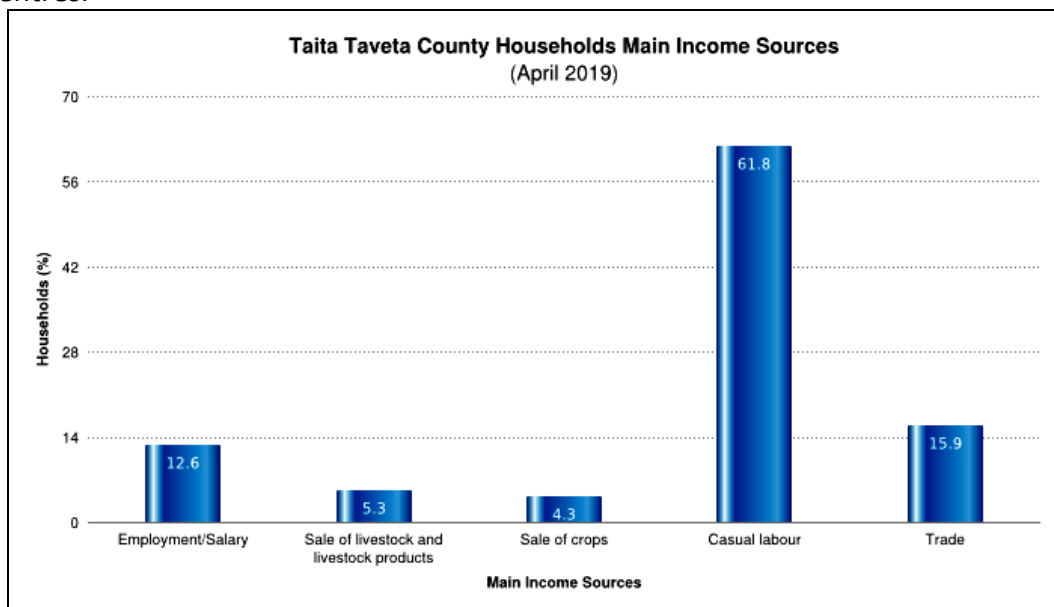
4.2.2 Beans



- The average market price of a kilo of beans rose by five percent to Kshs 86.50 compared with previous month and below the long term mean by eight percent.
- Lowest prices were recorded in mixed farming: horticulture/ dairy and mixed farming: irrigated cropping/livestock livelihood zones at Kshs 80.00 due to harvests, while high prices were recorded in the mixed farming: food crops/livestock livelihood zone of Kshs 88.60 in Mwakajo, Mwachawaza and Rukanga markets.

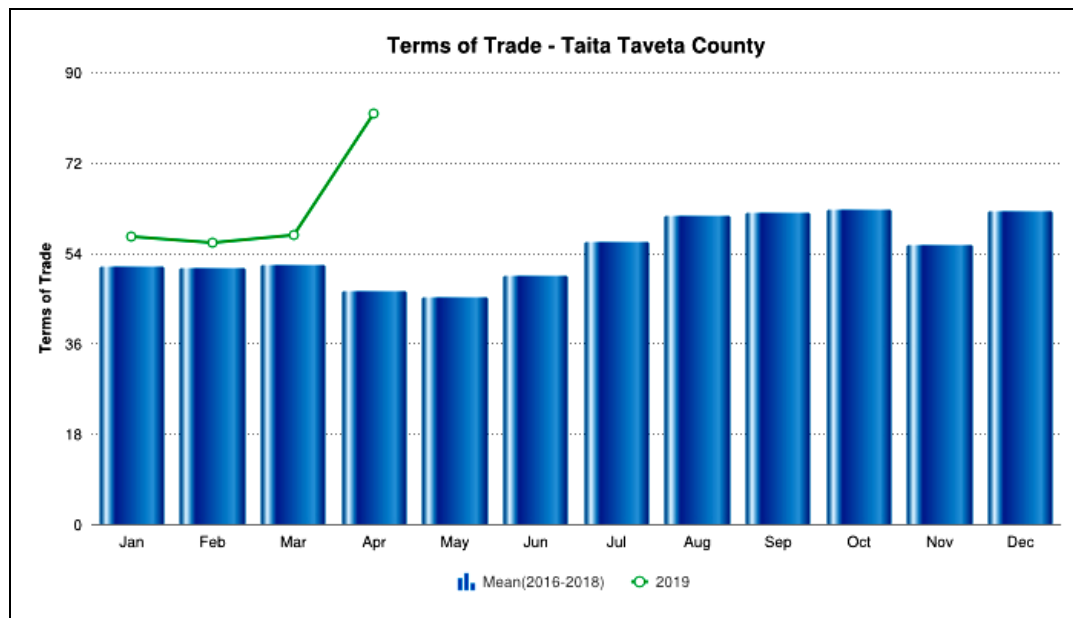
4.3 INCOME

- 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)

