

# National Drought Management Authority


TAITA TAVETA COUNTY

## DROUGHT EARLY WARNING BULLETIN FOR MARCH 2021



A Vision 2030 Flagship Project



MARCH 2021 EW PHASE		Early Warning Phase Classification		
 <p><b>Drought Status: NORMAL</b></p> <p>Shughuli za kawaida</p>	<b>Livelihood Zone</b>	<b>Phase</b>	<b>Trend</b>	
	Mixed Farming: Food Crops/ Livestock	Normal	Stable	
	Mixed Farming: Food Crops/ Horticulture/Dairy	Normal	Stable	
	Mixed Farming: Irrigated Cropping/ Livestock/Food Crops	Normal	Stable	
	National Park	Normal	Stable	
	<b>County</b>	<b>Normal</b>	<b>Stable</b>	
<p><b>Drought Situation &amp; EW Phase Classification</b></p> <p><b>Biophysical Indicators</b></p> <ul style="list-style-type: none"> <li>The County received light rains that were below normal and were reported in the lowlands and the highlands. The rains were poorly distributed in time and space</li> <li>The county vegetation greenness condition was above the normal range (VCI-3Month; 58.03) and as forecasted by ASTROCAST vegetation is projected to be green for the next two months.</li> </ul> <p><b>Socio Economic Indicators (Impact Indicators)</b></p> <p><b>Production Indicators</b></p> <ul style="list-style-type: none"> <li>Land preparation and early planting ongoing.</li> <li>Livestock body condition was good for all species across all livelihood zones and no migration was reported.</li> <li>Average milk production per HH per day was above normal.</li> </ul> <p><b>Access Indicators</b></p> <ul style="list-style-type: none"> <li>Terms of Trade were favorable.</li> <li>Milk consumption per HH per day was above normal.</li> <li>Household return distances to water sources were normal.</li> <li>Distances to water sources from grazing areas were below normal.</li> </ul> <p><b>Utilization Indicators</b></p> <ul style="list-style-type: none"> <li>The proportion of children at risk of malnutrition was within the normal range</li> </ul>	<b>Biophysical Indicators</b>	<b>Value</b>	<b>Normal Range/ Value</b>	
	Rainfall 3Months Anomaly	81	80 – 120	
	VCI-3Month	58.03	<50	
	<b>Production indicators</b>	<b>Value</b>	<b>Normal</b>	
	Crop Condition (maize)	Good	Good	
	Livestock Body Condition for cattle	Good	Good	
	Milk Production per HH/ day	3.6 Litres	3.5 Litres	
	Livestock Migration Pattern	Normal	Normal	
	<b>Access Indicators</b>	<b>Value</b>	<b>Normal</b>	
	Terms of Trade (Maize price vs Goat price)	135.6	140.4	
	Milk Consumption per HH/ day	1.3 Litres	1.2 Litres	
	Return HHs distance to water sources	2.7 km	2.4 Km	
	Water source return distance from grazing areas	3.2 km	3.4 Km	
	Cost of water (20 litres)	Kshs 3.00	< Kshs 5.00	
<b>Utilization indicators</b>	<b>Value</b>	<b>Normal</b>		
Nutrition Status, MUAC (% at risk of malnutrition)	0	1.8		

### 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

- During the month, onset of the long rains was recorded in various parts of the county during the fourth week. The amount received was below normal, poorly distributed over time and uneven spatially. On average most places experienced two to three wet days with amounts ranging from 8.1mm in Voi to 25.3mm in Marungu as tabulated below.

#### Kenya Meteorological Department Rainfall Data

No.	Rainfall Station	Livelihood Zone	Wet Days	Amount (mm)
1.	Marungu	Mixed Farming: food crop/livestock	2	25.3
2.	Voi Met. Station	Mixed Farming: food crop/livestock	4	8.1
3.	Wumingu	Mixed farming: horticulture/dairy	2	25

### 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- The month under review was generally dry across all livelihood zones with light rains being reported in some pockets of the county (mainly those around the hilly areas of Taita and Sagalla).
- According to WFP-VAM, Climate Hazards Group InfraRed, the county recorded 45 percent of normal rainfall.
- In terms of temporal spread the first, second and third Dekads received 6.5, 5.2 mm and 21.4 mm of rainfall compared to 21.2, 25.5 mm and 38.6 mm normally respectively as shown in the figure aside.

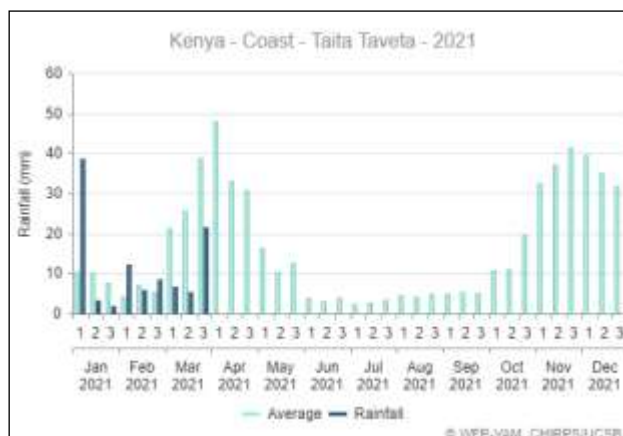


Figure 1. Rainfall distribution

## 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 one-month vegetation condition index (3M - VCI) of 58.03 (Figure below).
- All livelihood zones depicted vegetation greenness above normal.

