

National Drought Management Authority

TANA RIVER COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MARCH 2018



A Vision 2030 Flagship Project



MARCH EW PHASE

Drought Status: **ALARM**



Mipango ya kukabiliana na ukame

Drought Situation & EW Phase Classification

Biophysical Indicator

The County is currently experiencing severe agricultural drought.

Rainfall:

- The county received good rainfall amounts in this month. The county received an above normal rainfall amount during the first and the second dekad of this month. The intensity, spacial and the temporal distribution was also good.
- The vegetation condition.** The 3-month VCI indicates that the County is currently experiencing severe vegetation deficit. The values increased when compared to the previous month where the VCI was at 5.33. All the Sub Counties are currently experiencing severe vegetation deficit.

Socio Economic Indicators (Impact Indicators)

Production indicators

- Most of the livestock in Tana River County have remained in the fall back areas; Delta, Assa, Kone, Galana, Moa, Tsavo National park and also along River Tana. A few herd were reported to have started to migrate towards the hinterlands where the herder's households are located.
- The browse condition in the county is generally fair while the browse condition is generally good in all the livelihood zones.
- The browser (camel and goats) body condition is good while that of the grazers (cattle and sheep) is currently fair and on an improving trend.
- Milk production at household level increased to 5.7 litres compared to that of the last month where the amount was at 2 litres.

Access indicators

- The average milk consumption in the county also increased to 3 litres compared to the last month which was at 0.5 litre. Milk consumption remains below the normal.
- The average livestock distance to the water sources remained below the normal at 6 km compared to the last month where it was at 12.9 km. The return distance remains high compared to the normal distance of 7.4km.

Utilization indicators

The percentage of children under the risk of malnutrition in this month was at 18.3% compared to that of February which was at 13%. The poor nutritional status is attributed to poor milk production and consumption.

Early Warning (EW) Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Pastoral	Alarm	Improving
Marginal Mixed Farming	Alarm	Improving
Mixed Farming	Alarm	Improving

Biophysical Indicators	Value	Normal ranges
rainfall amount	43.5 mm	>15mm
3-Month VCI	13.71	>35
State of water sources	2	5

Production indicators	Value	Normal ranges
Livestock Migration Pattern	Not normal	Normal
Livestock Body Conditions	poor	Good
Milk production	5.7 litres	>58 Litres
Livestock deaths (from drought)	Death reported	No death
Crops area planted (%)	Nil	67%of LTA

Access Indicators	Value	Normal ranges(LTA)
Terms of Trade (ToT)	64.7	68
Milk Consumption	3 litres	>37 Litres
Average return distance to the water sources	6 km	7.4 km

Utilization indicators	Value	Normal ranges
MUAC(% at mid-risk of malnutrition)	18.3%	<12(%)

<ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks 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 A long dry spell Land preparation Increased HH Food Stocks 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

