

National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2017



A Vision 2030 Flagship Project



January EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming: Food Crops/ Livestock	Alert	Deteriorating
Mixed Farming: Food Crops/ Horticulture/Dairy	Alert	Deteriorating
Mixed Farming: Irrigated Cropping/ Livestock/Food Crops	Alert	Deteriorating
Casual Waged Labour: Sisal Farms	Alert	Deteriorating
National Park	Alert	Deteriorating
Trade/Business	Alert	Deteriorating
County	Alert	Deteriorating
Biophysical Indicators	Value	Normal Range/ Value
Rainfall (% of Normal)	51.2	80 -120
SPI-3Month (TAMSAT)	-0.04	-1.0 to 1.0
VCI-3Month	27.35	35-50
Production indicators	Value	Normal
Maize Crop Condition	Crop failed	Grain filling
Livestock Body Condition	Fair	Good
Milk Production	19	48 Litres
Livestock Migration Pattern	Parks	Ranches
Livestock deaths (drought)	20	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	72	83
Milk Consumption	27	36 litres
Return distance to water sources	3.1	<5 Km
Return distance to grazing areas	3.1	<6 Km
Cost of water (20 litres)	15	< Kshs 5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	3.0	<6.6

Drought Situation & EW Phase Classification

Biophysical Indicators

- No rains were received in the month under review.
- The short rains resulted to pasture regeneration and recharge of water sources in all zones.
- However, Pasture and open water sources are drying up fast due to high temperatures.
- Vegetation condition index was below long term average at 27.35.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Maize crop failure experienced while pulses harvests were below normal.
- Livestock body condition is fair.
- Milk production is improving mainly in the highlands.

Access Indicators

- Open water sources have dried up due to high evaporation rate.
- Cases of human wildlife conflict are increasing in Voi Sub County
- Terms of Trade remained favorable.

Utilization Indicators

- The proportion of children at risk of malnutrition is within normal range.

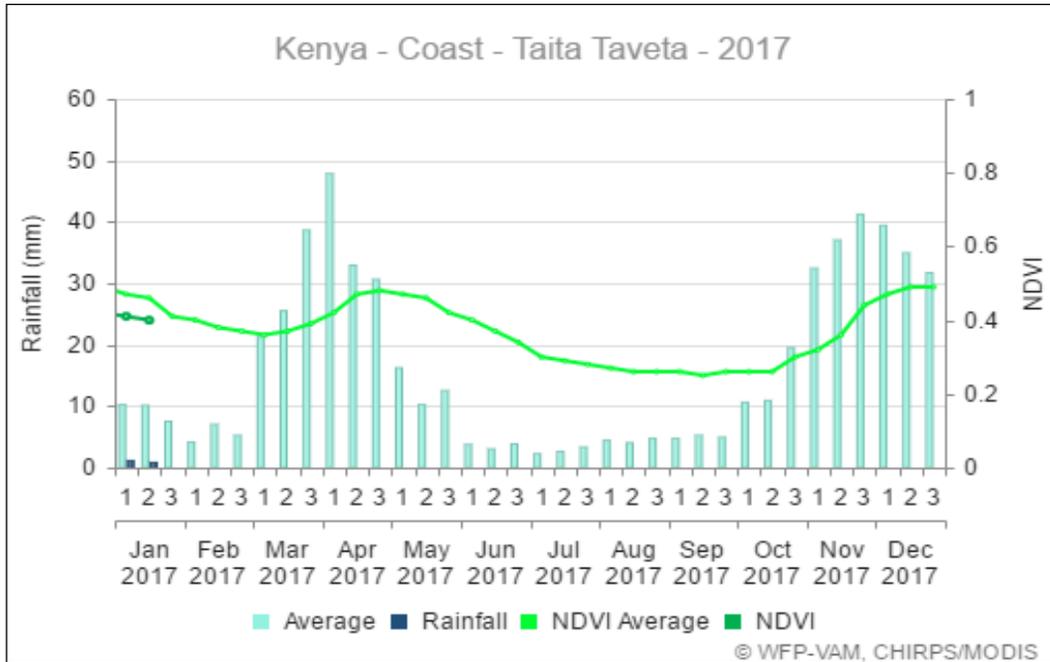
Seasonal Calendar

<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 	<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 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- No rains were received in the month under review.
- The short rains (OND) were depressed registering 50-75% of normal rains in most parts of the county. The highlands received 75-90% of the normal.
- Areas showing signs of stress due to depressed short rains are southern part of Kasigau Ward, Jipe and Challa wards and areas of Mwakitau, Mwachabo, Kishushe, Sangenyi and Mwaroko. Others are ranches found in Voi and Mwatate Sub Counties.
- The diagram below shows that the current rainfall performance and (NDVI) normalized differential vegetation index are both below average.

