

# National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MAY 2021



A Vision 2030 Flagship Project



MAY 2021 EW PHASE		Early Warning Phase Classification		
	<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 rains that were near average 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; 50.42) 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>Main crops are at podding/tasseling stage.</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	80	40 – 80	
	VCI-3Month	50.42	<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	3.8 Litres	3.8 Litres	
	Livestock Migration Pattern	Normal	Normal	
	<b>Access Indicators</b>	<b>Value</b>	<b>Normal</b>	
	Terms of Trade (Maize price vs Goat price)	138.2	137.3	
	Milk Consumption per HH/ day	1.4 Litres	1.2 Litres	
	Return HHs distance to water sources	2.4 km	2.2 Km	
	Water source return distance from grazing areas	2.6 km	2.7 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

- The month recorded near average rains that were poorly distributed over time and space.
- On average, most areas experienced below 10 wet days as reported by various rainfall stations.
- Higher rains were reported in the mixed farming:horticulture dairy livelihood zone.
- Depressed rains were experienced in mainly in the lowlands of the county.

## 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 CHIRPS), the county recorded a three months rainfall anomaly of 80 percent.
- In terms of temporal spread the first and

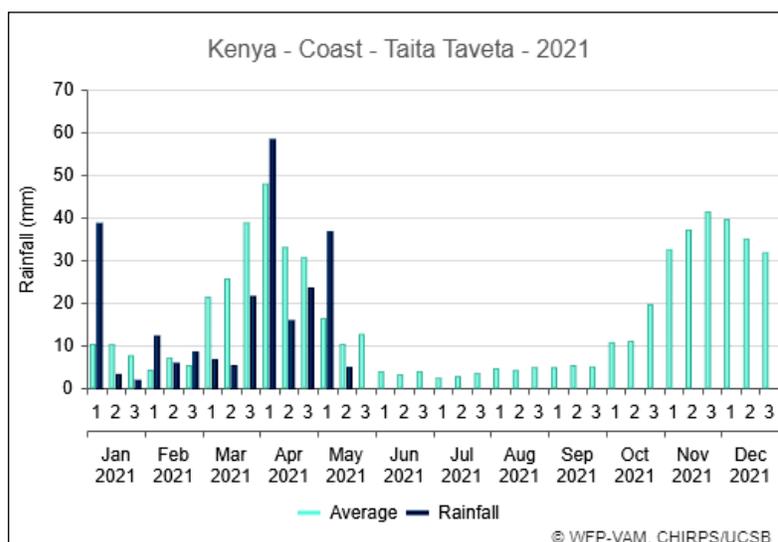


Figure 1. Rainfall (CHIRPS)

- In terms of temporal spread the first and second Dekad received 36.5 mm and 4.7 mm of rainfall respectively compared to LTA of 16.2 mm and 10.2mm mm respectively as shown in the figure aside.

## 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 three-month vegetation condition index of 50.42 (Figure below).
- All livelihood zones depicted vegetation greenness above normal.