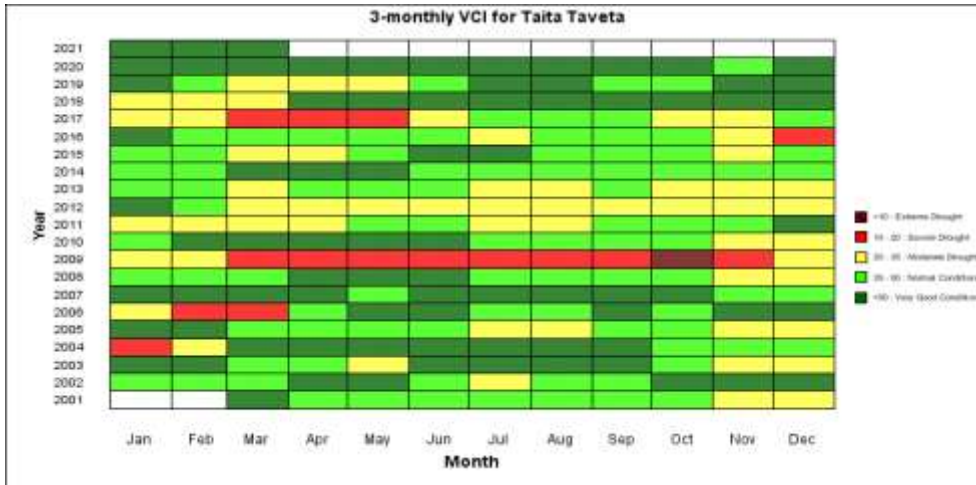


Figure 2. Vegetation Condition Index

### 2.1.2 Vegetation Condition Index (VCI) - Forecast

- According to Forecast-Based Preparedness Action (ForPac) vegetation greenness condition in the county is forecasted to remain above average for the next two months.

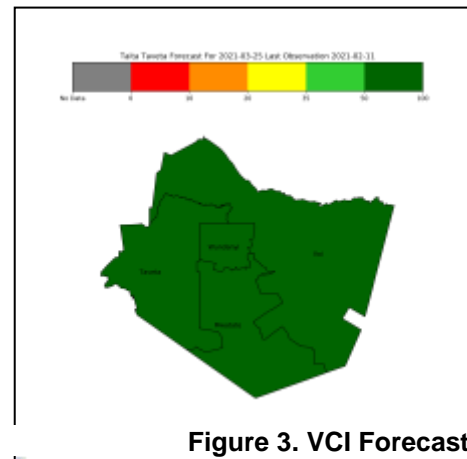


Figure 3. VCI Forecast

### 2.1.3 Soil Moisture Percentage Climatology

- According to TAMSAT-ALERT the forecast for soil moisture percentage climatology for the month of April will be above normal. The soil moisture levels being recorded are capable of regenerating and sustaining natural vegetation and pasture in good condition.
- Forecast for MAM show that the county will continue to experience normal to above average soil moisture with eastern part of the county seeing slightly above average soil moisture percentage climatology (Tsavo East National Park).

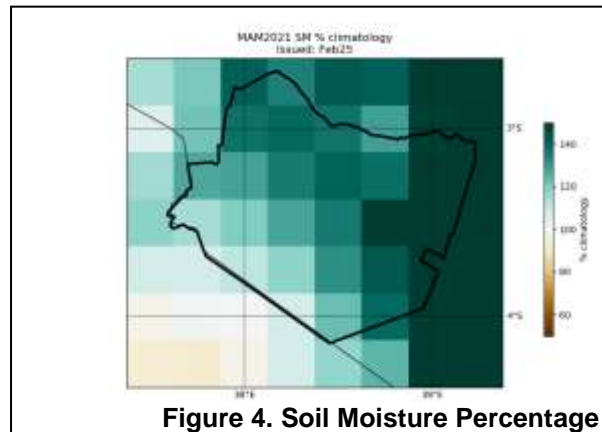


Figure 4. Soil Moisture Percentage

### 2.1.4 Pasture

- From community interviews, 90.5 and 9.5 percent of the respondents reported that pasture condition was good and fair respectively and normal compared to a time like this last year.
- In comparison to the previous month, pasture condition was generally good but on a deteriorating trend due to the prevailing drier conditions.
- Available pasture is expected to cater for livestock for the next two months.

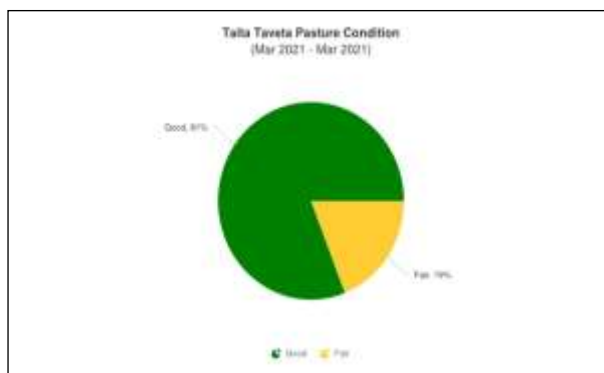


Figure 5. Pasture Condition

### 2.1.5 Browse

- From community interviews, 90.5 and 9.5 percent of the respondents reported browse condition was good and fair respectively, but normal.
- Compared to the previous month, the browse condition remained generally good.
- Available browse is expected to cater for livestock for the next three months.

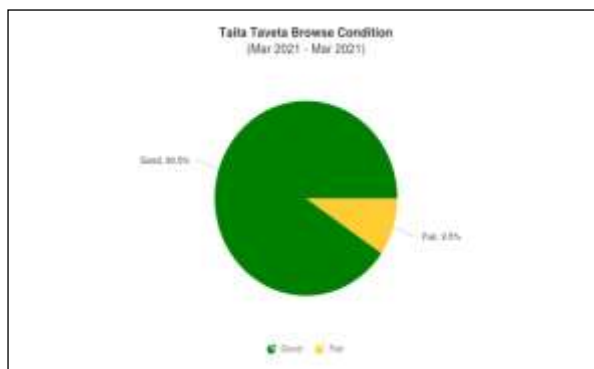


Figure 6. Browse Condition

## 2.2 WATER RESOURCE

### 2.2.1 Sources

- The main sources of water currently in use by both human beings and livestock were piped water systems, springs, rivers, boreholes, pans and rock catchments and shallow wells.
- They were relied upon by 33, 22, 17, 9, 6,4 and 9 percent of the households respectively.
- Notably, some water pans and rock catchments that had recharged during the previous month were still holding water hence water availability near grazing areas.
- In comparison to previous month, the proportions remained relatively the same.
- In all livelihood zones, water from the main sources is expected to cater for households for the next two to three months.