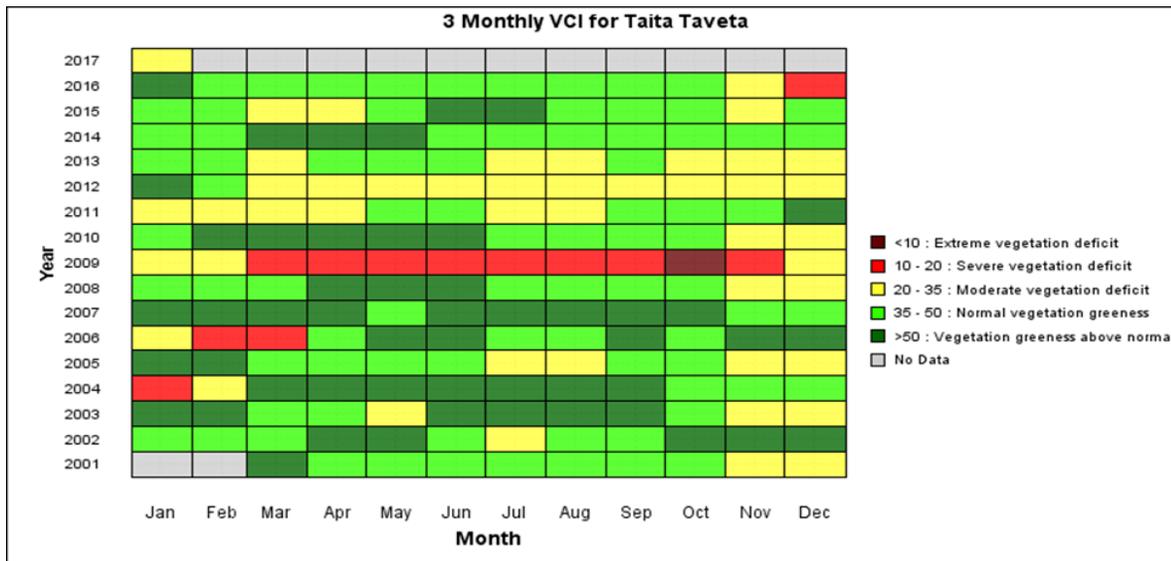


2. IMPACTS ON VEGETATION AND WATER

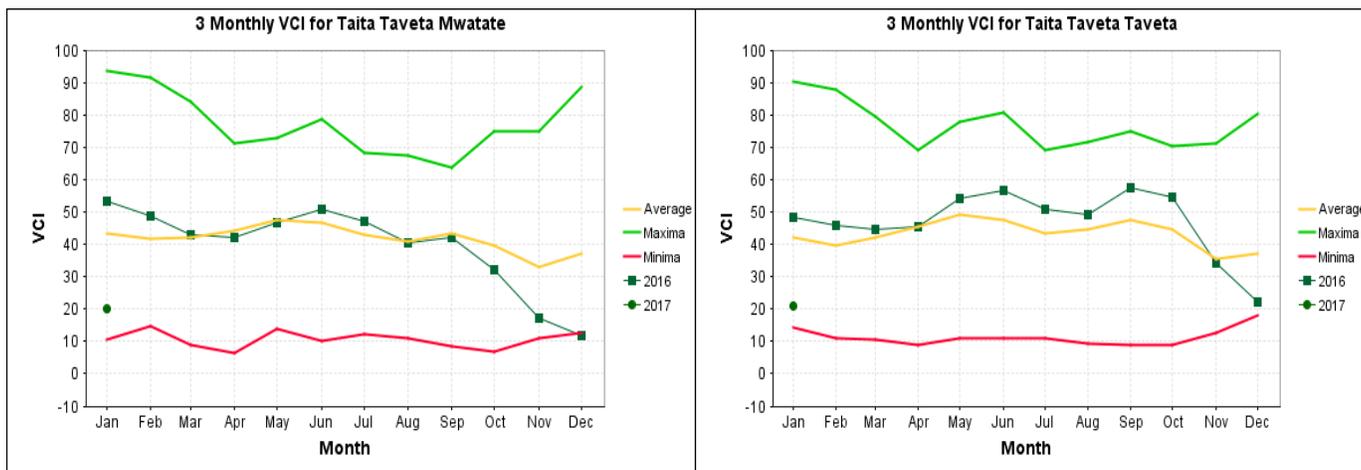
2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The VCI matrix which is a comparison of long term averages (15 years) show the county is at moderate vegetation deficit with an aggregate VCI of 27.35
- Mwatate and Taveta Sub Counties recorded severe vegetation deficit at 19.95 respectively.



- The graphs below show 3 monthly VCI for Taita and Mwatate Sub Counties, indicative of VCI below average. This shows a worsening VCI trend for the county.



2.1.2 Pasture

- Pasture condition in regard to quality and quantity is fair in the lowlands zones.
- Pasture depletion is due to high temperatures being experienced coupled with overgrazing due to influx of livestock from other regions.
- Areas that received minimal OND rainfall show pasture stress. These areas are Sangenyi, Mwaroko, Kishushe, Paranga, Mgeno, Godoma, Msorongu, Mwakitau, Jora, Bungule, and Makwasinyi.
- Mixed farming: food crop/ livestock livelihood zone pasture regeneration is fair. Available pasture is likely to last for approximately one month.
- In the mixed farming: irrigated cropping/ livestock/ food crops zone pasture condition is fair. Available pasture is likely to last for approximately one month.
- In the mixed farming: horticulture/ dairy zone pasture condition is good expected to last for two to three months.
- Herders in the irrigation zone are illegally grazing inside the park and other protected zones like private land.

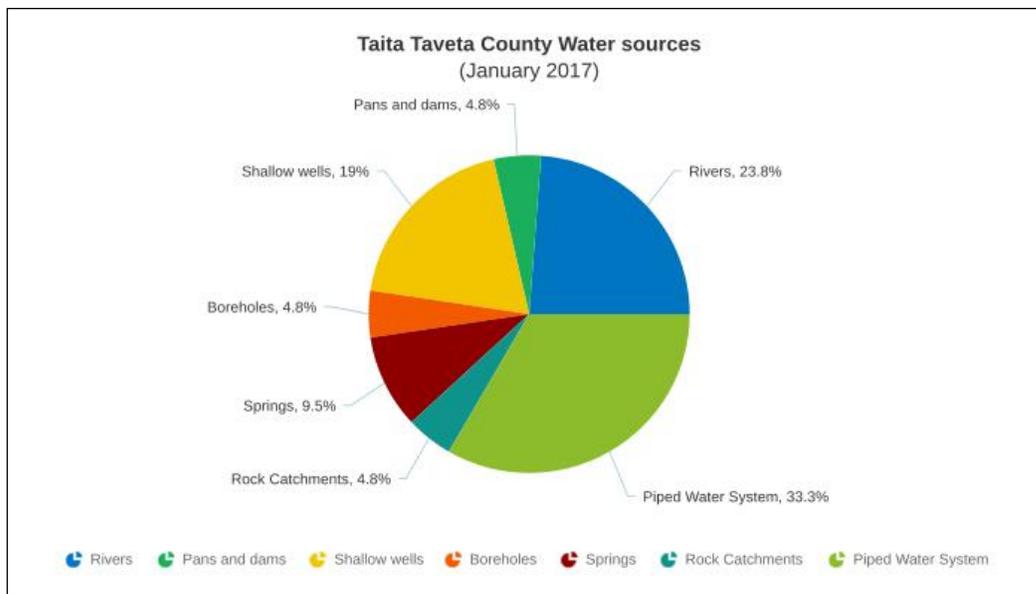
2.1.3 Browse

- Browse condition in terms of quality and quantity is good to fair in all livelihood zones.
- In the mixed farming: food crop/ livestock livelihood zone browse condition is fair and is expected to last for one month due to high temperatures being experienced.
- In the mixed farming: horticulture/ dairy and mixed farming: irrigated cropping/ livestock/ food crops livelihood zones browse is good expected to last for two months.
- No constraints were observed in accessing browse in the month under review.