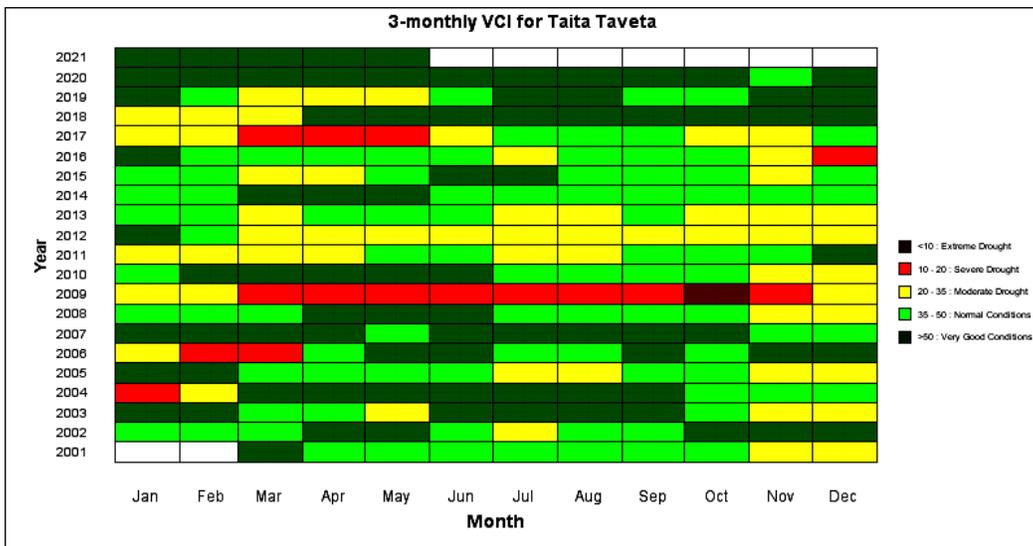


Figure 2. Vegetation Condition Index

**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 month of June.

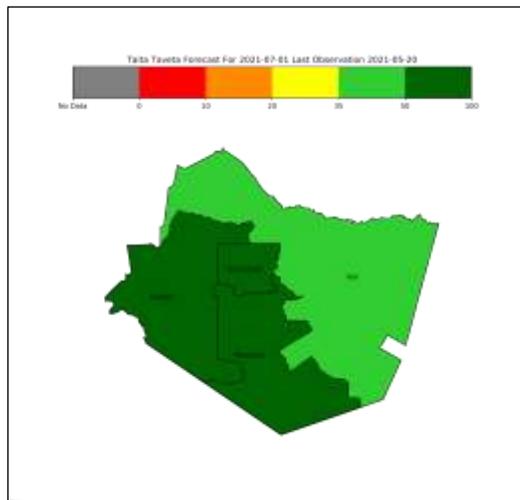


Figure 2. VCI Forecast

**2.1.3 Soil Moisture Percentage Climatology**

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

### 2.1.4 Pasture

- From community interviews, an estimated 95.2 and 4.8 percent of the respondents reported that pasture condition was good and fair respectively but below normal compared to a time like this last year.
- In comparison to the previous month, pasture was generally good. However, there are pockets that showed poor pasture condition in terms of both quality and quantity. These hotspot areas were Ngolia and Kasigau Wards.
- Available pasture is expected to cater for livestock for the next three months.

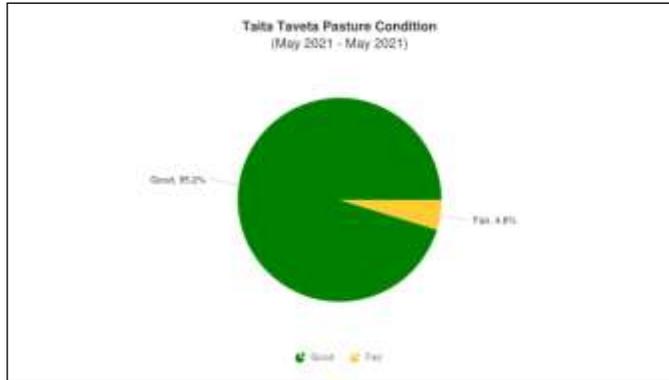


Figure 4. Pasture Condition

### 2.1.5 Browse

- From community interviews, an estimated 100 percent of the respondents reported browse condition was good and normal.
- Compared to the previous month, the browse condition was generally good.
- Available browse is likely to cater for livestock for the next three months.

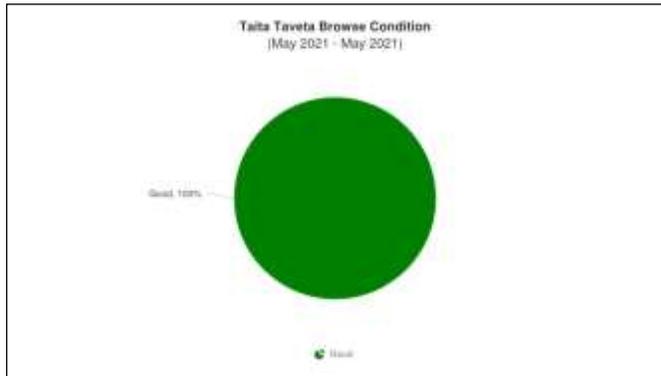


Figure 5. Major Water Sources

## 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 36, 23, 16, 9, 5,4 and 7 percent of the households respectively.
- Water pans, dams and rock catchments near grazing areas that had partially recharged were still holding water available for livestock.
- In comparison to previous month, the proportions remained relatively the same.

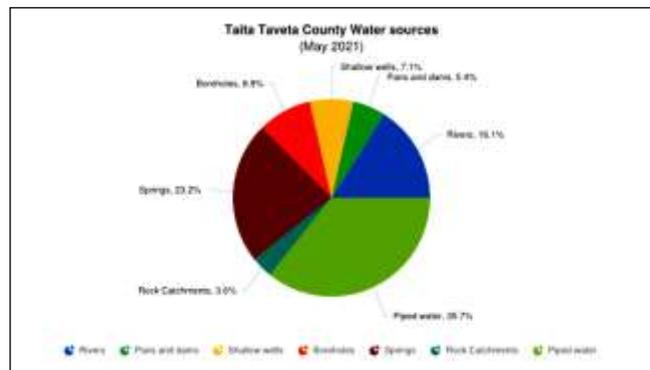


Figure 6. Major Water Sources

- In all livelihood zones, water from the main sources is expected to cater for households for at least the next three months.

### 2.2.2 Household Access and Utilization of Water

- The average return distance from households to main water sources increased slightly to 2.4km compared to 2.3 km reported in the previous month and above the short-term average by nine percent as shown in the graph below.