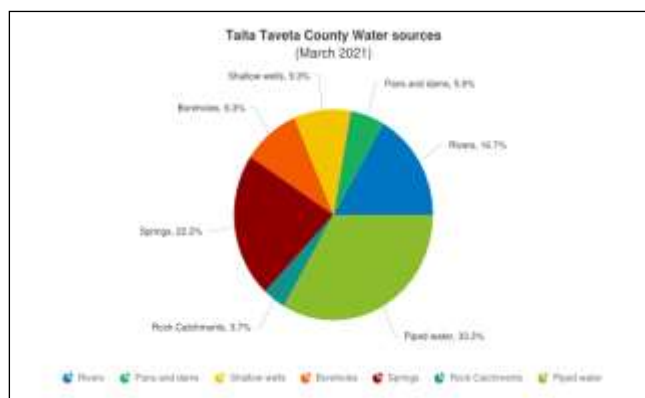


Figure 7. Major Water Sources

### 2.2.2 Household Access and Utilization of Water

- The average return distance from households to main water sources remained stable at 2.7 km compared to 2.6 km in the previous month and above the short-term average by 13 percent as shown in the graph below.
- Ordinarily, most households usually benefit from roof catchment water harvesting but the same was not available following the late onset of the long rains and in sections where it had been received, the amounts were relatively low.

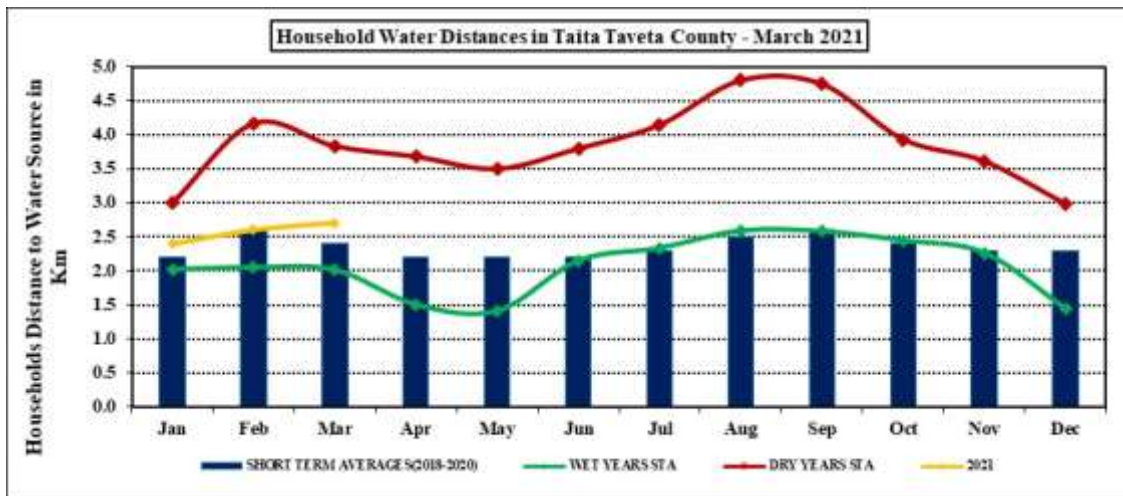


Figure 8. Household Access to Water  
n=21 Key Informants

- The county average water consumption per person per day (pppd) was at 16.6 litres, same as the previous month and varied across livelihood zones.
- Households in mixed farming: horticulture/ dairy livelihood zone and mixed farming: irrigated cropping/ livestock livelihood zone reported 16.5 and 20 litres pppd respectively compared to 16 litres pppd in mixed farming: food crops/ livestock livelihood zone.
- Water retailed at Kshs 2 per 20 litre jerry-can at source and approximately 61 percent of the households purchased water compared to 66 percent in the previous month. Price per jerry can at private water points ranged from Kshs 3 - 5.
- Overall, 14.3 percent of the households treated drinking water at home and this mainly was in the mixed farming; irrigated cropping/livestock livelihood zone and mainly used chemicals like water guard. In this area water is usually contaminated due to agricultural activities and occasional flooding.
- Water used by households in the horticulture/dairy and food crop/livestock livelihood zones is piped and normally treated at the source.

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

- The average livestock trekking return distance from grazing areas to main water sources was recorded at 3.2km compared to 2.9 km for the previous month and below the short-term average by 6 percent as indicated in the graph below.
- Increases in distance were as a result of decline in water levels and drying up of some open water sources that were in use during the previous month.

- In all livelihood zones, frequency of watering livestock remained normal; once per day in the lowlands and twice per day in the highlands.

