

National Drought Management Authority

TAITA TAVETA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2017



A Vision 2030 Flagship Project



February EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- Parts of the lowland received off season rains for two days.
- The rains improved availability of water to a few households through roof catchment.
- Minimal regeneration of pasture is expected in these areas due to high temperatures being experienced.
- Vegetation condition index was below long term average at 23.55.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Harvest of pulses was below normal while maize crop failed.
- Livestock body condition is fair.
- Milk production is deteriorating mainly in the lowlands.

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.

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 | 23.55 | 35-50 |
| Production indicators | Value | Normal |
| Maize Crop Condition | Crop failed | Harvesting |
| Livestock Body Condition | Fair | Good |
| Milk Production | 19 | 48 Litres |
| Livestock Migration Pattern | Parks | Ranches |
| Livestock deaths (drought) | None | No death |
| Access Indicators | Value | Normal |
| Terms of Trade (ToT) | 72 | 83 |
| Milk Consumption | 27 | 36 litres |
| Return distance to water sources | 3.5 | <5 Km |
| Return distance to grazing areas | 3.7 | <6 Km |
| Cost of water (20 litres) | 15 | < Kshs 5 |
| Utilization indicators | Value | Normal |
| Nutrition Status, MUAC (% at risk of malnutrition) | 3.1 | <6.6 |

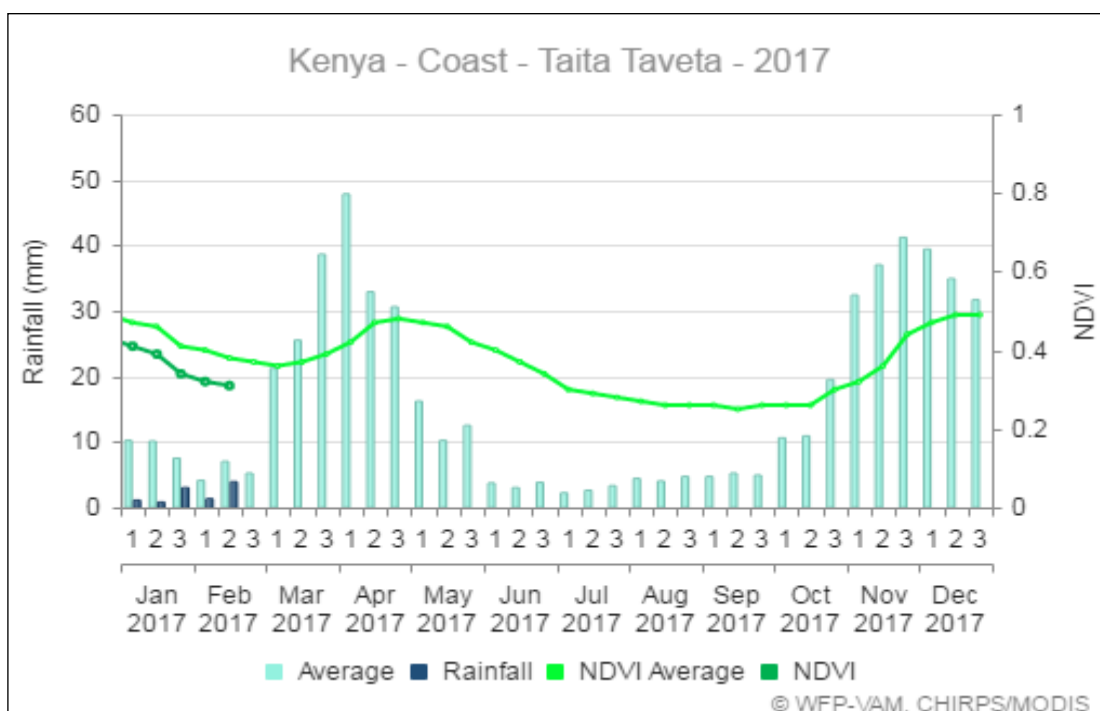
Seasonal Calendar

| | | | | | | | | | | | |
|--|---|---|---|-----|-----|-----|-----|------|-----|-----|-----|
| <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

- In the month under review, parts of the lowlands received off season rains on the 18th and 19th.
- In most areas the rains were moderate ranging between 5 – 20 mm. However, in Mwatate Ward areas of Mgeno the rains were heavy and ranged between 20 – 50 mm.
- The rains impacted positively on the water sector in these areas but no significant impact is expected in terms of regeneration of pasture and browse.
- Areas reporting water and pasture stress are southern part of Kasigau Ward, Jipe, Mahoo and Mata wards and areas of Mahandakini, 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.