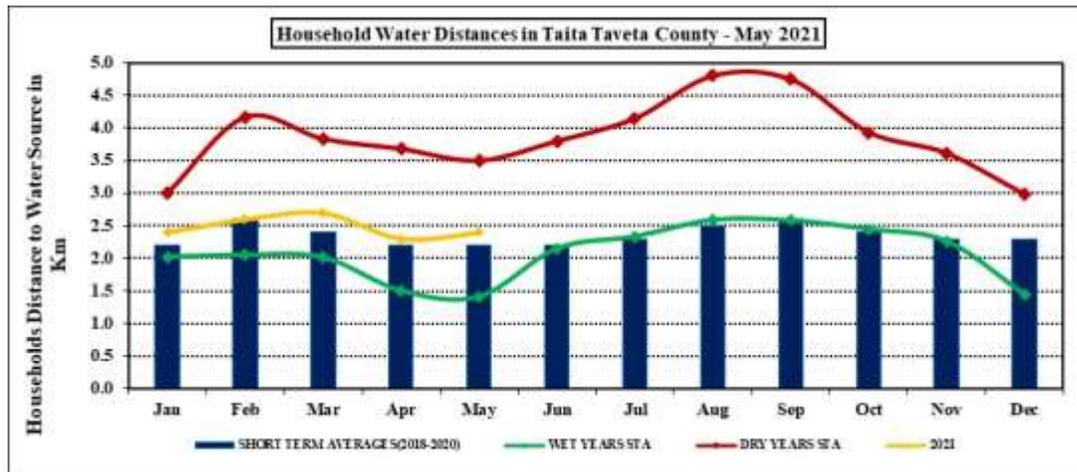


Figure 7. Household Water Access and Utilization

- The county average water consumption per person per day (pppd) was at 16 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 17 and 15.3 litres pppd respectively compared to 15 litres pppd in mixed farming: food crops/ livestock livelihood zone.
- Water retailed at Kshs 2 per 20 litre jerry-can at source and approximately 62 percent of the households purchased water compared to 58 percent in the previous month. Price per jerry can at private water points ranged from Kshs 3 - 5.
- Overall, 15 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 occasional flooding and agricultural activities.
- 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 2.6 km compared to 2.8 km for the previous month and below the short-term average by four percent as indicated in the graph below.

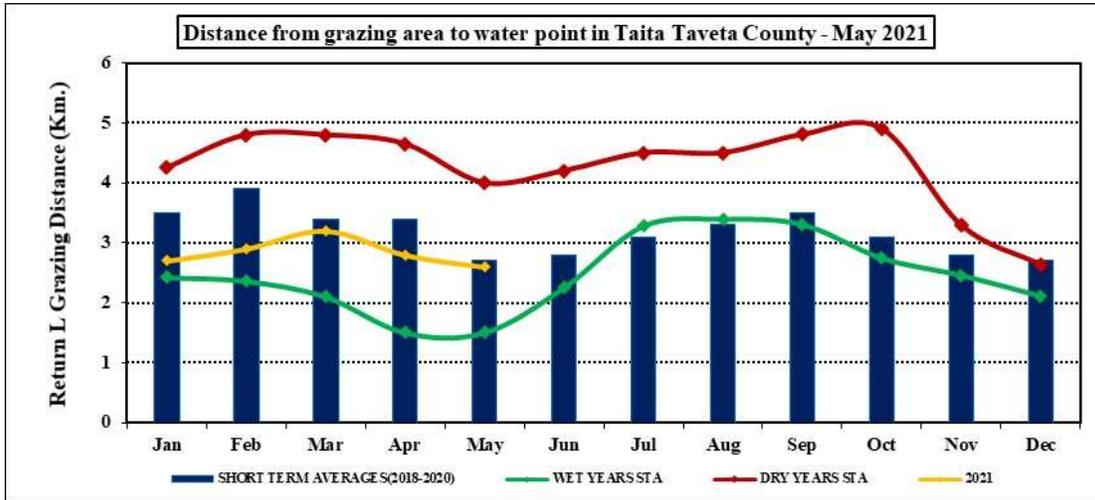


Figure 8. Livestock Trekking Distance to Water Sources from Grazing Areas

- The slight drop in distance was as a result of the partial recharge of open water sources especially those located in near grazing areas.
- In all livelihood zones, frequency of watering livestock remained normal; once per day in the lowlands and twice per day in the highlands.

### 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 marginally better compared to the previous month due to availability of browse, forage and water.
- Livestock body condition is projected to remain good over the next three months.

##### 3.1.2 Milk Production

- The average milk production (cow) per household was recorded at 3.8 litres, similar to the previous month and the long-term average.