2.2 WATER RESOURCE

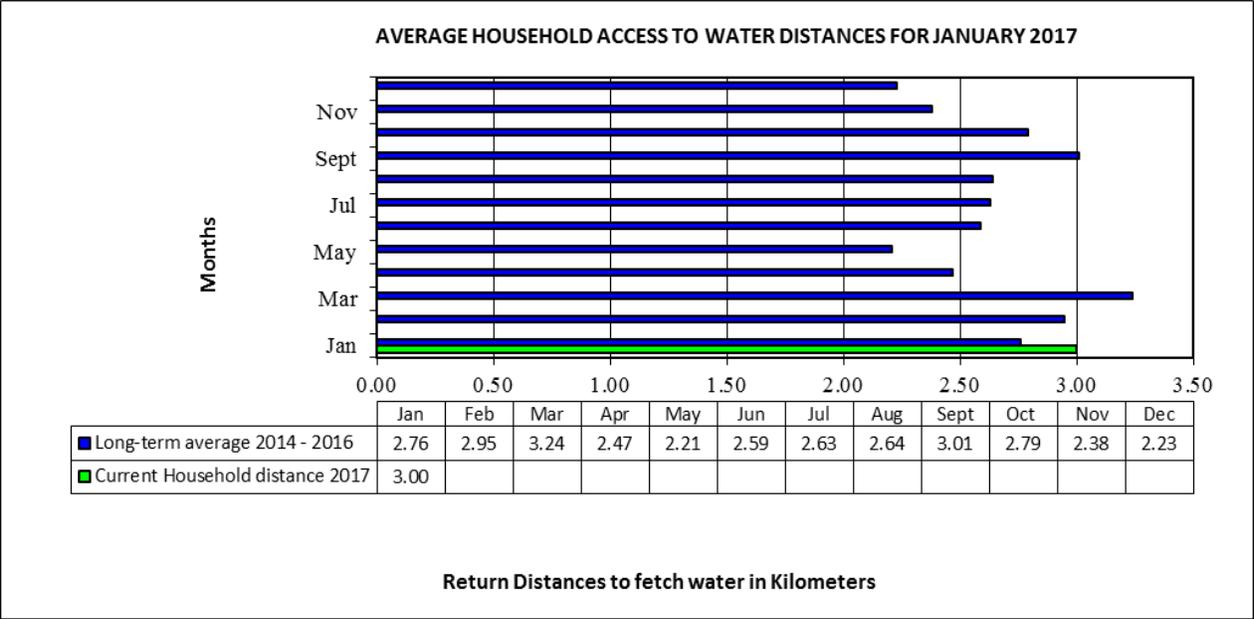
2.2.1 Sources

- The diagram below show that in the month under review, out of 210 sampled households analyzed, main water sources for both human and livestock use in the county were piped water system, rivers, shallow wells, springs and boreholes at 33.3%, 23.8%, 19.0%, 9.5% and 4.8% respectively.
- Water situation has deteriorated due to drying up of open water sources aggravated by high temperatures being experienced.
- Areas experiencing water stress are Bungule, Buguta, Mgeno, Mwakitau, Mwaroko, Paranga, Kishushe, and Oza ranch water pans.



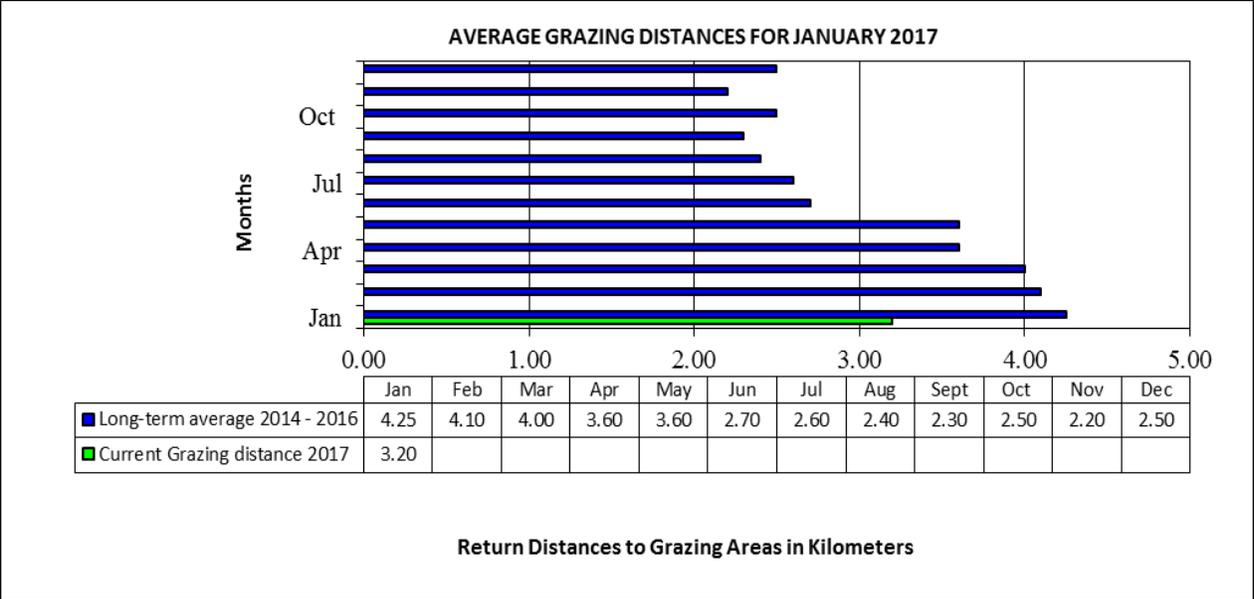
2.2.2 Household access to Water

- In the month under review, out of 210 sampled households analyzed, household distance to fetch water increased to 3.0km from 2.8km. The current distance is longer than the LTA by 7%.
- The waiting time at water points increased due to reduces discharge at water sources in all livelihood zones. The lowlands registered up to 120-360 minutes waiting time.
- In the mixed farming: food crop/ livestock zone, the average cost of 20 litre jerrican has increased to Kshs 15 from Kshs 8. However, water vendors in areas facing acute water shortage are delivering the same at Kshs 30-50.
- Areas experiencing water inaccessibility/ rationing are Kasigau, Zungulukani, Mgeno, Mwakitau, Mwachabo, Mwaroko, Sangenyi, Kishushe, Paranga, Mlilo and Ngongodinyi.