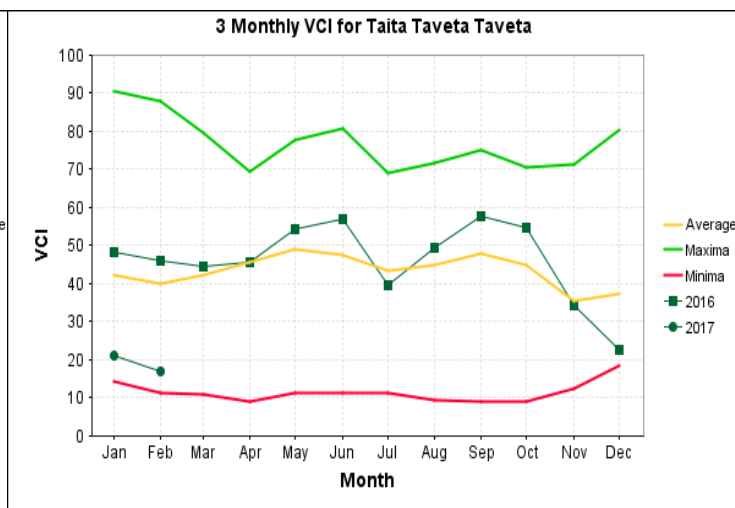
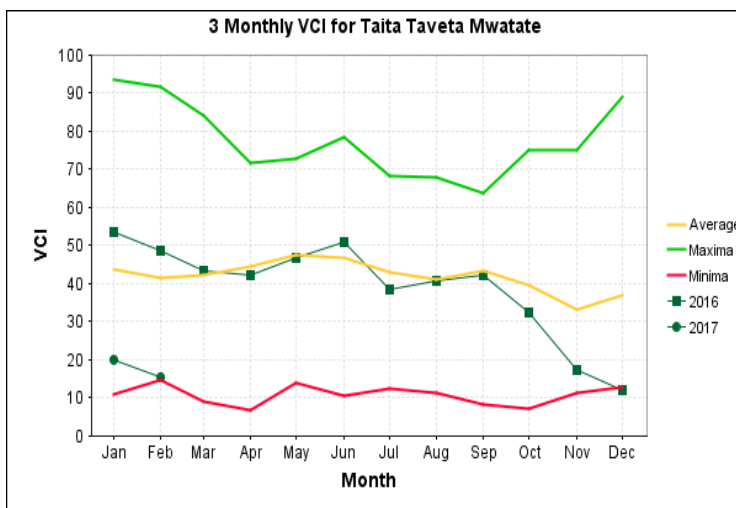
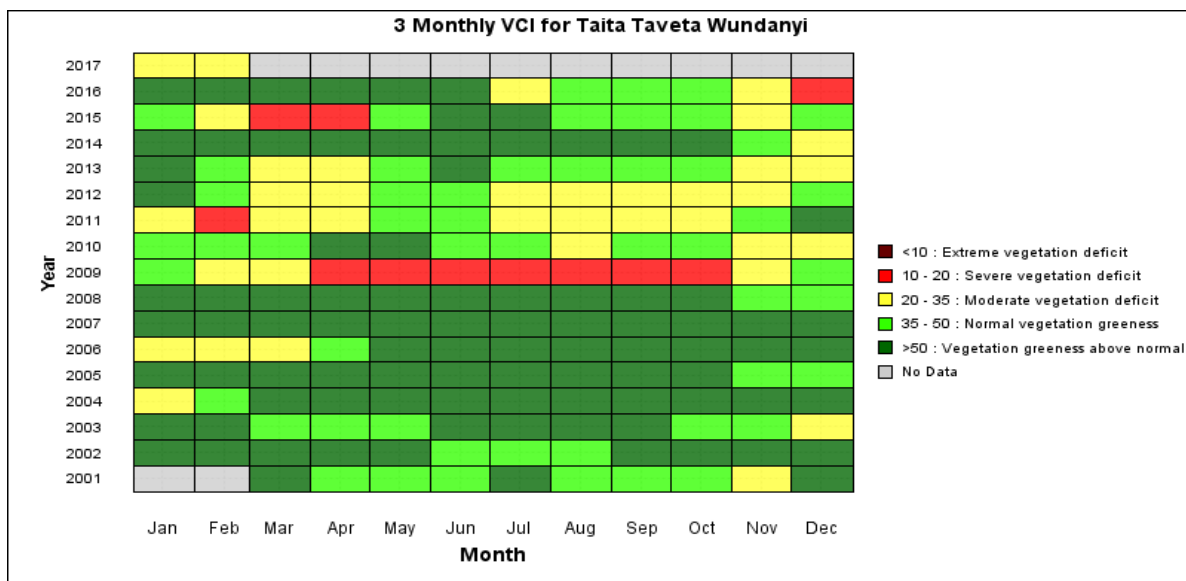


2. IMPACTS ON VEGETATION AND WATER

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 23.55.
- Mwatate and Taveta Sub Counties recorded severe vegetation deficit at 15.23 and 16.77 respectively.
- The matrix below shows 3 monthly VCI for the county, plus VCI graphs for Mwatate and Taveta 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 showing pasture stress are Sangenyi, Mwaroko, Kishushe, Paranga, Mgeno, Godoma, Msorongo, Mwakitau, Jora, Bungule, and Makwasinyi.
- Mixed farming: food crop/ livestock livelihood zone pasture regeneration is fair to poor. Minimal stocks are available and in some areas pasture is completely depleted.
- In the mixed farming: irrigated cropping/ livestock/ food crops zone pasture condition is fair to poor. Pasture depleted in the month under review.
- In the mixed farming: horticulture/ dairy zone pasture condition is good to fair expected to last for two months.
- Herders mainly in the lowlands are illegally grazing inside the park, sanctuaries and other protected zones like private land.