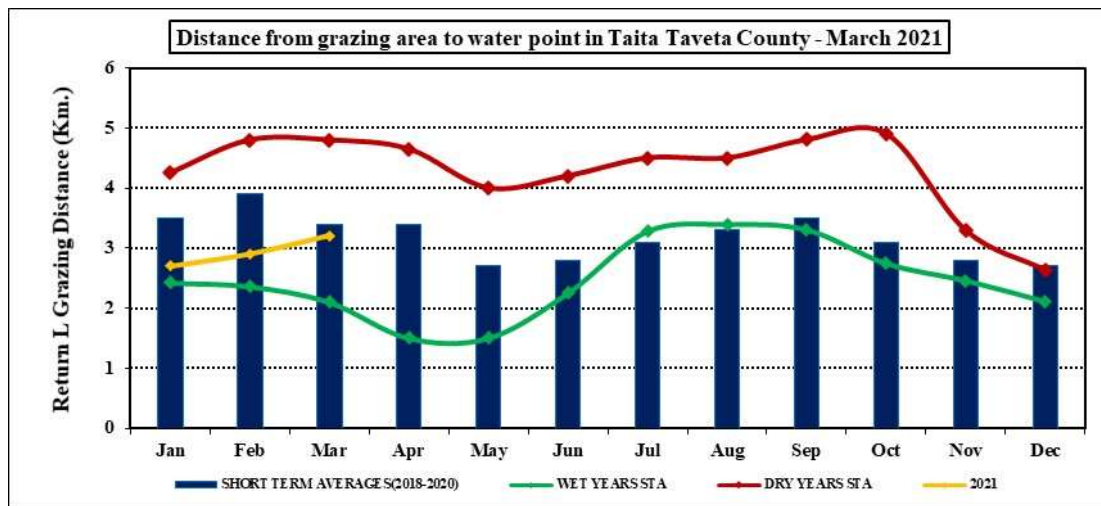


Figure 9. Grazing distances  
n=21Key Informants

### 3. PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

- Livestock body condition for all species was generally good across all livelihood zones and similar to the previous month due to availability of forage.
- Livestock body condition is projected to remain good due to availability of forage and water at shorter distances.

##### 3.1.2 Milk Production

- The average milk production (cow) per household was recorded at 3.6 litres, same as the previous month and above the long-term average by 3 percent.

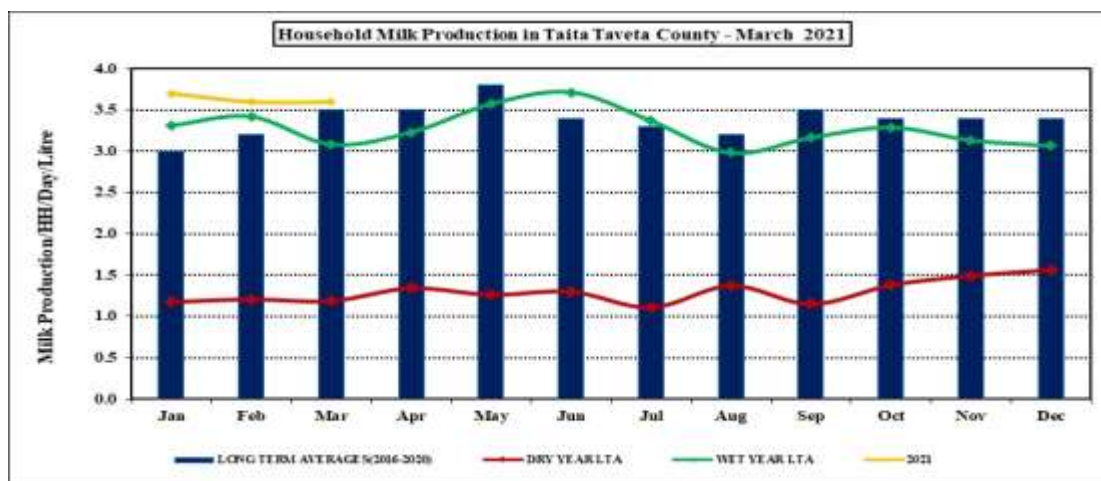


Figure 10. Milk Production  
n=210 HHS

- Mixed farming: horticulture/ dairy livelihood zone milk production was at 6.5 litres, 2.8 litres in the mixed farming: irrigated cropping/ livestock livelihood zone at three litres and lowest at 2.2 litres in the mixed farming: food crop/ livestock livelihood zone.

## 3.2 RAIN-FED CROP PRODUCTION

### 3.2.1 Stage and Condition of food Crops

- Farmers in the Mixed farming: horticulture/ dairy livelihood zone were busy preparing their farms in anticipation of the March-May long rains. Early planting was also observed in isolated farms across the county.
- In the mixed farming: irrigated cropping/ livestock livelihood zone, diverse crop enterprises were at various stages of physiological growth ranging from germination to maturity. However, in readiness for the rainfed cropping the main activities included land preparation and early planting.

## 4. MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

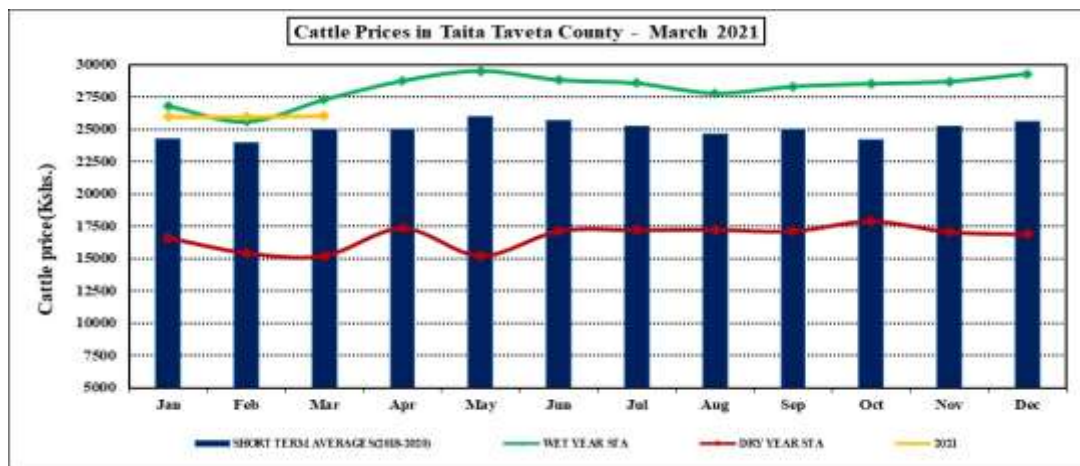


Figure 11. Cattle Market Prices

- The average market price of a three-year-old bull was recorded at Kshs. 26,000, same as the previous month.
- The relatively fair to high prices were as a result of the good livestock body condition reported across all livelihood zones.
- The highest prices were reported in the mixed farming: horticulture/ dairy at Kshs 32,300 and Kshs 25,200 in mixed farming/: food crop/livestock livelihood zone while lower prices were also reported in mixed farming: irrigated/livestock livelihood at Kshs 24,000.
- Compared to the short-term average, the county average price was higher by four percent.