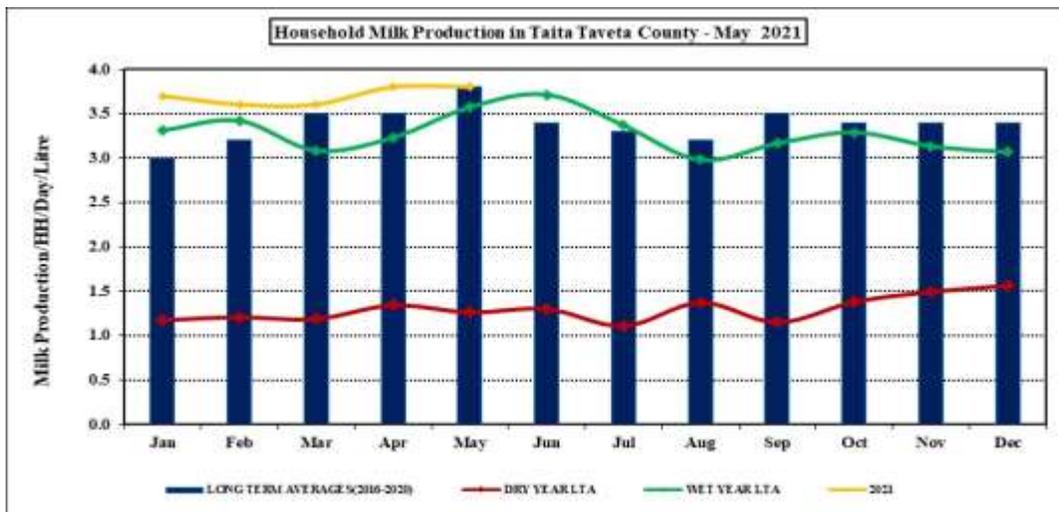


Figure 3. Milk Production

- Mixed farming: horticulture/ dairy livelihood zone milk production was at 7 litres, 2.2 litres in the mixed farming: irrigated cropping/ livestock livelihood zone at three litres and 2.6 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

- In both the Mixed farming: horticulture/ dairy and mixed farming: food crop/ livestock livelihood zones, crops planted were in the podding and tasselling stage.
- Crops were generally good in the highlands and irrigation zone, however in the rainfed lowlands maize crop was withering due to moisture stress.
- In the mixed farming: irrigated cropping/ livestock livelihood zone, diverse crop enterprises were at various stages of physiological growth ranging from podding/tasselling to maturity.

## 4. MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

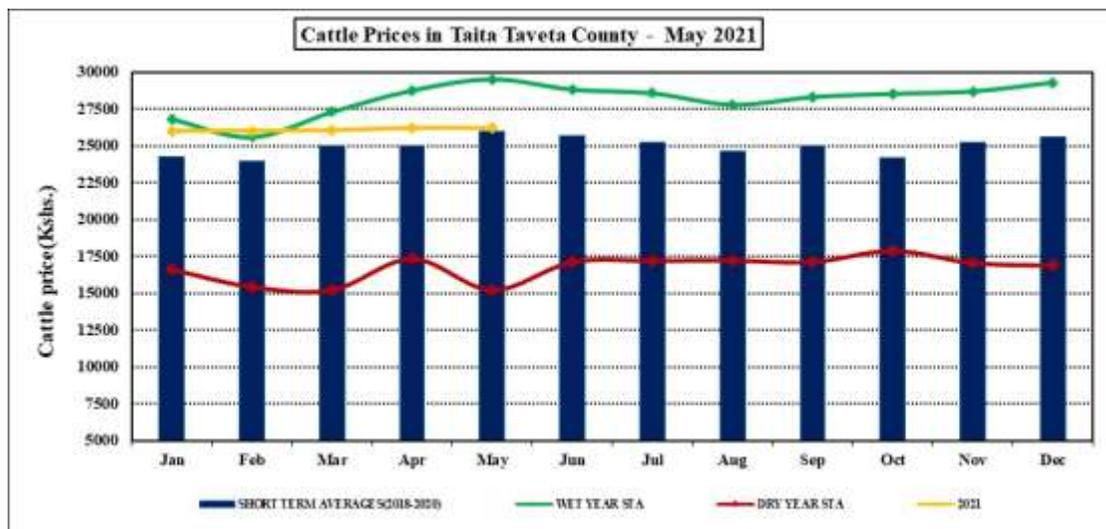


Figure 4. Cattle Market Prices

- The average market price of a three-year-old bull was recorded at Kshs. 26,190, similar to the previous month.
- The relatively fair to high prices in various markets 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 32,000 and Kshs 25,466 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 less than one percent.