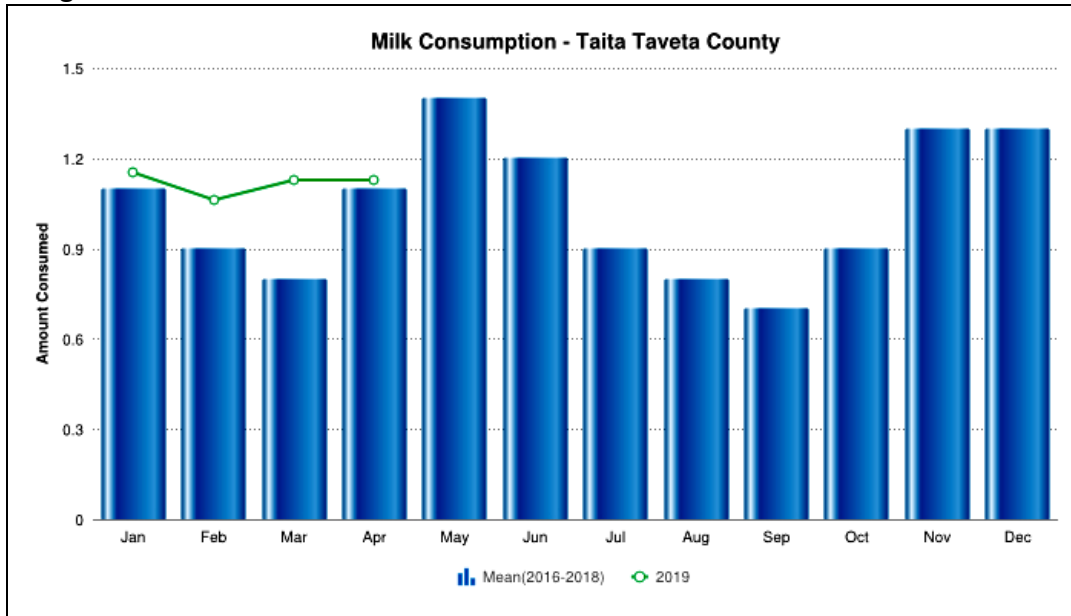


- The Terms of Trade were favourable recorded at 81.9 compared to 57.7 posted in the previous month and 76 percent above the long term mean implying an improved purchasing power compared to normal times.
- Earnings accruing from casual labour managed to purchase an extra 24 kilograms of maize compared to last month.
- Highest ratio was recorded in mixed farming: irrigated cropping/livestock livelihood zone; Challa of 106 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 61.1. Mixed farming: horticulture/ dairy livelihood zone stood at 78.6.
- Casual labour earnings purchased 81.9 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 stable at 1.1 litres as posted in the previous month. Milk consumption remained relatively stable and within the normal range.

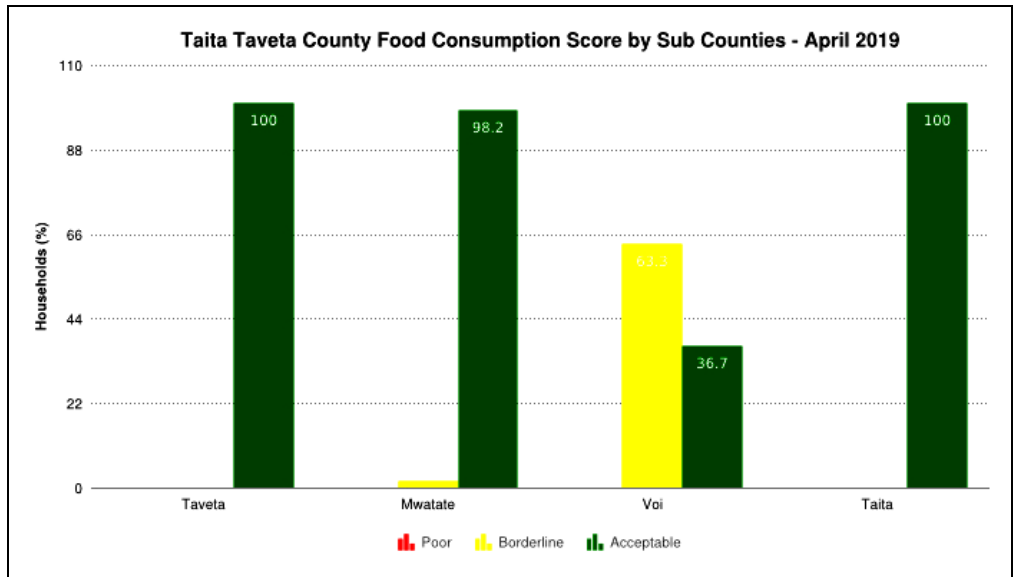


n=210 HHs

- Milk consumption was normal at one litre per household per day across all livelihood zones.