#### 4.1.2 Goat Prices

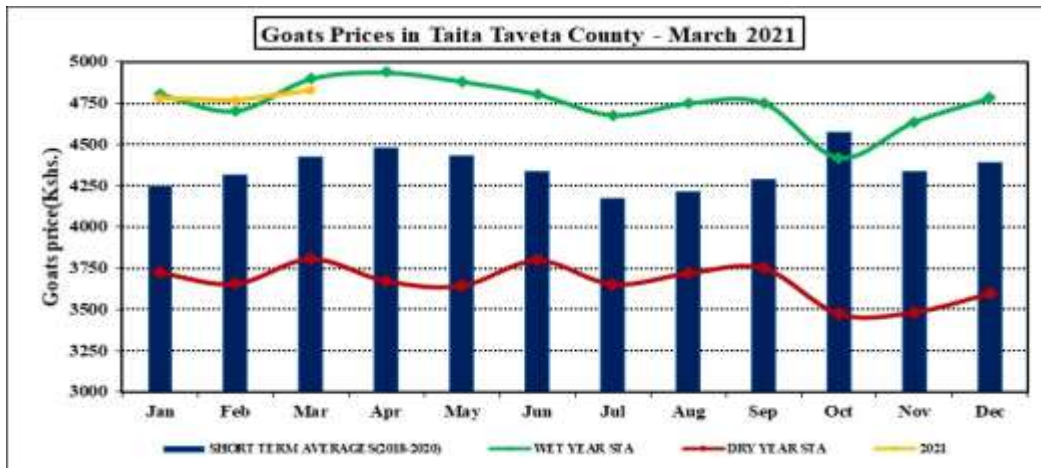


Figure 12. Goat Market Prices

- The county average market price of a two-year-old goat remained stable at Kshs 4,767 as posted last month. The highest prices were reported in the mixed farming: horticulture/ dairy livelihood zone of Kshs 6,167 where farmers keep a few animals for special events while lower prices of Kshs 4,726 and Kshs 4,000 were reported in mixed farming: food crop/ livestock livelihood zone and mixed farming: irrigated/livestock livelihood zone.
- The stable prices were as a result of the good livestock body condition reported from all livelihood zones.
- Compared to short term average, the price was higher by nine percent.

#### 4.2 CROP PRICES

##### 4.2.1 Maize

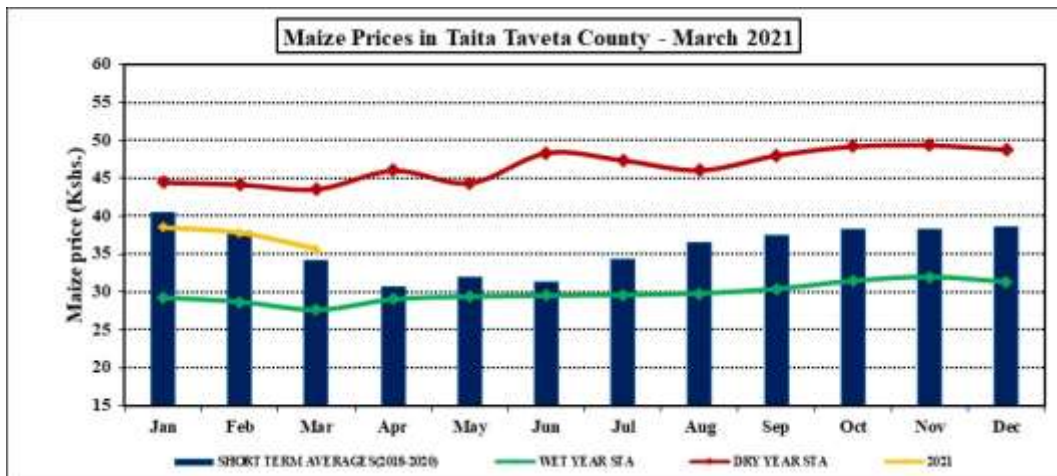


Figure 13. Maize prices

- The average market price of a kilo of maize was recorded at Kshs 36 compared to Kshs. 38 posted in the previous month and below the short-term average by five percent.
- The drop in maize price was due to availability of supplies of maize in the market and households from the previous harvesting season.



- Across the livelihood zones the prices were recorded in the mixed farming; food crops/ livestock livelihood zone (Ghazi, Bura, Rukanga, Mwatate and Chumvini markets) at Kshs 37 while horticulture/dairy livelihood zone (Mghambonyi market) and mixed farming: irrigated/livestock livelihood zone (Taveta Town) at Kshs 35 and Kshs 30 respectively.