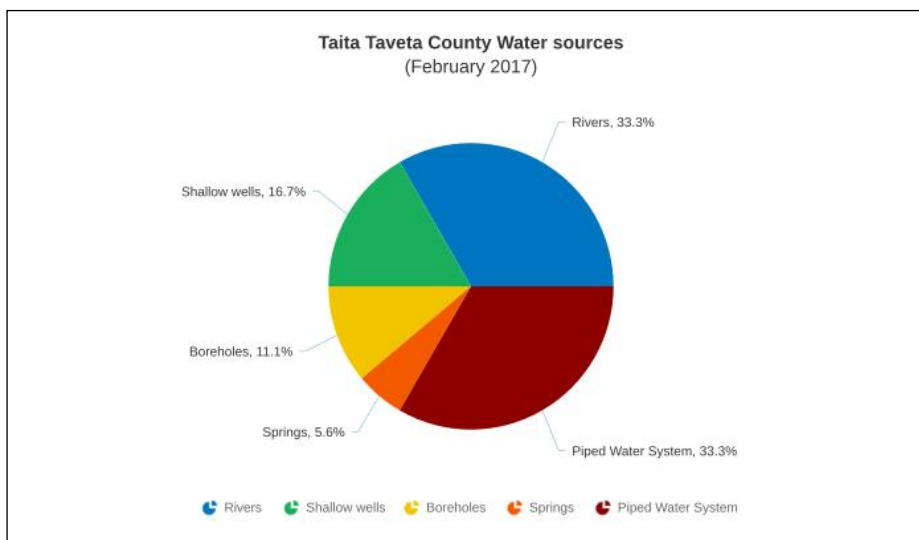
2.1.3 Browse

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

2.2 WATER RESOURCE

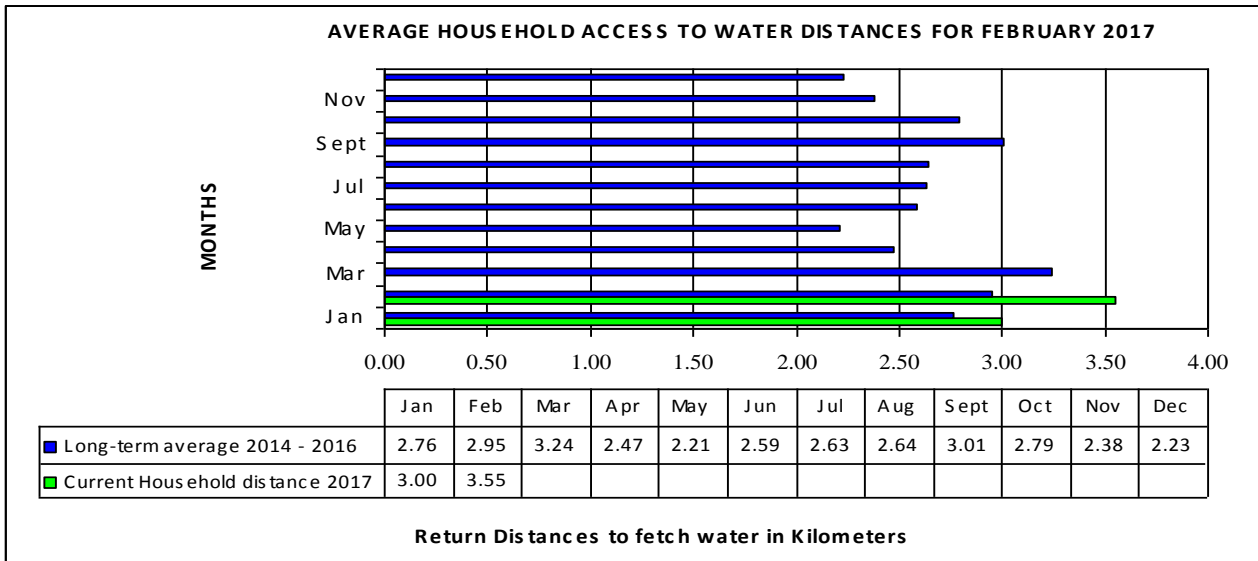
2.2.1 Sources

- 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, boreholes and springs at 33.3%, 33.3%, 16.7%, 11.1% and 5.6% respectively.
- Water situation has deteriorated due to drying up of open water sources aggravated by high temperatures being experienced.
- Areas experiencing water stress are southern part of Kasigau Ward, Jipe, Mahoo and Mata wards and areas of Mahandakini, Mwakitau, Mwachabo, Kishushe, Sangenyi and Mwaroko.