5.2 FOOD CONSUMPTION SCORE

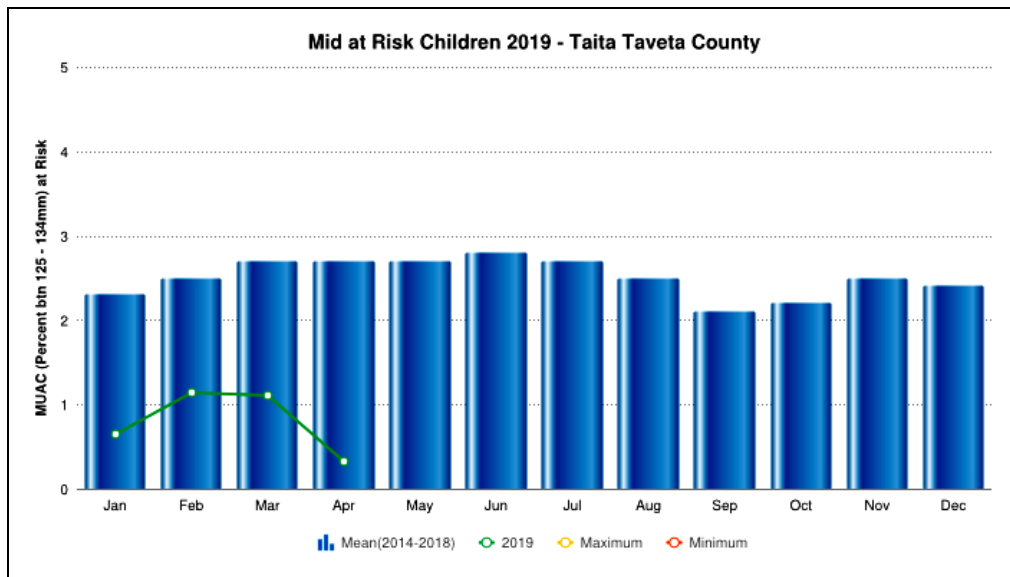
- The prevalence of households with acceptable and borderline food consumption (FCS) score was 81 and 19 percent respectively.
- Compared with previous month 20 percent of households under the borderline category moved to acceptable category indicating an improvement.
- Compared with similar period in 2018 where prevalence was at 2, 48 and 50 percent respectively, household consumption is currently much better given that none are in the poor food consumption score category more households are in the acceptable food consumption score.
- The mean food consumption score was recorded at 59.3 compared to 48.2 posted in March, 2019.
- The mean FCS score was high in the mixed farming: irrigated cropping/ livestock livelihood zone recorded at 84.6 while mixed farming: horticulture/ dairy livelihood zone and mixed farming: food crop/ livestock livelihood zone recorded the lowest at 47.95 and 45.45 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 637 children below five years were sampled for MUAC out of which 43 percent were female and 57 percent male.



5.3.1 Nutrition Status

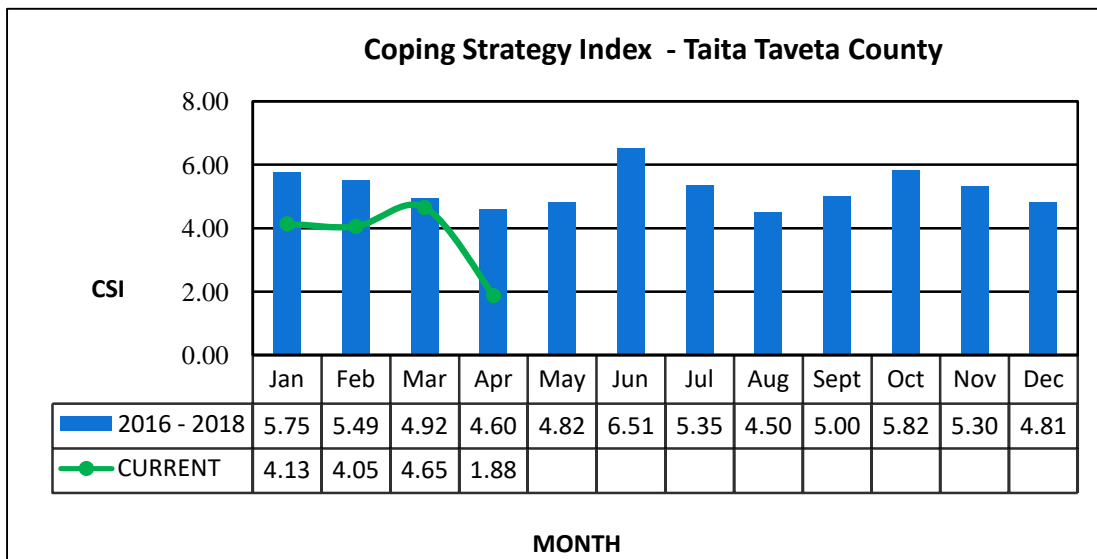
- The proportion of children at risk of malnutrition (125 – 134 mm) dropped to 0.3 percent from 1.1 percent posted in the previous month.
- No cases of GAM by MUAC (115 -124 mm) and Severe<115 mm were recorded
- The current proportion of MUAC (125 - 134) was lower than LTM by 88 percent.
- In all livelihood zones nutrition status of children below five years in sampled sentinel sites remained good in the month under review.