2.2.3 Livestock Access

- The graph below extrapolates the average grazing distances out of 210 households sampled. Average return distance by livestock to grazing areas slightly increased to 3.20 from 3.10km realized in the previous month.
- This is due to depletion of pasture and browse coupled with poor rainfall distribution.
- Compared to the LTA the current distance to grazing areas is shorter by 9%.
- In the mixed farming: food crop/ livestock and horticulture/ dairy livelihood zones livestock watering dropped to once per day from the normal of twice per day.
- Longer distances to water points were observed in Kasigau, Buguta, Zungulukani, Mwachabo, Mwakitau, Mgeno, Mwaroko, Sangenyi and Kishushe.
- Concentration of livestock at strategic boreholes was observed in areas of Mwakitau.



3. PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

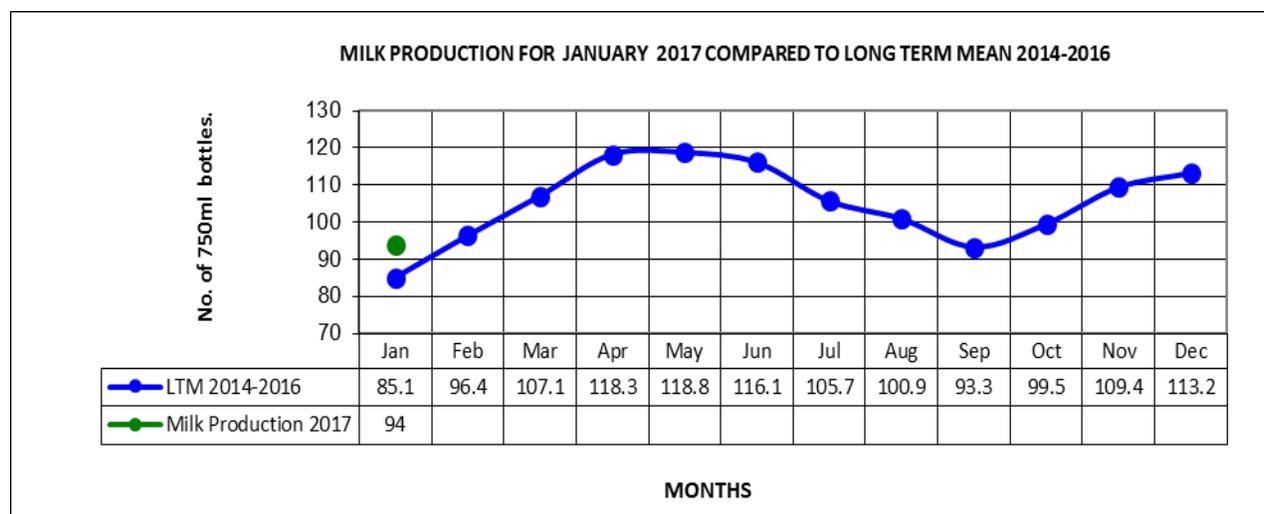
- Compared to previous month cattle body condition remained fair.
- Goats and sheep body condition was good to fair with a deteriorating trend given that trekking distances in search of pasture and browse will increase in the lowlands.
- Currently most cattle are fair in stressed classification borderline where fore-ribs are not visible but 12th & 13th ribs are visible.
- Cases where a few number of cattle were in critical classification showing fore-ribs were observed in areas of Zungulukani, Kasigau, Mwachabo, Mgeno, Kajire, Miasenyi, Mbulia and the ranches.
- In Mramba ranch 20 cattle were reported dead due to effects of drought.
- Livestock sector is expected to deteriorate due to drying up of open water sources and increasing trekking distances in search of pasture and browse.

3.1.2 Livestock Diseases

- There was no disease outbreak of notifiable disease reported however there is an increase in reported cases of FMD, CBPP, Trypanosomiasis, CCPP, LSD and East Coast Fever.

3.1.3 Milk Production

- Average milk production per day from 210 sampled households decreased to 94 litres from 95 litres in the previous month.
- Farmers in the dairy zone areas of Wumingu Ward located in the highlands of Taita Sub County, continue to register near normal milk production.
- Mixed farming: horticulture/food crops/dairy livelihood zone registered 52.6% situated on the hill masses, mixed farming: food crops/livestock livelihood zone 35.3% and casual waged labour: sisal 12.1% found in the rain fed lowlands.
- Average milk price per litre at household level remained at Ksh 49.00.
- Milk production is expected to drop due to prevailing harsh weather conditions being experienced in the county.