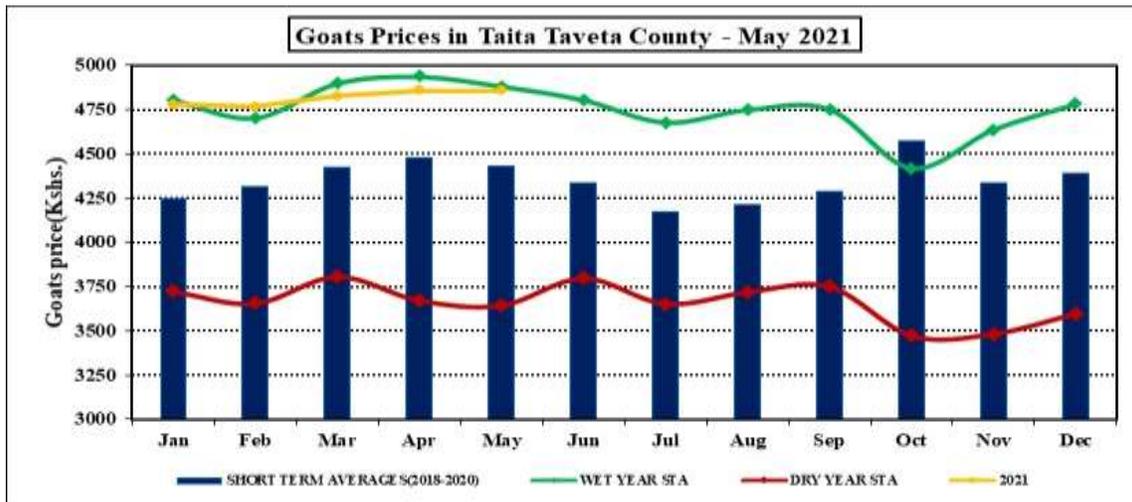


Figure 11. Goat Market Prices

#### 4.1.2 Goat Prices

- The county average market price of a two-year-old goat remained the same compared to the previous month at Kshs. 4857. The highest prices were reported in the mixed farming: horticulture/ dairy livelihood zone of Kshs 6,000 where farmers keep a few animals for special events while lower prices of Kshs 4,800 and Kshs 4,000 were reported in mixed farming: food crop/ livestock livelihood zone and mixed farming: irrigated/livestock livelihood zone.
- The prevailing good livestock condition reported across all livelihood zones was the key reason for the better market prices.
- Compared to short term average, the price was higher by 10 percent.

### 4.2 CROP PRICES

#### 4.2.1 Maize

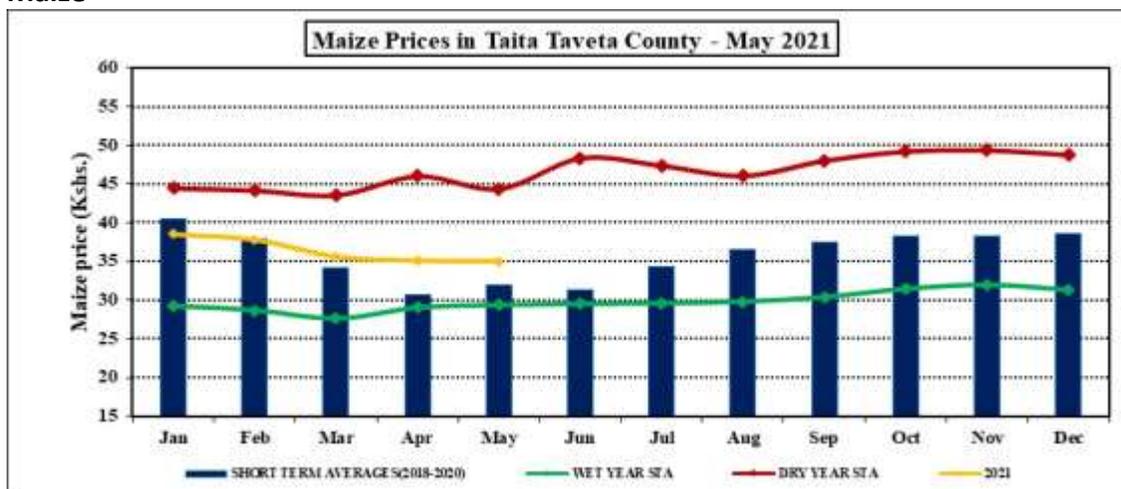


Figure 12. Maize Price

- The average market price for a kilo of maize was recorded at Kshs 35 similar to the previous month and above the short-term average by nine percent.
- The stable maize price was because of 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 36 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