5.3.2 Health

- Out of the 637 sampled children five percent were reported to be ailing from fever with chills like malaria and diarrhoea. Prevalent was fever with chills like malaria at 93 percent.
- Skin infection was reported in Kishushe primary school.

5.4 COPING STRATEGIES

- The average Coping Strategy Index (CSI) for the month under review was 1.88 compared to 4.70 posted in the previous month.
- The CSI was below the long term average by 59 percent meaning household were within normal consumption based coping strategies.
- Similar period last year CSI was at 2.83 (34 percent above) meaning households are better off this time of the year compared to similar period last year.
- Zero CSI was recorded in the mixed farming: irrigated cropping/ livestock livelihood zone, while the highest in mixed farming: horticulture/ dairy livelihood zone at 3.13. Mixed farming: food crop/ livestock livelihood zone CSI was at 2.51.
- The graph below show trend of consumption based coping strategy index in the county.



n=210HHs

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD AND NON FOOD INTERVENTIONS

6.1.1 Sectoral

Intervention	Activities	Implementers
Agriculture & Livestock Sector		
Artificial insemination	Breeds improvement	Dept of Agriculture & Livestock
Pasture seeds	Pasture seeds distributed to farmers	
Irrigation Sector		
Desilting of drainage canals	Desilting of Survey Kubwa and Survey Ndogo drainage canals (14 km each) in Kimorigho, Taveta Sub County	County Government
Water Sector		
Provision of water	Water trucking to Mwakitau Dispensary	Department of Water & Sanitation
	Equipping and Pipeline Development of Kimwa water project in Lower Sagalla at 95% completion	
	Equipping of Zungulukani borehole	
	Construction of Ufunguo Water Pan	
	Implementation of Iriwenyi borehole	Coast Water Services Board
	Manoa borehole piping	
	Dighai borehole equipping	
	Iriwenyi borehole	
Multi-Sector		
Coordination	Development of drought response plan	NDMA and Technical CSG

7.0 EMERGING ISSUES

7.1 Insecurity/ Conflict/ Human Displacement

- Marauding elephants damaging germinating crops were reported in areas of Kasigau Ward, Voi Sub County.
- Flash floods were reported in Maungu in Voi Sub County and Njoro in Taveta Sub County. A total of twenty houses were affected, thirteen in Maungu and seven in Njoro.
- In Maungu floods were caused by heavy downpours that led to overflow of water pans at Ndovuni, Marungu Ward.

7.2 Migration

- No abnormal livestock migration was reported.

7.3 FOOD SECURITY PROGNOSIS

- The rains have been unpredictable and most farmers are in a dilemma. Some have replanted even after making losses during the first trial. If the rains fail to progress, then the county might fall short of food stocks given that the previous season performed below normal in terms of harvests.

- Positive impact on livestock and water sector projected due to availability of water and pasture at shorter distances and livestock body condition is expected to be good and livestock productivity to increase for the next three months.
- Majority of the population are likely to have borderline and acceptable food consumption scores and employ normal consumption based coping strategies.
- Nutrition status will remain stable and no mortalities are expected as a result of food insecurity.

8. RECOMMENDATIONS

Agriculture and Livestock Sector

- Promote good agronomic practices and planting of early maturing and DTCs
- Vaccination of livestock especially in Mboghoni, Chawia, and Kasigau Wards
- Disease surveillance in all stock routes and ranches
- Campaigns to farmers to reduce herd sizes(commercial off takes)

Water and Irrigation Sector

- Repair of broken spill ways for the water pans in Ndovuni and monitor other dams to reinforce areas with weakness.

Public Health and Nutrition Sector

- Deworming for both adults and children especially in Kishushe.
- Household level water treatment and provision of water treatment chemicals.

Peace and Security Sector

- Communities residing in areas prone to flooding in Taveta Sub County to move to higher grounds.
- KWS to enhance surveillance in areas bordering the park especially Sagalla, Kasigau and Ngolia Wards.