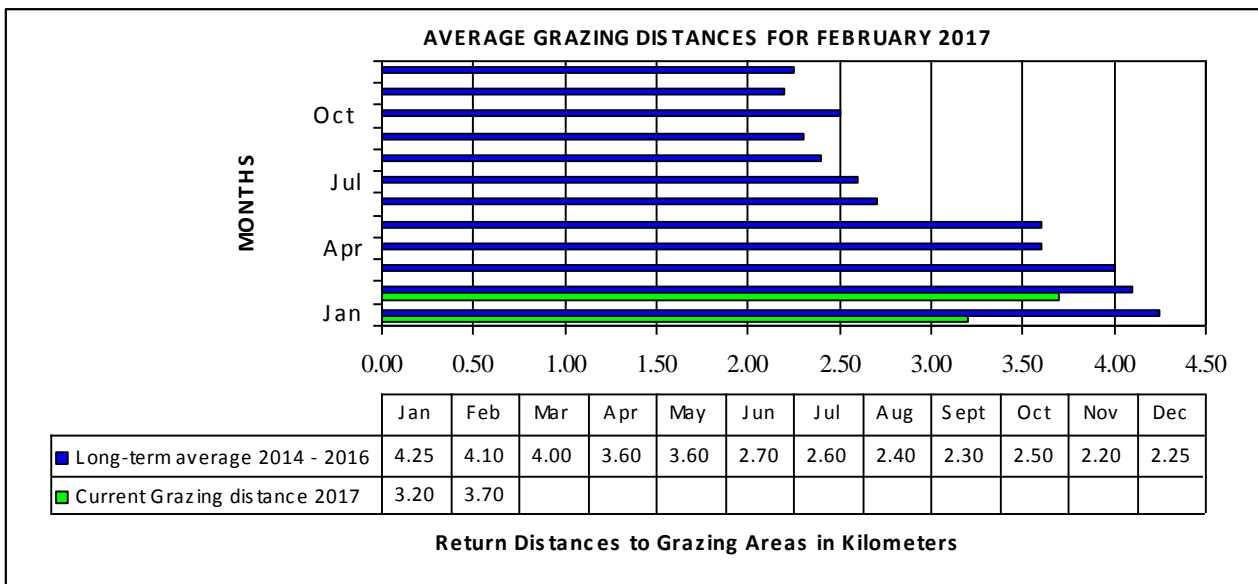
2.2.2 Household access to Water

- In the month under review, out of 210 sampled households analyzed, household distance to fetch water increased to 3.1 km from 3.0 km. The current distance is longer than the LTA by 20%.
- The waiting time increased at water points due to reduced 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 remained 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 3.70 km from 3.20km realized in the previous month.
- This is due to depletion of pasture and browse in the lowlands.
- Compared to the LTA the current distance to grazing areas is shorter by 10%.
- 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. Others are being watered once in two days for instance in Marungu in Mwanda Ward and Kishushe where livestock migrated to areas of Ndi in Ngolia Ward
- Longer distances to water points were observed in Kasigau, Buguta, Zungulukani, Mwachabo, Mwakitau, Mgeno, Mwaroko, Sangenyi, Kishushe and lower Sagalla.
- 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

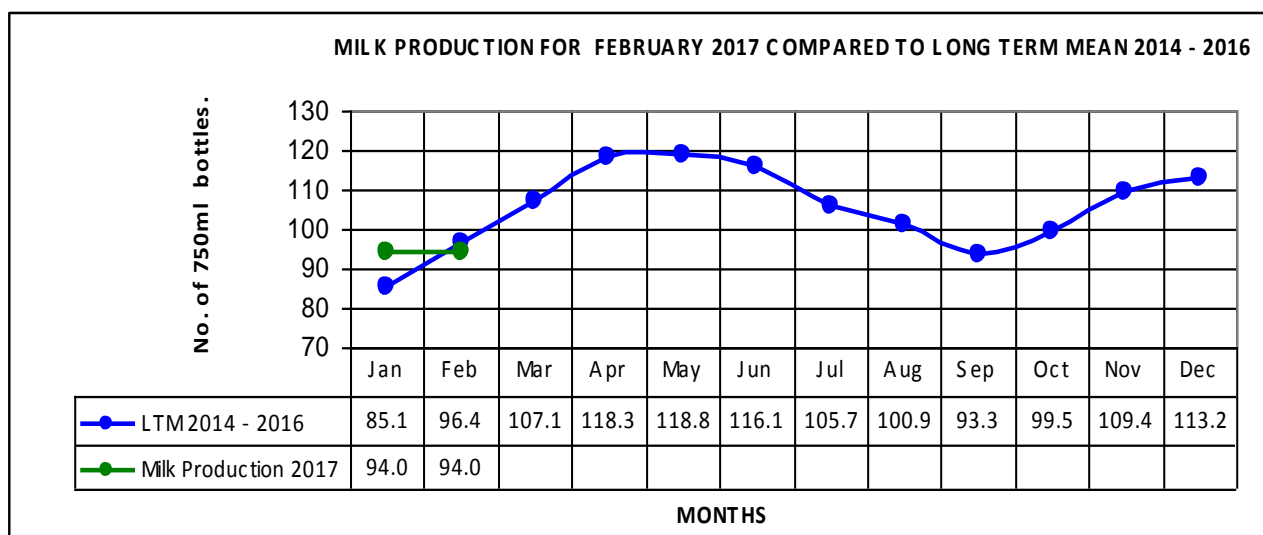
- Compared to previous month cattle body condition remained fair.
- Goats and sheep body condition was good to fair with a deteriorating trend given that trekking distances in search of pasture and browse will increase in the lowlands.
- Currently most cattle are fair in stressed classification borderline where fore-ribs are not visible but 12th & 13th ribs are visible.
- Cattle in critical classification with thin fore-ribs visible were observed in areas of Zungulukani, Kasigau, Mwakitau, Mwachabo, Mgeno, Kajire, Miasenyi, Mbulia and the ranches for instance Mramba.
- 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 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 remained at 94 litres as 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 57.6% situated on the hill masses, mixed farming: food crops/livestock livelihood zone 30.3% 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