3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

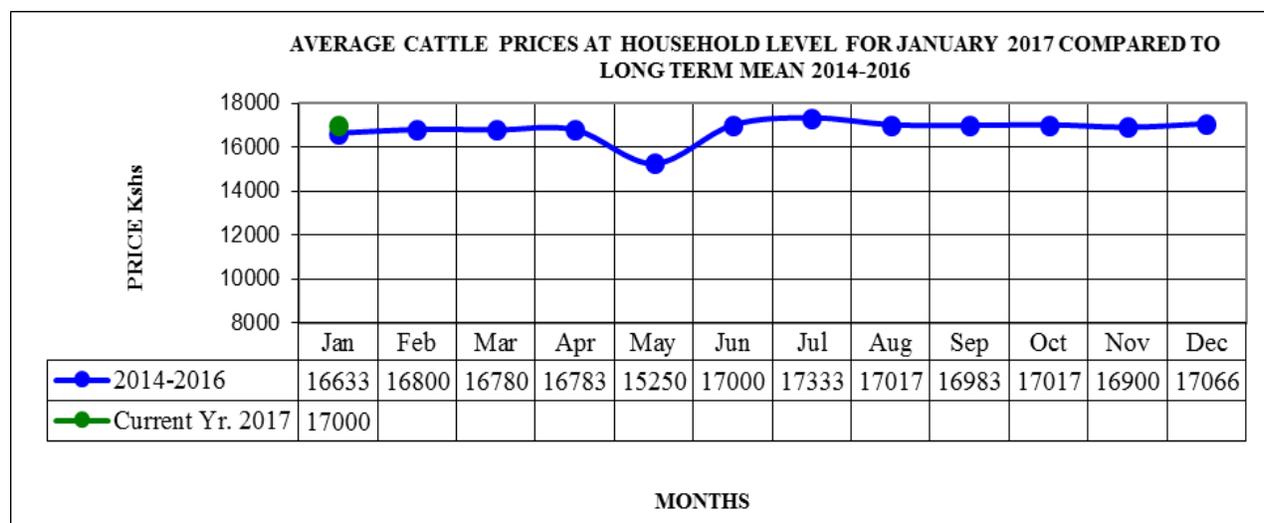
- In the mixed farming: food crops/livestock livelihood zone farmers harvested green grams and cowpeas.
- In the mixed farming: Irrigation livelihood zone farmers are harvesting green maize.
- In the mixed farming: Horticulture/ Dairy livelihood zone farmers who dry planted are harvesting green maize. In some sections maize crop is drying up at cob forming stage.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

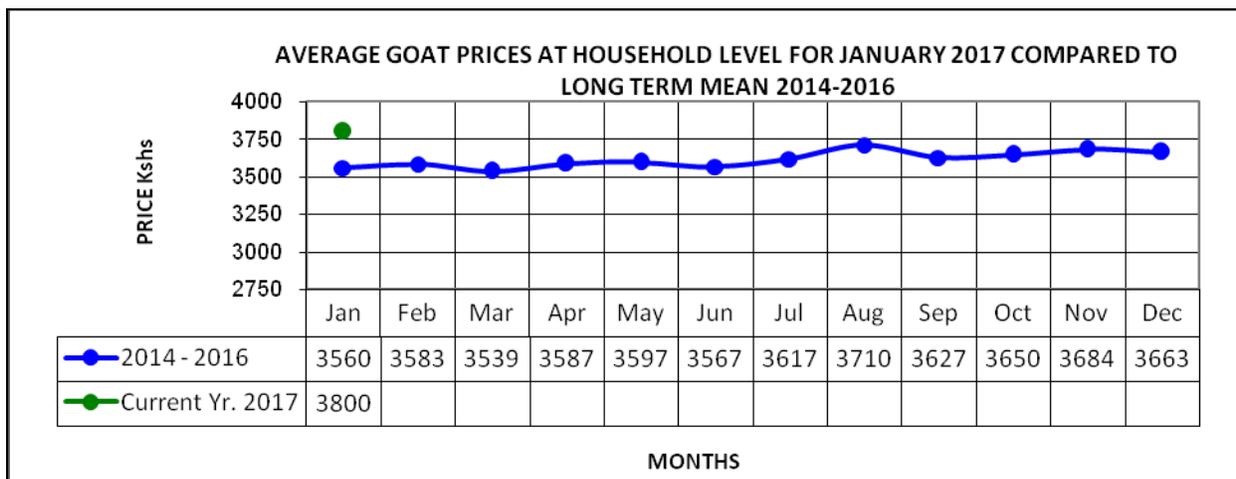
4.1.1 Cattle Prices

- The average price of a three year old bull from 210 sampled households decreased to Ksh 17,000 from Ksh 17,200 in the previous month.
- The drop in price could be attributed to deteriorating cattle body condition.
- Compared to the long term mean, the average price is higher by 2.2%.
- Livelihood variations were notable, in the horticulture/dairy livelihood zone cattle prices range between Ksh 25,000 to 40,000, while in hotspot areas mainly in food crops/livestock livelihood zone prices ranged between Ksh 8,000 to 10,000.



4.1.2 Goat Prices

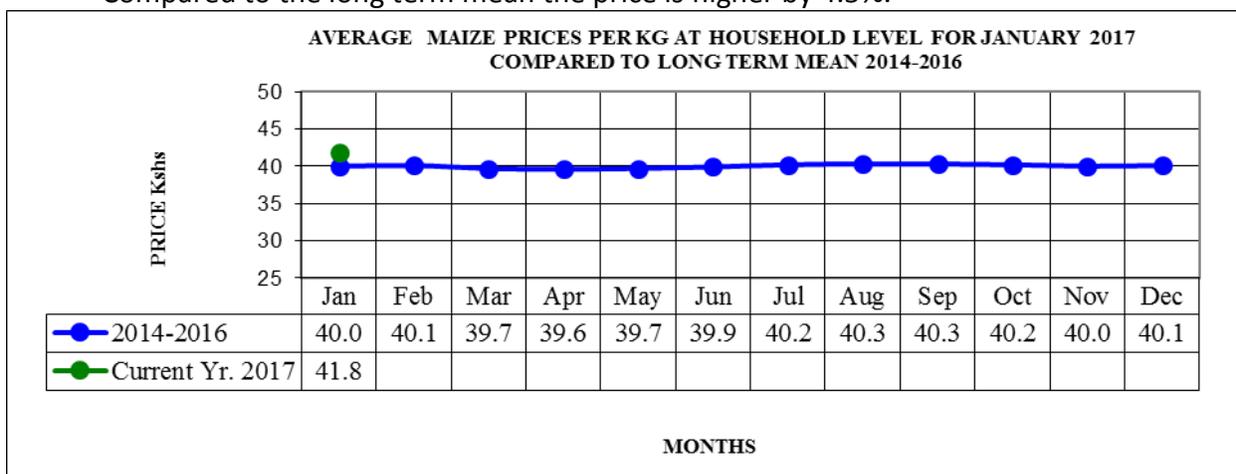
- The average price of a three year old goat from 210 sampled households decreased to Ksh 3,800 from Ksh 3,900 in the previous month.
- Drop in price could be attributed to deteriorating body condition especially in those areas that received poor short rains.
- Compared to long term mean, the average price is higher by 6.7%.
- No significant variations in prices of goats across livelihood zones.