#### 4.2.2 Beans

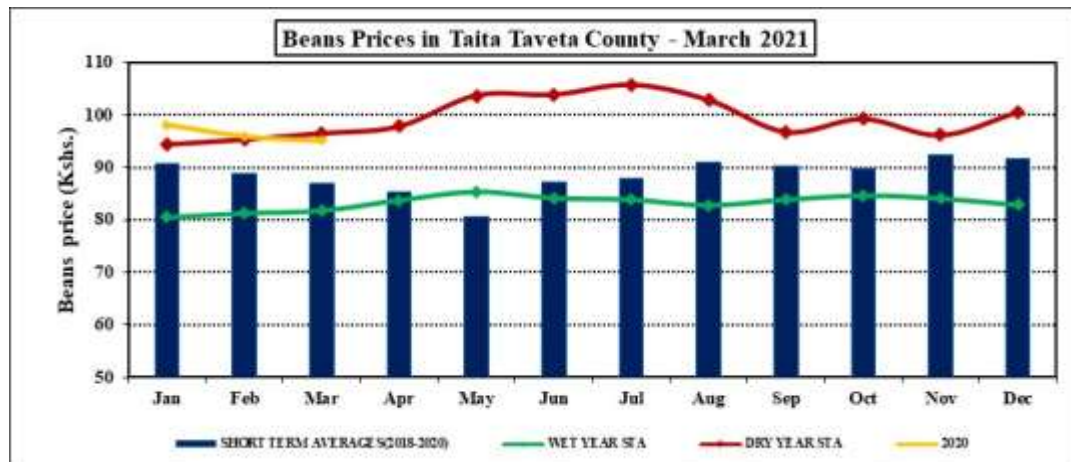


Figure 14. Beans prices

- The average market price of a kilo of beans was Kshs 95 compared to Kshs. 96 in the previous month and above the short-term average by nine percent. The lower prices are due to availability of the product at both household and market level from the previous season's harvest.
- Across the livelihood zones, the price varied with the mixed farming: food crop/ livestock livelihood zone recording a price of Kshs 97 while mixed farming: irrigated/ livestock livelihood zone and mixed farming: horticulture/dairy livelihood zone both recorded a price of Kshs 85 and Kshs.95 respectively.

#### 4.3 INCOME

- The main source of income was casual labour. Others included; trade, employment, and sale of livestock and livestock products and sale of crops at lower proportions. The average casual labour wage for the county for the month under review was Kshs 2,800 compared to Kshs 3,200 posted in the previous month.
- Compared to previous month sources of income remained relatively stable.

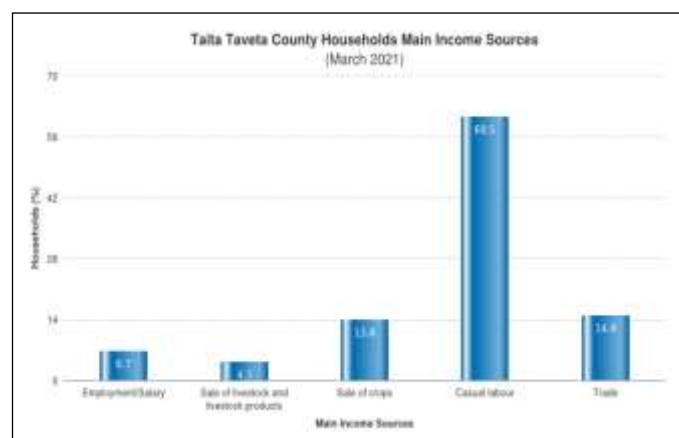


Figure 15. Income sources

- Casual labour opportunities in the rural areas were available in the sisal and banana plantations, irrigation schemes, herding and ranches while in the urban areas, opportunities were in the construction sites and cleaning services in towns.

#### 4.4 TERMS OF TRADE (GOAT PRICE VERSUS MAIZE PRICE)

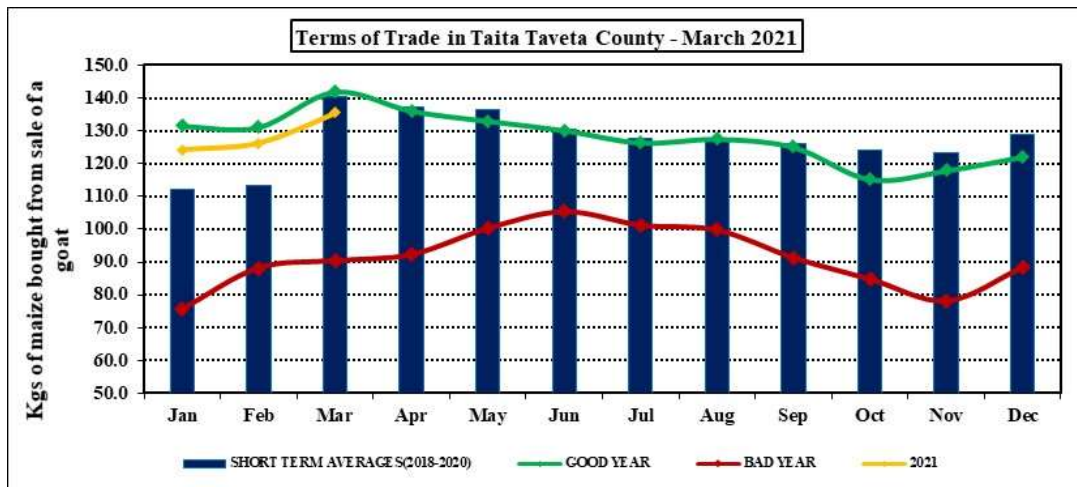


Figure 16. Terms of Trade

- Terms of trade (ToT) were unfavourable and proceeds of sale of goat could purchase 136 kilograms of maize compared to 140 usually (STA). Relative to the previous month the terms improved by approximately eight percent.
- ToT ratios by livelihood zone were as follows; mixed farming: horticulture/ dairy livelihood zone at 176, mixed farming: food crops/livestock livelihood zone at 129 and mixed farming: irrigated cropping/livestock livelihood zone recorded at 133.

### 5. FOOD CONSUMPTION AND NUTRITION STATUS

#### 5.1 MILK CONSUMPTION

- The average milk consumption per household per day remained stable at 1.3 litres, same as the previous month and above the long term mean by eight percent.