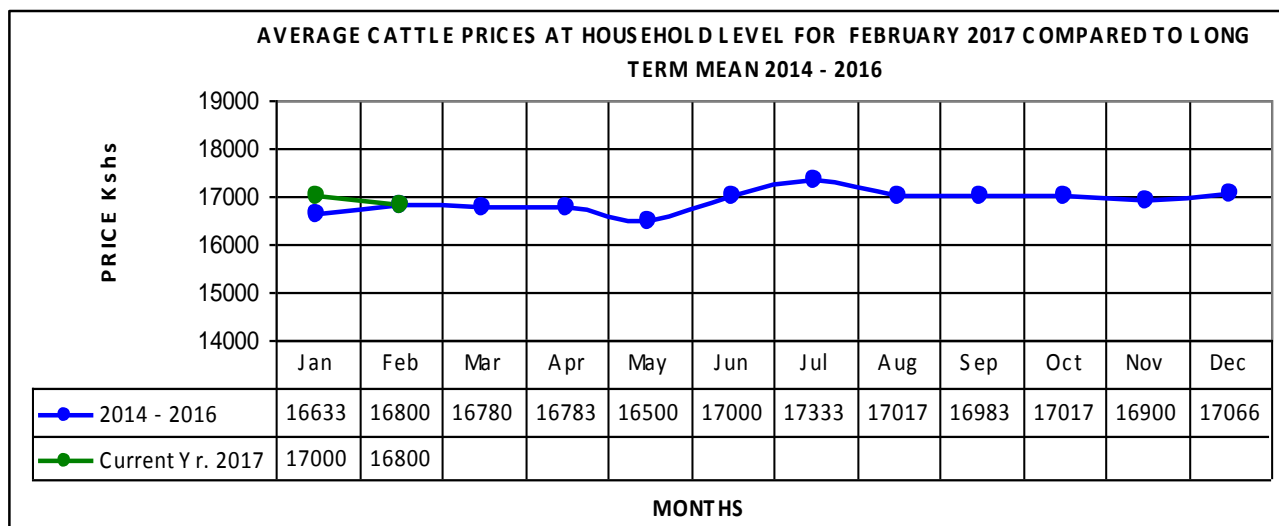
- In the mixed farming: food crops/livestock livelihood zone land preparation is ongoing.
- In the mixed farming: Irrigation livelihood zone farmers are harvesting maize.
- In the mixed farming: Horticulture/ Dairy livelihood zone harvesting of maize is ongoing.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

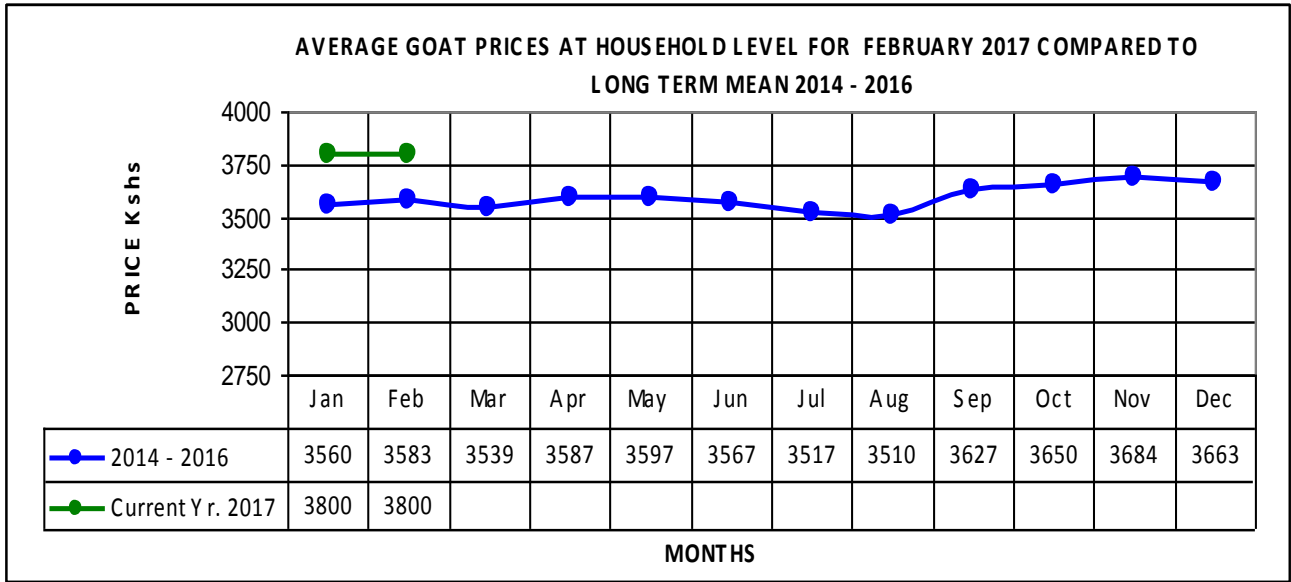
4.1.1 Cattle Prices

- The average price of a three year old bull from 210 sampled households decreased to Ksh 16,800 from Ksh 17,000 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 the same.
- 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

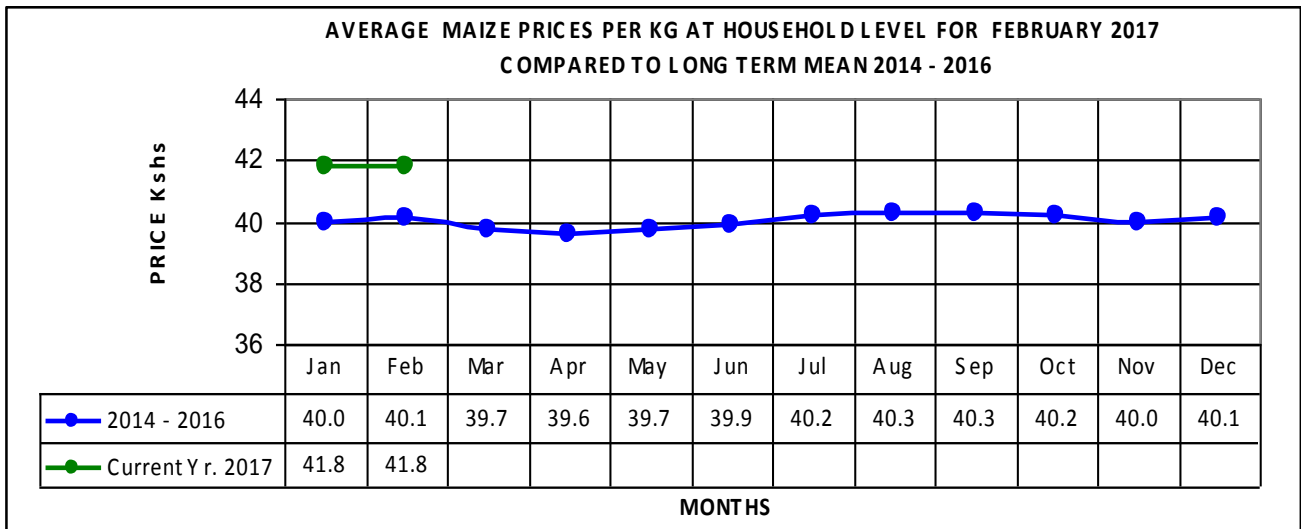
- The average price of a three year old goat from 210 sampled households remained at Ksh 3,800 as in the previous month.
- The low price could be attributed to fair goat body condition.
- Compared to long term mean, the average price is higher by 6.1%.
- No significant variations in prices of goats were observed across livelihood zones.