4.2 CROP PRICES

4.2.1 Maize

- Compared to the previous month, average price of maize per kg at household level increased to Kshs41.80 from Ksh 41.00.
- Lowest prices ranged from Ksh 30 to Ksh 35 in the mixed farming: irrigated cropping/livestock livelihood zone, areas of Challa and Eldoro in Taveta Sub County.
- Highest price was recorded in the mixed farming: food crops/livestock livelihood zone, Mwakajo, Rukanga and Mwachawaza at Ksh 40.00 to Ksh 45.00 in Voi and Mwatate Sub Counties.
- Compared to the long term mean the price is higher by 4.5%.



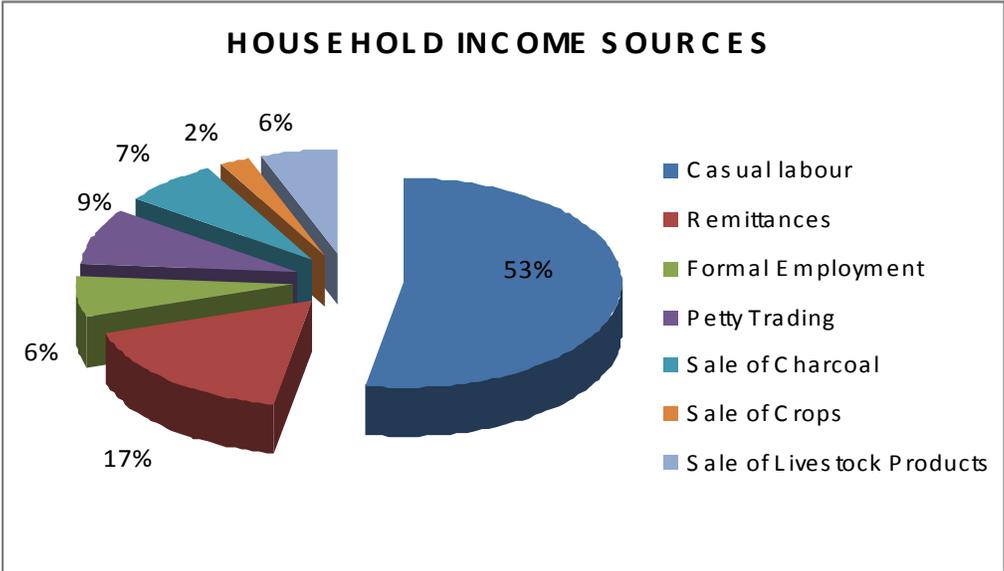
4.2.2 Beans

- Compared to the previous month, average price of beans per kg at household level decreased to Kshs 91.80 from Ksh 92.50. This is due to harvest of pulses being experienced in the county and neighbouring Tanzania.
- Lowest prices were recorded in mixed farming: irrigated cropping/livestock/food crops livelihood zone; Challa at Kshs 60 to 70 due to incoming beans from the Republic of Tanzania, while high prices in the mixed farming: food crops/livestock livelihood zone Mwakajo, Mwachawaza and Rukanga at Kshs 90 to 110.
- Compared to the long term mean bean prices are higher by 2.0%.



4.3 INCOME

- Analyzed income from 210 sampled households’ show that sale of charcoal, sale of livestock products, petty trading, casual labour, remittances, sale of crops remained the same like in the previous month.
- Formal employment remained at the same at 6%.



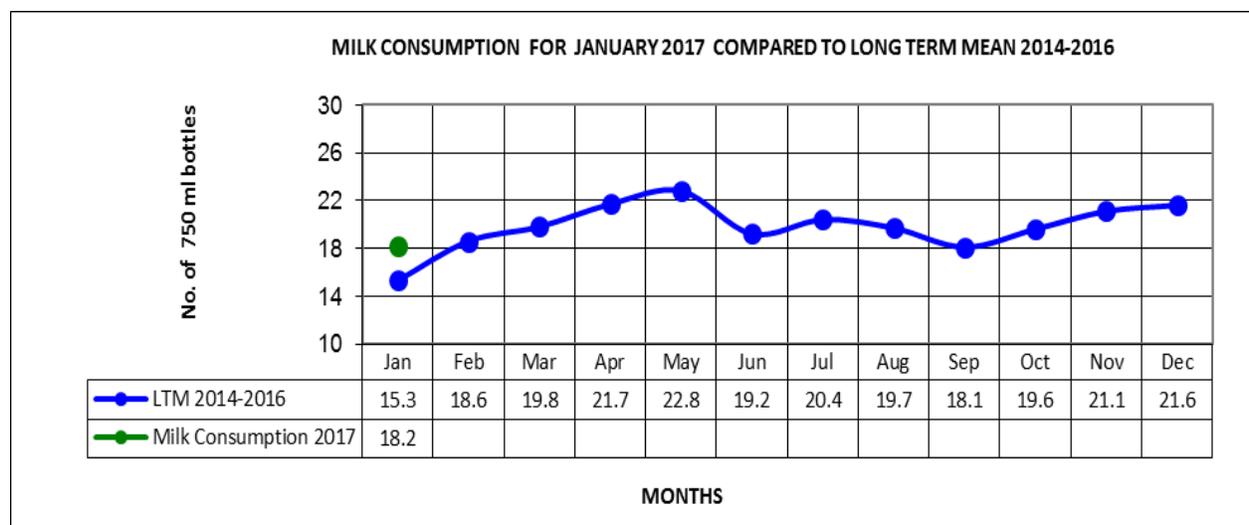
4.4 TERMS OF TRADE

- Terms of trade remained favourable from sampled households in the month under review.
- The sale of 1 goat at Kshs 3,800 resulted to purchase of 90.9kg of maize at Kshs 41.80 per kg. This is a drop compared to 95.12kg posted in the previous month.
- The downward is due to increasing prices of maize due to poor harvest and decreasing prices of goat emanating from deteriorating body condition.