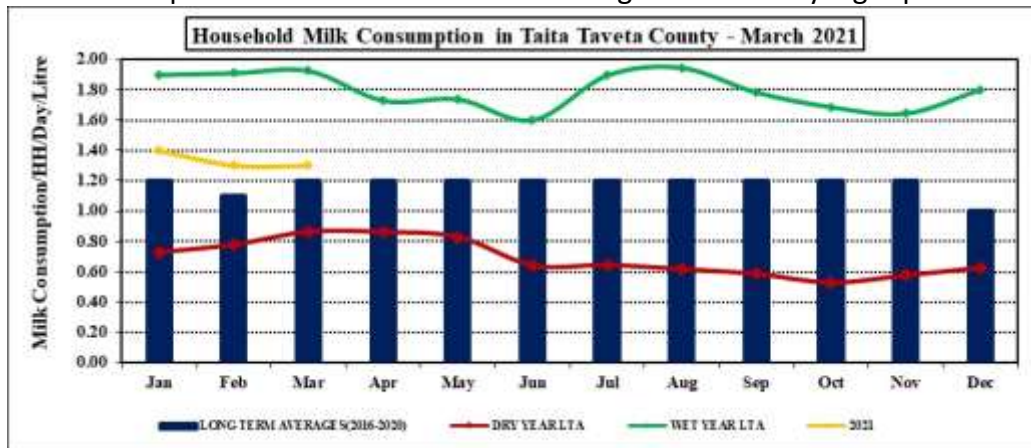


Figure 17. Milk consumption

- Milk consumption per household per day in regard to livelihood zones; mixed farming: food crops/livestock (1.1 litres), mixed farming: horticulture/ dairy (1.6 litres) and mixed farming: irrigated cropping/livestock at (1.3 litres).

## 5.2 FOOD CONSUMPTION SCORE

- An estimated 99 and 1 percent of households sampled were in the acceptable and borderline food consumption score (FCS) compared to 99.5 and 0.5 percent reported in the past month respectfully.
- Households that were reported to be in the borderline food consumption score category were located in the rain fed areas of Challa and Bura Wards in Taveta and Mwatate Sub Counties respectively.
- Some hotspots in the two Wards recorded crop failure over the previous season hence the declining score.
- Compared to a similar period in 2020 where prevalence was 100 percent for acceptable FCS, household consumption for the month under review was stable.
- The current mean food consumption score depicted a stable trend of 75.7 compared to 75.2 in the previous month.
- The mean FCS score was high in the mixed farming: irrigated cropping/ livestock livelihood zone recorded at 91 followed by mixed farming: horticulture/dairy livelihood zone at 76 and mixed farming; food crop/livestock livelihood zone at 60.
- In all the zones, households consumed three food groups i.e., maize, pulses and vegetables and in addition 70 percent of the households interviewed consumed meat (fish/beef) at least once during the seven-day recall period. Fish was served for three to five days in a week in households of Mboghoni and Challa wards in Taveta Sub County due to fishing activities in both Lake Challa and Lake Jipe.
- Source of food consumed varied from own production to purchases; in the mixed farming: irrigated cropping/ livestock livelihood zone 70 percent of households consumed grains, pulses and vegetables that were from own production, mixed farming: horticulture/dairy livelihood zone grains (73), pulses (43) and vegetables (70) percent and mixed farming; food crop/livestock livelihood zone grains (79), pulses (56) and vegetables (7) percent.

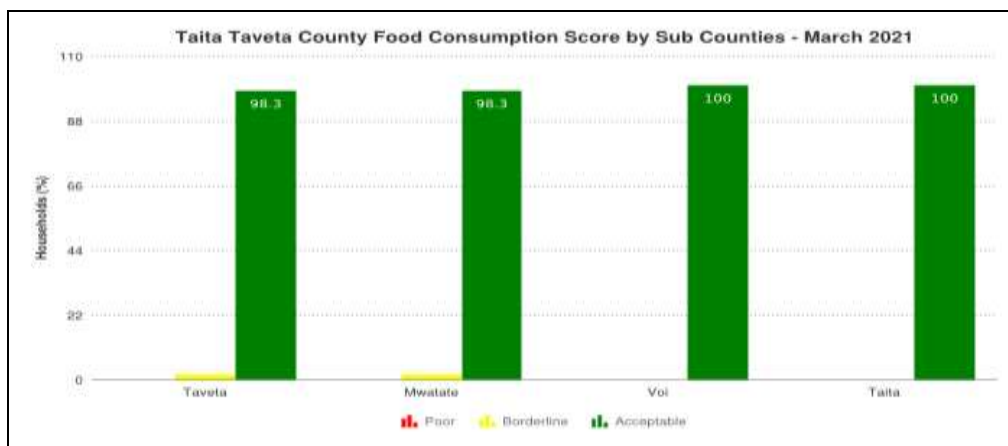


Figure 18. Food Consumption Score  
n=210HHs

### 5.3 HEALTH AND NUTRITION STATUS

- A total of 412 children below five years were sampled for MUAC measurement where proportion of male and female was at 52 and 48 percent respectively.

#### 5.3.1 Nutrition Status

- In the month under review, no children aged below five years were found with MUAC - at risk of malnutrition (125 – 134 mm).
- There were no cases reported to be with MUAC (moderate 115-124mm) or (Severe<115).
- Across all livelihood zones nutrition status of children below five years remained relatively good in the seven sampled sentinel sites.

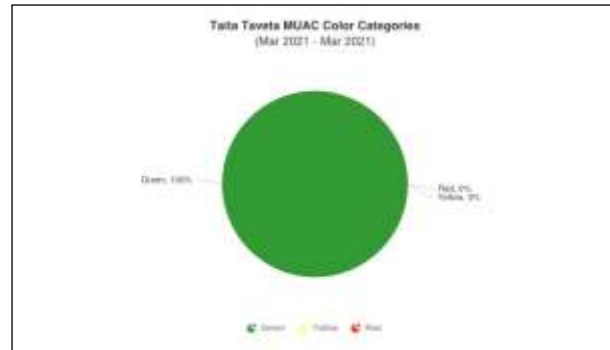


Figure 19. Children at Risk of Malnutrition

#### 5.3.2 Health

- Out of the 412 sampled children only 0.5 percent (2 cases) were reported to be ailing from fever with chills like malaria. The two cases were from Voi and Mwatate Sub-counties (Kasigau and Wusi). These cases were referred to visit either public or private health centres and encouraged to adopt measures like the use of mosquito nets.

### 5.4 COPING STRATEGIES

- There were no consumption-based coping strategies employed from households interviewed in the month under review since an estimated 69 percent of households were holding stocks from the current season harvest and prices were also lower at the household level. The current Coping Strategy Index (CSI) indicates that the situation is generally stable compared to similar month last year.
- The graph below shows trend of consumption-based coping strategy index in the county.