4.2 CROP PRICES

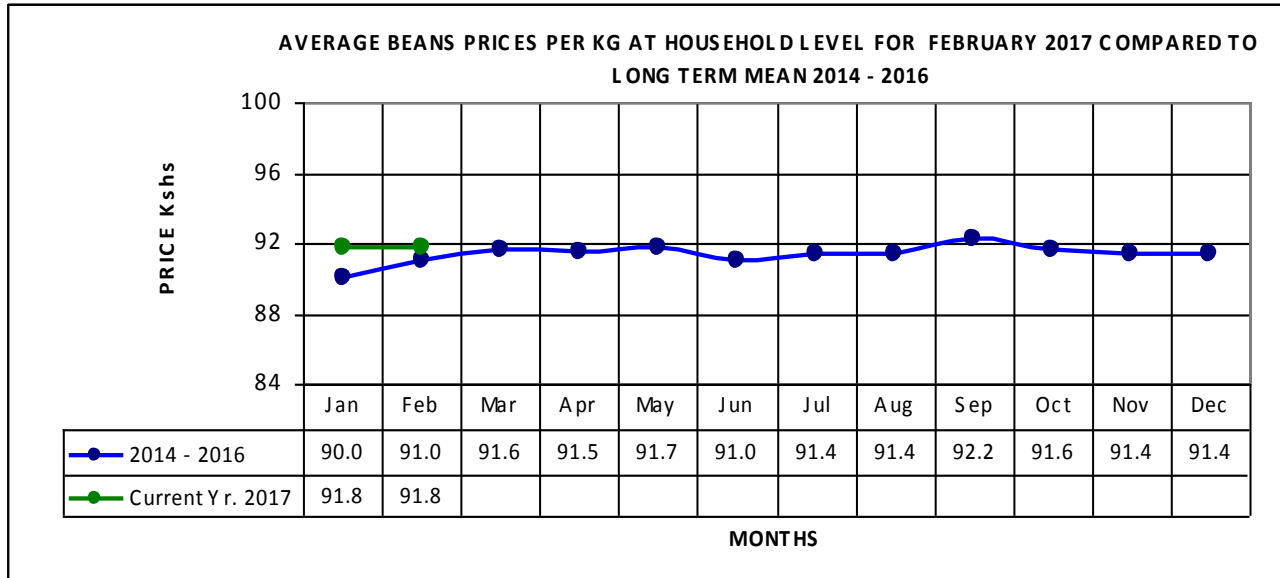
4.2.1 Maize

- Compared to the previous month, average price of maize per kg at household level remained at Kshs 41.80.
- 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 4.2%.



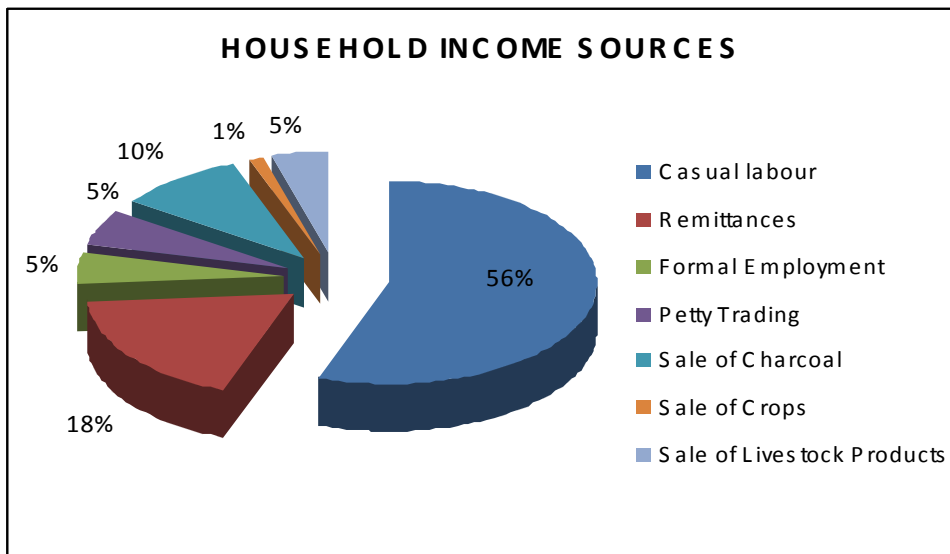
4.2.2 Beans

- Compared to the previous month, average price of beans per kg at household level remained at Kshs 91.80.
- 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 almost equal.