5. FOOD CONSUMPTION AND NUTRITION STATUS

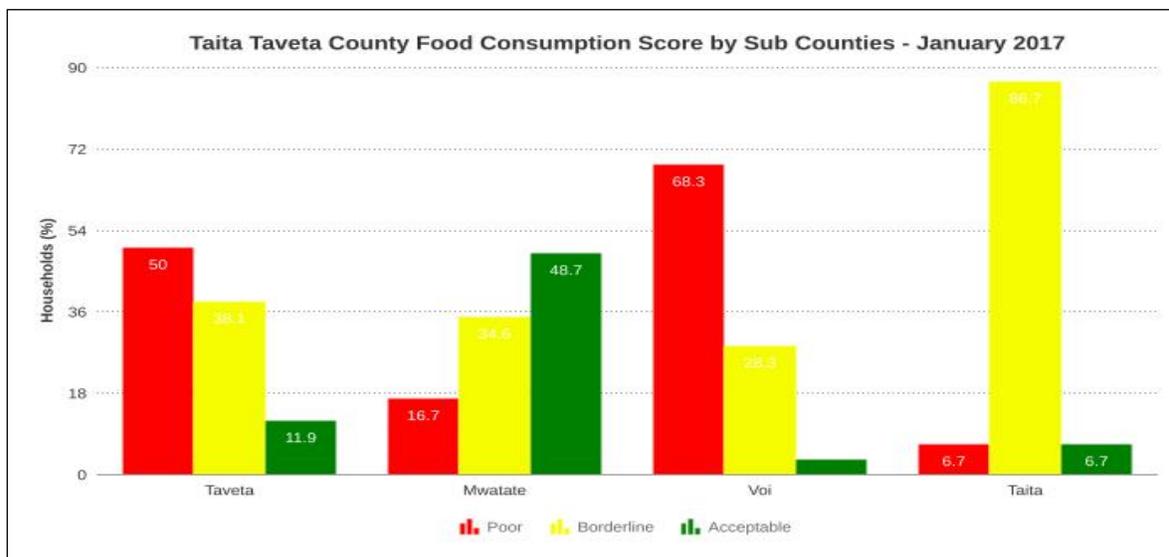
5.1 MILK CONSUMPTION

- Out of the 210 sampled households milk consumption per day decreased to 18.2 litres from 19.0 litres in the previous month.
- In the month under review the average milk consumption per household per day ranges between 0.5 – 1 litre.
- Generally most household members consumed approximately 19.3% of the total milk produced.
- Compared to the long term mean milk consumption was lower by 19.0%.



5.2 FOOD CONSUMPTION SCORE

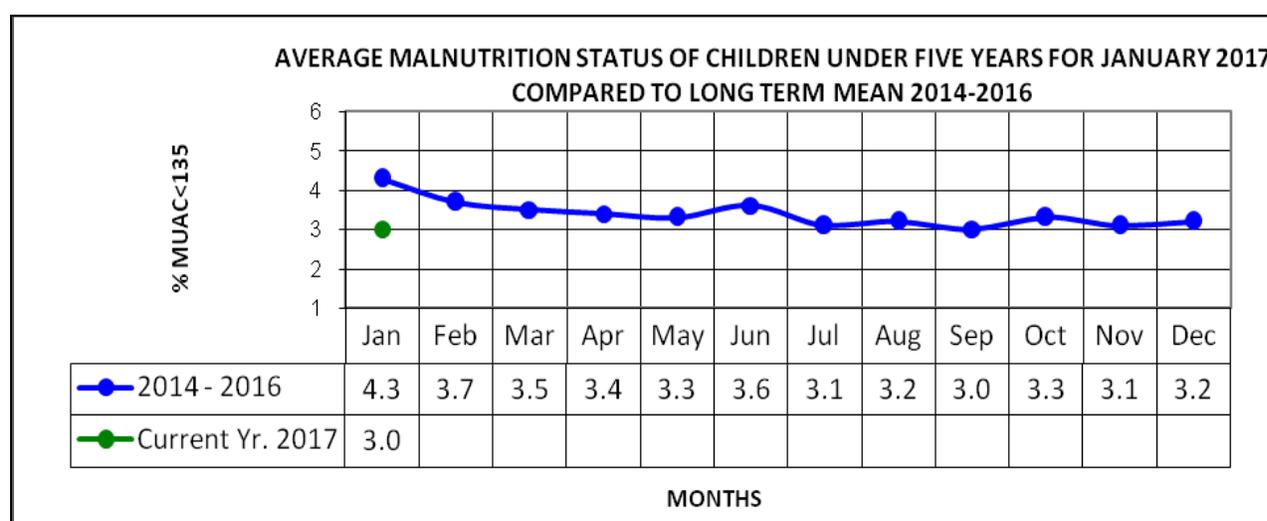
- The diagram below show food consumption scores for 210 sampled households for the month under review.
- Compared to the previous month, Voi Sub County was the most affected where approximately 68.3% of households dropped to poor category consumption score from borderline category.
- Also Taveta Sub County posted 50% being in the poor category consumption score.
- This could be attributed to reduction of number of meals taken by household members due to reduced food stocks and money to buy food.
- Main meals consumed are two food groups that are ugali and vegetables.
- Poor dietary diversity have been observed where children below 5 years are being fed on two food groups carbohydrates and vitamins three times a day but lack proteins in their meals.
- In the lowlands food security situation is worsening given that harvests were poor and household members are employing demeaning coping mechanism to survive.
- Reduction of meals and poor dietary diversity will lead to other health related problems.