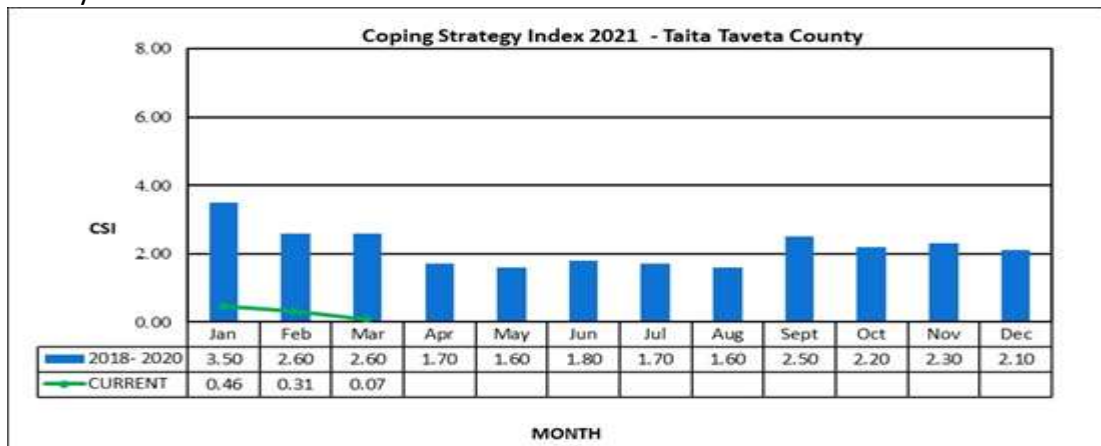


Figure 20. Coping Strategies Index n=210HHS

## 6. CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 FOOD AND NON-FOOD INTERVENTIONS

#### 6.1.1 Sectoral

Intervention	Activities	Implementers
<b>Health Sector</b>		
Provision of health equipment	<ul style="list-style-type: none"> <li>Purchase of personal protective equipment (PPEs), sanitizers, thermo guns, respirators, chlorine, overalls clothes, helmets and spraying pumps.</li> </ul>	County Government Department of Health
<b>Agriculture and Livestock Sector</b>		
Provision of food security	<ul style="list-style-type: none"> <li>Fodder harvesting and storage in all wards</li> </ul>	Department of livestock
	<ul style="list-style-type: none"> <li>Capacity building on poultry production and cluster vaccination in Ngolia Ward</li> </ul>	Department of livestock
<b>Water and Environment Sector</b>		
Provision of clean and safe drinking water and environmental conservation	<ul style="list-style-type: none"> <li>Water pipeline extension (1.88 km) from Kishenyi tunnel to Vipalo waters tanks in Mghange/ Mwanda Ward in Taita Sub County 95 percent complete</li> </ul>	County and National Government EU, NDMA and County Government
	<ul style="list-style-type: none"> <li>Pipeline extension from Kiriwenyi borehole to Kituma ECDE and Kituma Secondary School</li> </ul>	County Government (Dept of Water)
	<ul style="list-style-type: none"> <li>Excavation of Kajire earth dam is ongoing</li> </ul>	National Irrigation Authority
	<ul style="list-style-type: none"> <li>Rehabilitation of Nyangoro - Mwakitau water project in Mwatate Sub County</li> </ul>	Water Sector Trust Fund and County Government
<b>Multi-Sectoral</b>		
Support livelihoods through various enterprises and information	<ul style="list-style-type: none"> <li>Implementation of Sagalla Ward integrated livelihood drought preparedness project is ongoing (Poultry, Sunflower, ABEC, Seedlings and Beekeeping and pipeline development</li> </ul>	EU, NDMA, STE and County Government
	<ul style="list-style-type: none"> <li>Rolling out of Kenya Social Economic Inclusion Program in two Sub Counties (Mwatate and Taveta) to target 1,500 extreme poor families</li> </ul>	County Government, MDMA and State department of Social Development

## **7. EMERGING ISSUES**

### **7.1 Insecurity/ Conflict/ Human Displacement**

- Cases of foot and mouth disease were reported in Mgeno and Mwashoti in Mwatate Sub County and the veterinary department approved quarantine in those areas.
- The COVID-19 pandemic continues to negatively affect off-farm income-earning opportunities like non-farm casual labour, petty trade, and remittances.

### **7.2 Migration**

- No cases of in or out migration was reported in the month under review.

### **7.3 FOOD SECURITY PROGNOSIS**

- KMD April forecast report indicated that occasional and near to above the long-term average rains will be experienced through the month.
- Food will be available at household level due to the previous harvest, however farmers who experienced crop failure and had exhausted their stocks will be forced to rely on stocks from the markets. Minimal consumption based coping strategies are expected.
- Based on TAMSAT-ALERT, soil moisture is expected to be above average and will sustain pasture and browse growth and support tree seedlings planted during the short rains season.
- Forage condition is expected to be good and available at shorter distances and hence maintain good livestock body condition.
- Water situation is projected to cater for the communities until the next season.

## **8. RECOMMENDATIONS**

### **Health sector**

- Provision of PPEs, sanitizers and health equipment for healthcare workers.

### **Agriculture and Livestock Sector**

- Sensitize farmers on post-harvest management.
- Timely provision of certified planting seeds for the season and promote rain water harvesting technologies and management.
- Constant monitoring of locust invasion that have caused havoc in our neighbouring counties

### **Water Sector**

- Provide adequate supply of water in all learning institutions, crowded places like bus stages and market places to enhance hand washing especially during this period of fighting COVID-19.

### **Multi-Sectoral**

- Provision of face masks to school going children to curb spread of COVID-19
- Sensitize all population on the COVID-19 pandemic and its prevention
- Provision of food assistance and cash transfers among the vulnerable groups impacted negatively by effects of COVID-19 pandemic.