4.3 INCOME

- Analyzed income from 210 sampled households' below show that sale of charcoal, casual labour, remittances rose by 3%, 3% and 1% respectively.
- Petty trading dropped by 4% while formal employment, sale of livestock products, sale of crops decreased by 1% each compared to the previous month.
- Most households are now depending on charcoal burning and remittances.



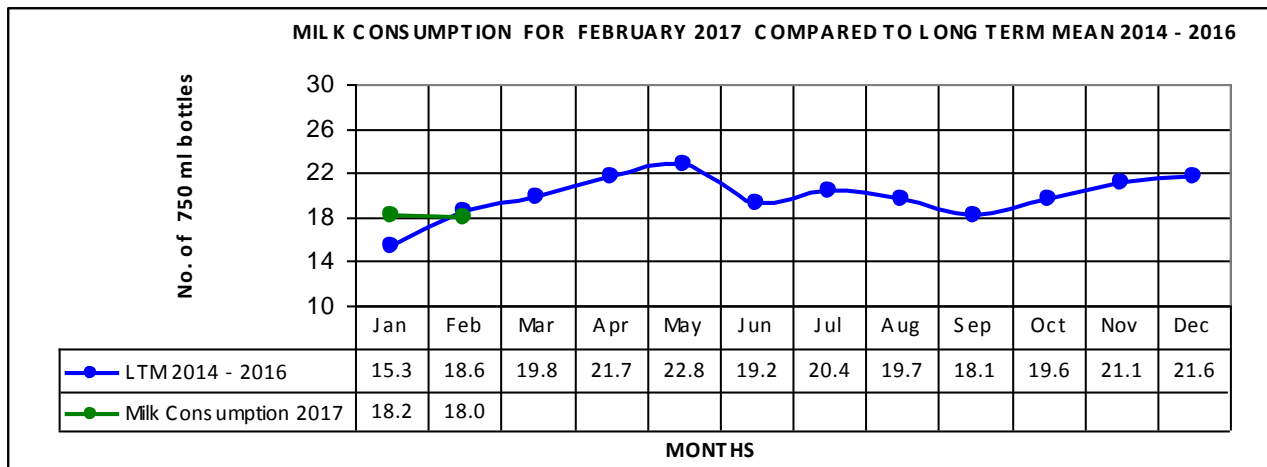
4.4 TERMS OF TRADE

- 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.
- Though ToT remained the same as in the previous month, the trend is decreasing due to 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

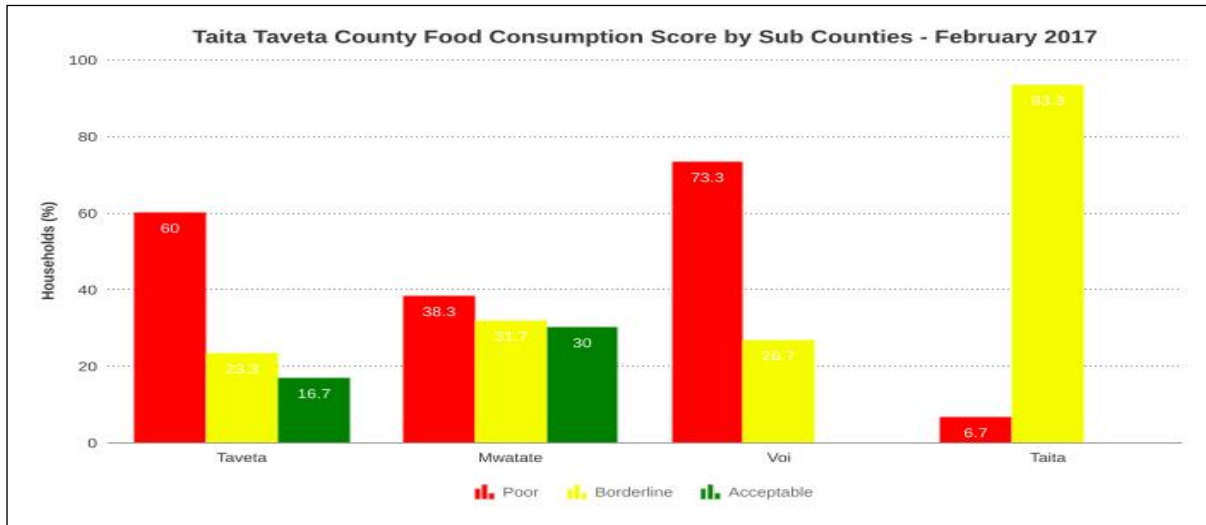
- Out of the 210 sampled households milk consumption per day decreased to 18.0 litres from 18.2 litres in the previous month.
- In the month under review the average milk consumption per household per day ranges between 0.5 – 1 litre.
- Generally most household members consumed approximately 19.1% of the total milk produced.
- Compared to the long term mean milk consumption was lower by 3.2%.



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, Mwatate, Voi and Taveta Sub Counties were negatively affected in terms of food consumption.
- Those in poor category consumption score increased by 20.6%, 10% and 5% for Mwatate, Taveta and Voi Sub Counties respectively.
- In Mwatate Sub County those in the acceptable category dropped by 18.7%.
- Taita Sub County showed an improvement where those in the acceptable category increased by 86.6%.
- Downward trend in Mwatate, Taveta and Voi Sub Counties could be attributed to reduction of number of meals taken by household members due to reduced food stocks and money to buy food.