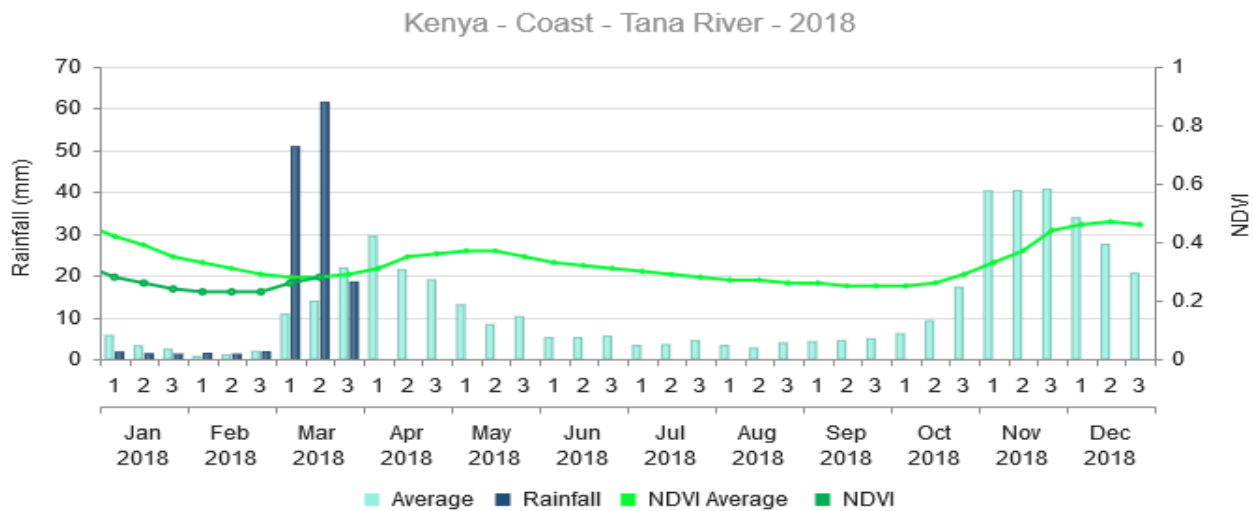


Fig. 1. The graph above shows the rainfall amounts received during the month of March and also the NDVI trend comparing both to the long term averages.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Good rainfall amount was received in this month. A negligible average of 0.53 mm was recorded. The county received an above average rainfall in this month recording 43.5 mm above the long term average of 15mm.
- According to Kenya metrological department, the onset of the March-May 2018 long-rains is expected to start at the 1st to 2nd week of April. However, several parts of the county received off seasonal rainfall during the first and second dekad of this month.
- The rainfall intensity of this off seasonal rains was good, the spatial and temporal distribution was also very good. These rains were received all over the county.
- The graph above shows the rainfall amounts received in February and compares it to the normal averages.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1 1 Vegetation Condition Index (VCI)

- The 3-M Vegetation Condition Index indicates that the county is experiencing severe vegetation deficit recording a VCI of 13.71 by the end March as Compared to the month of February which stood at 5.33.
- The VCI is on an increasing trend in this month and this is attributed to the good rainfall amount received in the county during this month. In comparison to same time in the previous years, the vegetation conditions have below the normal average.
- The matrix below show the severity of the county's vegetation deficit for this month;

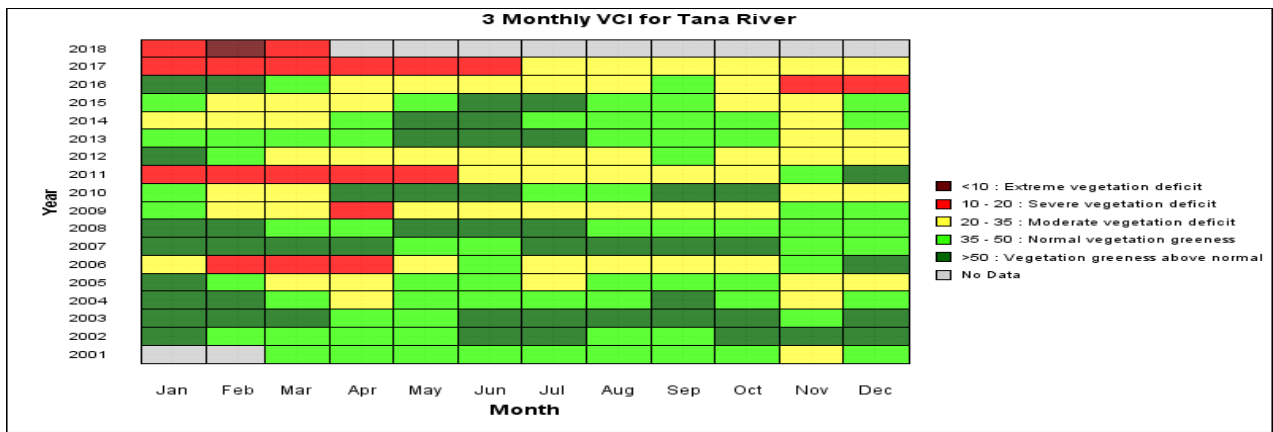


Fig. 2 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

- The graph below further depicts the 3-month VCI trend for this month and compares it to the same time in 2017 values; the long term average, the maxima and minima.
- The current County VCI recorded is at the minimum when compared to the same time of the previous years.
- In this month, the VCI values shows an increasing trend and this is attributed to the off-seasonal downpours received during this month.