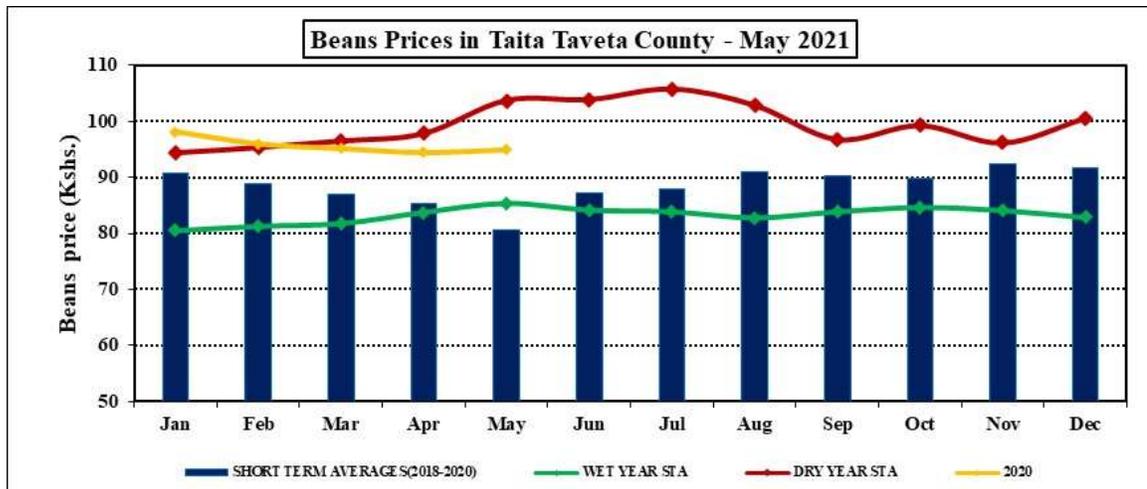


Figure 5. Beans prices

- The average market price of a kilo of beans remained at Kshs 95 in comparison to the previous month and above the short-term average by 18 percent. The lower prices were 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.93 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 3,100 compared to Kshs 2,800 posted in the previous month.

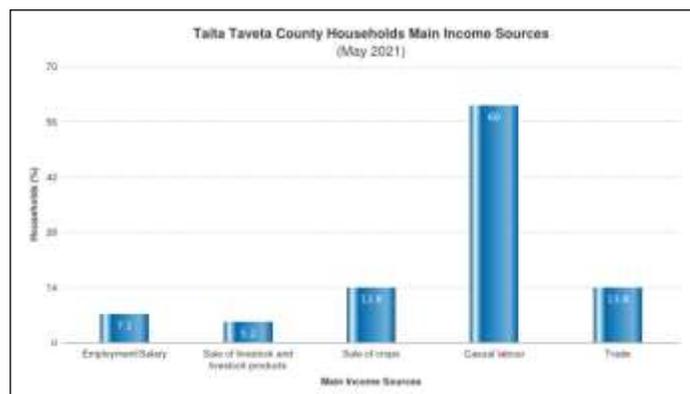


Figure 14: Households main income sources

- Compared to previous month sources of income remained relatively stable.
- 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)

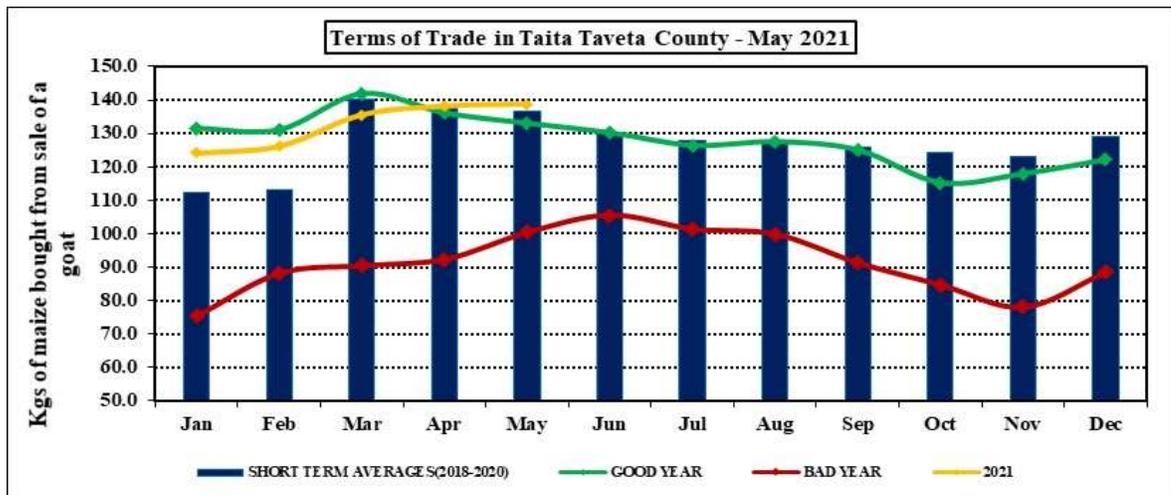


Figure 15. Terms of Trade

- Terms of trade (ToT) were marginally favourable and proceeds of sale of goat could purchase 139 kilograms of maize compared to 137 usually (STA). Relative to the previous month the terms improved by approximately two percent.
- The mixed farming: horticulture/ dairy livelihood zone posted a ToT ratio of 171 while mixed farming: food crops/livestock and mixed farming: irrigated cropping/livestock livelihood zones posted ToT ratios of 134 and 133 respectively.