5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- Based on the Mid Upper Arm Circumference (MUAC) measurement, the nutrition status of children below five years percentage of those rated as being at risk of malnutrition remained at 3.0 as posted in the previous month.
- Out of 735 children under-five sampled in 7 sentinel sites, 22 were found with MUAC less than 135 mm.
- Compared to long term mean, MUAC level is lower by 30%.
- Normal screening at the health facilities show an upsurge of up to 5% in malnutrition levels mainly in hotspots of Mwatate and Voi Sub Counties.
- This could be attributed to reduction of meals and poor dietary diversity plus less care being given to children and the elderly given that care givers are engaged in other income generating activities.



5.3.2 Health

- Increased cases of (URI) Upper Respiratory Infections and deficiency in iron were reported for children less than five years in the mixed farming: food crop/ livestock livelihood zone.
- Also there was an upsurge in cases of diseases of the respiratory system, diseases of the skin, diarrhoea, Malaria and pneumonia in most facilities mainly in the lowlands. These areas are Mwakitau, Mwachabo, Mgeno, Kishushe, Mwaroko, Miasenyi, Buguta, Kasigau, Mraru, Ghazi and Mbulia.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 NON-FOOD INTERVENTIONS

6.1.1 Multi Sectoral

- Drought Contingency Fund activities targeting Voi Sub County were ongoing water trucking, repair of boreholes, community barazas, security patrols and livestock disease surveillance and vaccinations.
- An aerial and ground patrol by KWS and Wildlife Works to monitor wildlife movement is ongoing.
- Opening up of feeder roads by county government is ongoing.
- Construction of Taveta - Mwatate - Wundanyi road is ongoing.

6.1.2 Health and Nutrition Sector

- Deworming, Vitamin A supplementation, Therapeutic Zinc and Iron Folic Acid supplementation.
- Referral and follow up to SFP, OTP and Stabilization centres for management of malnutrition
- Malnutrition Screening
- Disease surveillance and response

6.1.3 Water and Sanitation Sector

- Water trucking by private vendors was being undertaken to areas experiencing water shortage.
- Operationalization of Ndara borehole through construction of water kiosk, livestock trough and installation of PVC tank – Anglican Development Services (ADS - Pwani)

6.1.4 Social Protection

- CFA is ongoing and the target beneficiary number is 5,848HHs though incentives for the month of November and December are yet to be compensated.
- The lean period (Jan - March) for CFA programme is in underway. This has impacted negatively to food security given that these farmers experienced poor or no harvests.
- Relief food distribution by Ministry of Interior and Coordination in all sub counties – Facilitated by National Irrigation Board.

7.0 EMERGING ISSUES

7.1 MIGRATION

- Livestock deaths (20 cattle) were reported in Mramba Ranch.
- Carcasses of livestock were observed along Mombasa highway areas of Mackinnon being part of herds from Northern region and Tana River entering Taita Taveta ranches for fattening.
- Due to poor pasture regeneration in the ranches herders are encroaching settlement areas to graze their livestock. This might cause conflict since herders from parts of Northern Kenya and Tana River County depend on these ranches to fatten livestock.
- Migration of livestock from Mwatate ranches to Kishushe and Chyulu hills area in search of pasture.
- Herders in Taveta Sub County areas of Jipe are still encroaching Tsavo West National Park in search of pasture.
- Marauding elephants are causing havoc in Marungu Ward and lower parts of Sagalla.

7.2 CONFLICT

- Cases of human wildlife conflict are on the increase in Voi Sub County, wanton destruction of assets by elephants.
- Conflict between residence and those from other counties might arise due to scarcity of resources mainly in Voi and Mwatate ranches.
- Grazing of camels in human settlements in areas of Buguta and Marungu could also lead to conflict.

7.3 FOOD SECURITY PROGNOSIS

- The county is in the late stage of Alert Phase with high possibilities of sliding into alarm phase.
- Estimated Population in need of food assistance as per the short rains assessment undertaken in January is 72,182 (2009 census KNBS).
- Inadequacy of food due to poor harvest has adversely affected food consumption.
- Households are unable to afford some essential nonfood expenditures therefore engaging in irreversible coping strategies.
- Early preparations are required to respond to urgent needs of the community to avoid loss of assets.
- Water availability and accessibility situation is deteriorating as the dry spell is unfolding. Open water sources are drying up fast due to high temperatures resulting to high evaporation rate.
- Available resources like pasture are expected to be over utilized due to minimal rains received in the county.
- Currently no major cases of conflict have been reported, however livestock in migration from other counties remain a serious threat to normal operations in both the ranches and settlement areas given that pasture quality and quantity is deteriorating at a high rate.
- Livestock sector require constant monitoring to avert conflict and spread of livestock diseases.

- Cases of malnutrition are likely to increase due to crop and livestock production being below normal.
- Overgrazing, human wildlife conflict and deforestation remains a threat to food security in the county.

8. RECOMMENDATIONS

Social Protection Sector

- Beneficiaries under the Cash for assets programme need to be considered for food assistance during the lean months period, that is, January – March, given that most households in the rain fed lowlands experienced maize crop failure plus below normal harvests of pulses during the short rain season.
- Upscale CFA and General Food Distribution beneficiaries.

Agriculture and Livestock Sector

- Livestock disease surveillance and control is important due to the influx of livestock from other areas.
- Expansion of vaccination and disease control to other affected areas.
- Provision of supplementary feed.
- Promotion of pasture and browse management through bailing.

Water and Irrigation Sector

- Water trucking.
- Provision of water treatment tabs.
- Provision of water treatment tabs.
- Repair and Rehabilitation of strategic boreholes.
- Promotion of water harvesting structures at household level.

Health and Nutrition

- Enhance disease and nutritional surveillance.
- Enhance provision of therapeutic feeds to health facilities with high levels of iron.

Education

- Upscale and expand School Meals Program.

Peace and Security Sector

- Peace and security meetings should be enhanced in areas neighbouring the ranches and the parks.
- Establish communication channels between the community and KWS.
- KWS to enhance surveillance and patrols to contain wildlife inside the park.

Multi Sectoral

- Activate drought contingency plan for Mwatate, Taveta and Taita Sub Counties and upscale and expand for Voi Sub County having being ranked first in terms of most affected by effects of drought (SRA2017).

- Drought Contingency Fund should target mixed farming: food crops/livestock livelihood zone in the county given that the rains were highly depressed.