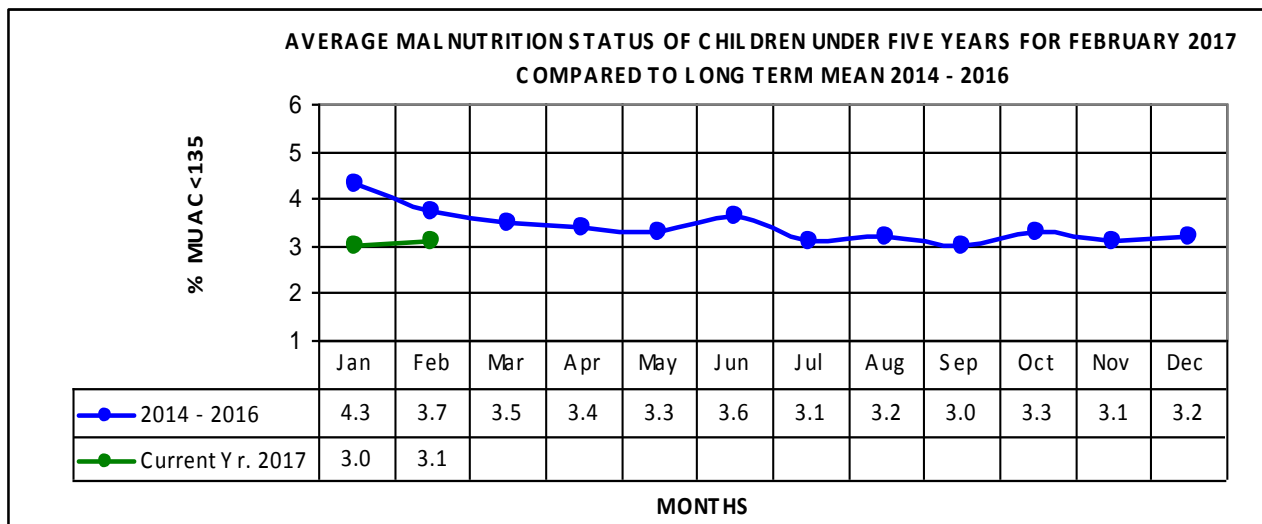
- Main meals consumed are two food groups that are ugali and vegetables.
- In the lowlands food security situation is worsening given that harvests were poor and household members are employing demeaning coping mechanism to survive.
- Reduction of meals and poor dietary diversity will lead to other health 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 increased to 3.10 from 3.0 posted in the previous month.
- Out of 728 children under-five sampled in 7 sentinel sites, 23 were found with MUAC less than 135 mm.
- Compared to long term mean, MUAC level is lower by 16.2%.
- 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 were Mwakitau, Mwachabo, Mgeno, Kishushe, Mwaroko, Miasenyi, Buguta, Kasigau, Mraru, Ghazi and Mbulia.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD AND NON FOOD INTERVENTIONS

6.1.1 Sectoral

| Sector | Planned intervention | Target areas/Wards | Cost of intervention | Quantified achievements | Contributions from partners(Specify the partner) | Remarks |
|----------------------|---|---|---|---|---|--|
| Water | Water trucking | Mwakitau, Mwanda, Kamtonga, Manoa, Kishushe, Mbololo, Buguta, Kasigau | 6,000,000 | 35,000 people benefited with 701M ³ of water | CWSB/NG - 6,000,000 | 5 water bowsers contracted to truck water to hotspot areas |
| Livestock | Distribution of supplementary feed | Mwatate, Voi, Taita and Taveta | 8MT UMMB 1680bags range cubes | Targeting and distribution to selected areas completed | CG - distribution NG - provision of feed | Targeting and distribution carried out by County |
| Health and Nutrition | Distribution of Therapeutic and supplementary feed to health facilities | County wide 57 facilities | 140 bags CSB 140 cartons RUTF 16 cartons MNPs | 27 facilities received commodities | UNICEF - Commodities NDCF/NDMA - Fuel CG - Logistical support | |
| Food and safety nets | Food aid | Mwatate, Voi, Taita, Taveta | 5000 (50kg) bags Maize 934 (90kg) bags beans 600 bags (50kg) Rice 450 cartons Veg. oil | 10,000HHs have received relief food | NG - Food commodities, logistical support and distribution | |
| | Cash transfers (Cash for Asset) | Mwatate, Voi, Taita, Taveta | 11,062,255.80 | 5848 HH paid incentives for month of December 2016 | World Food Programme - Cash incentives | |

6.1.2 Multi Sectoral

- 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.

7.0 EMERGING ISSUES

7.1 MIGRATION

- 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.
- Kishushe herders are moving to areas of Ndii in Ngolia Ward, Voi Sub County in search of pastures.
- Herders were evicted from the Tsavo national park due to elephant census exercise that was being undertaken in the month under review.
- Most of these livestock were observed in settlement areas of Maungu and Kasigau Wards.
- Marauding elephants are causing havoc in Marungu Ward and lower parts of Sagalla in search of water.

7.2 CONFLICT

- Cases of human wildlife conflict are on the increase in Voi Sub County, wanton destruction of assets by elephants.
- Conflict between residents 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 71,212 (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 and water are expected to be over utilized due to increased influx of livestock from other regions.
- 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.
- Provision of Veterinary and Livestock frontline extension staff in all the Wards.

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

- Fast track county drought response activities to enhance resilience and safe the worsening food security situation.
- Drought Contingency Fund should target mixed farming: food crops/livestock livelihood zone, given that this zone has consecutively experienced depressed rainy seasons.