### 5. FOOD CONSUMPTION AND NUTRITION STATUS

#### 5.1 MILK CONSUMPTION

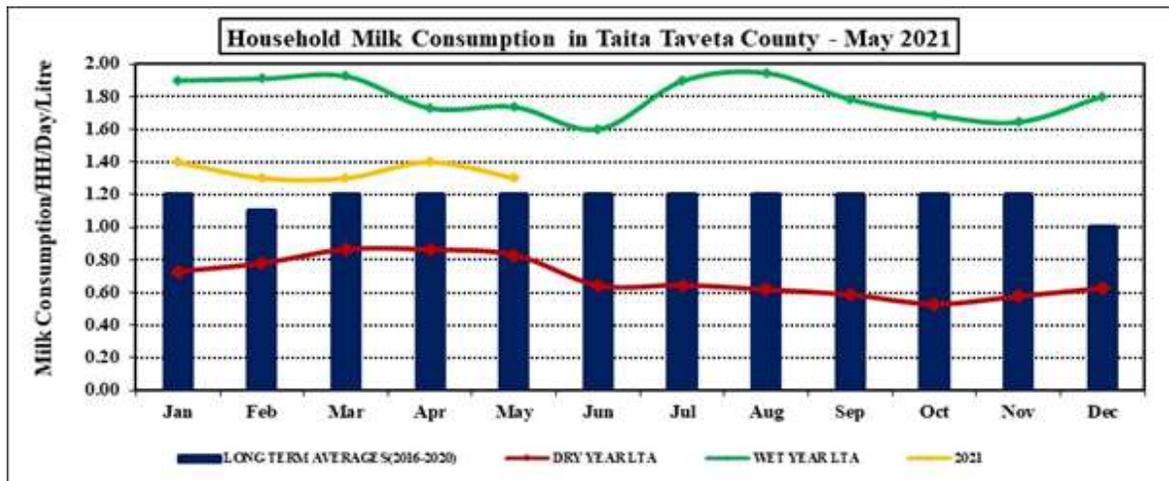


Figure 6. Milk Consumption

- The average milk consumption per household per day was stable and similar to the previous month at 1.4 litres and above the long term mean by 17 percent.
- Milk consumption per household per day in regard to livelihood zones; mixed farming: food crops/livestock (1.2 litres), mixed farming: horticulture/ dairy (1.3 litres) and mixed farming: irrigated cropping/livestock at (1.5 litres).

## 5.2 FOOD CONSUMPTION SCORE

- An estimated 99.5 and 0.5 percent of households sampled were in the acceptable and borderline food consumption score (FCS) and similar to the previous month.
- Households that were reported to be in the borderline food consumption score category were located in the rain fed areas of Challa and Kasigau Wards in Taveta and Voi Sub Counties respectively.
- 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 stood at 74 compared to 76 percent recorded in the previous month.
- The mean FCS score was high in the mixed farming: irrigated cropping/ livestock livelihood zone recorded at 88 followed by mixed farming: horticulture/dairy livelihood zone at 80 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.

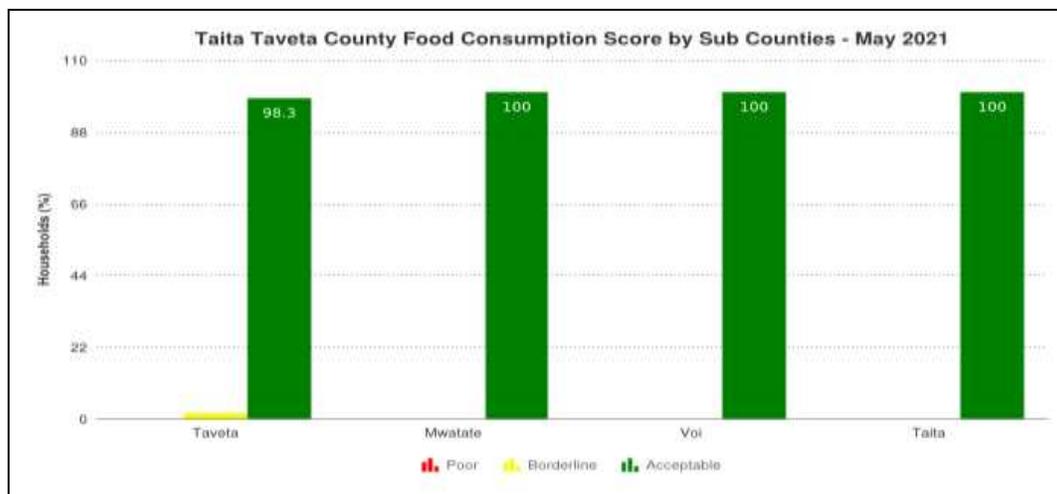


Figure 17. Food Consumption Score

n=210

## 5.3 HEALTH AND NUTRITION STATUS

- A total of 433 children below five years were sampled for MUAC measurement where proportion of male and female was at 55 and 45 percent respectively.

### 5.3.1 Nutrition Status

- 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.

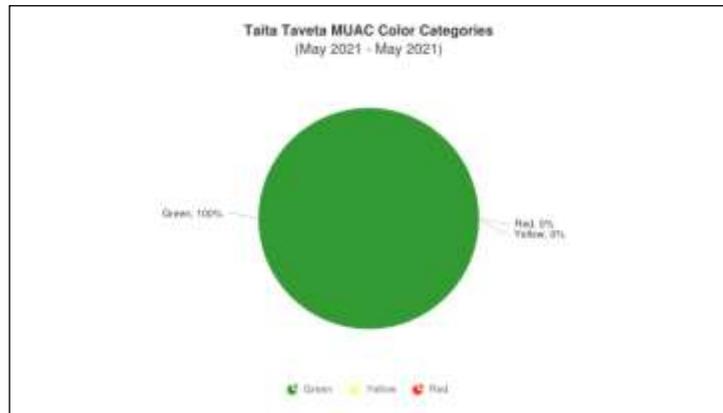


Figure 18. Children at Risk of Malnutrition

### 5.3.2 Health

- Out of the sample size of 433 children, none were reported to have FWCLM or any other illnesses.

### 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.

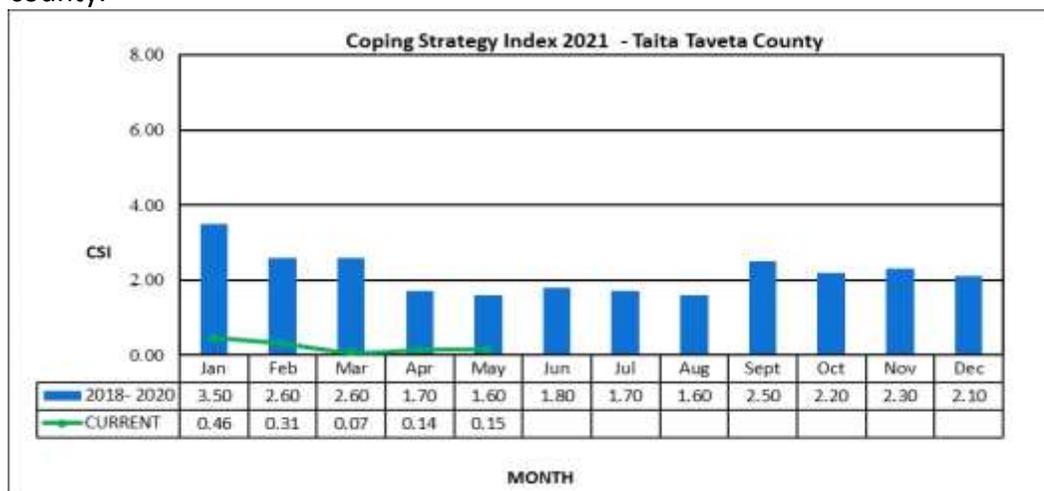


Figure 19. Coping Strategy Index

n=210

## 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).</li> <li>• Provision of mosquito nets for mothers.</li> </ul>	County Government Department of Health
<b>Agriculture and Livestock Sector</b>		
Provision of food security	• Fodder harvesting and storage in all wards	Department of livestock
	• Capacity building on poultry production awaiting distribution of poultry in June 2021	KCSAP (Department of Agriculture and livestock)
	• Community Driven Development Committees trained and developed Climate Change action plans	KCSAP (Department of Agriculture and livestock)
<b>Water and Environment Sector</b>		
Provision of clean and safe drinking water and environmental conservation	• Water pipeline extension (1.88 km) from Kishenyi tunnel to Vipalo waters tanks in Mghange/ Mwanda Ward in Taita Sub County complete	County and National Government EU, NDMA and County Government
	• Excavation of Kajire earth dam is ongoing	National Irrigation Authority
	• Rehabilitation of Nyangoro - Mwakitau water project in Mwatate Sub County is ongoing	Water Sector Trust Fund and County Government
<b>Multi-Sectoral</b>		
Support livelihoods through various enterprises and information	• Implementation of Sagalla Ward integrated livelihood drought preparedness project is ongoing (Poultry, Sunflower, ABEC, Seedlings and Beekeeping and pipeline development	EU, NDMA, STE and County Government
	• Village selection done and recruitment of Mentor Supervisor underway	KSEIP, Social Service, NDMA and department of Livestock, Agriculture and Interior
	• UNDP COVID-19 fund to support youth groups is at the stage	UNDP, NDMA and Gender groups

## **7. EMERGING ISSUES**

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

- Cases of human wildlife conflicts (Elephants and Buffaloes) resulting in destruction of crops and property were being reported in parts of Ngolia, Sagalla, Kishushe and Kasigau where community together with KWS and partners were in collaboration to keep the wildlife away from their farms and properties.
- 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 May forecast report that the county is likely to remain food secure due to poor performance of MAM season and the expected dry conditions in the coming months.
- The slight warmer condition being forecasted by KMD are expected to result to high rate of pasture and browse depletion
- Food stocks will dwindle and households will be forced to rely on stocks from the markets and this will lead to households employing minimal consumption-based coping strategies.
- Based on TAMSAT-ALERT forecast, soil moisture will above average though on a downward trend and this is expected to impact negatively of growth and sustainability.
- Livestock body condition is expected to remain good in the month of June due to availability of water and forage in the grazing areas.

## **8. RECOMMENDATIONS**

### **Health sector**

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

### **Agriculture and Livestock Sector**

- Sensitize farmers on post-harvest management.

### **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**

- KWS and Partners to enhance surveillance and protect communities bordering the national parks from wildlife especially elephants and buffaloes.
- 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.