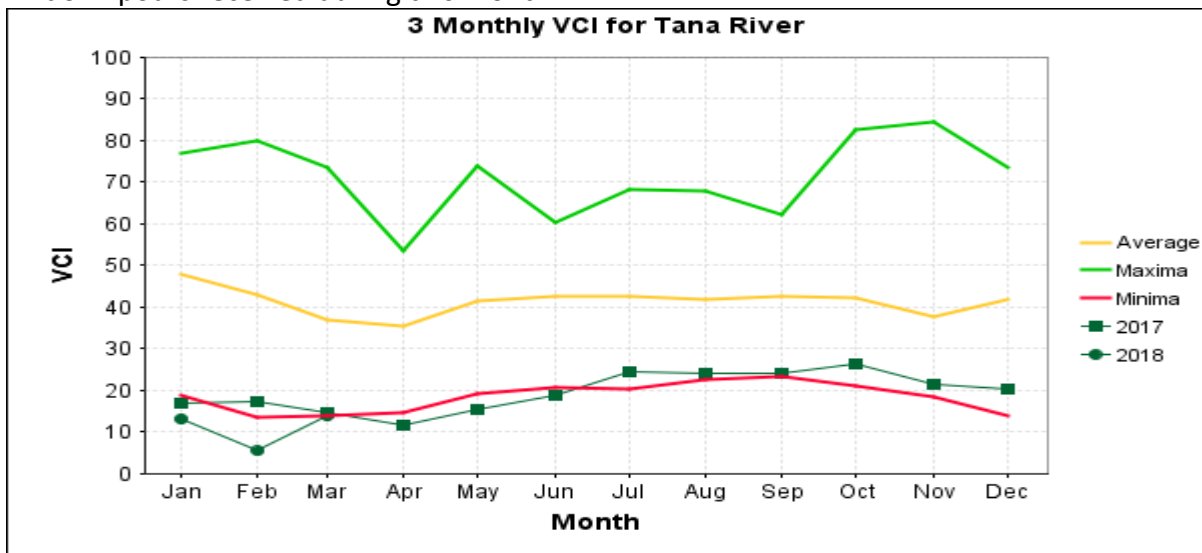


Fig. 3 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

Sub county VCI

- All the sub counties in Tana River County; Bura, Galole and Garsen sub counties are currently experiencing severe vegetation deficit. There was an improvement in vegetation greenness in all the sub counties in this month when compared to that of February.

Bura

- The 3-month Vegetation cover for Bura is currently at 10.05 compared to last month's VCI of 0.34. The agricultural drought conditions in this sub county has remained below the normal.
- The VCI of 10.05 in this month indicates severe vegetation deficit within Bura sub-county.
- As shown in the matrix below, this sub county has continuously faced persistent drought conditions since November 2016.

2.1.2 Pasture

- The pasture quality and quantity has improved and is fair in the county.
- This is due to the good rainfall amounts that was received all over the county during the month.
- The pasture quality and quantity is expected to improve with the anticipated onset of the long rains.
- The pasture quality and quantity is currently below the normal when compared to the same time of the past years.

2.1.3 Browse

- The quantity and quality of browse within the County is currently good compared normal at this time of the year.
- The overall vegetation conditions in the county are fair and can sustain the livestock for 2 month.

2.2 WATER RESOURCE

2.2.1 Sources

- The communities within the pastoral livelihood zone depend pans, shallow well and borehole while Marginal mixed and the Mixed farming livelihood zones depend on River Tana and boreholes for domestic water use.
- The rainfall received during the month has reduced water stressed in the county.

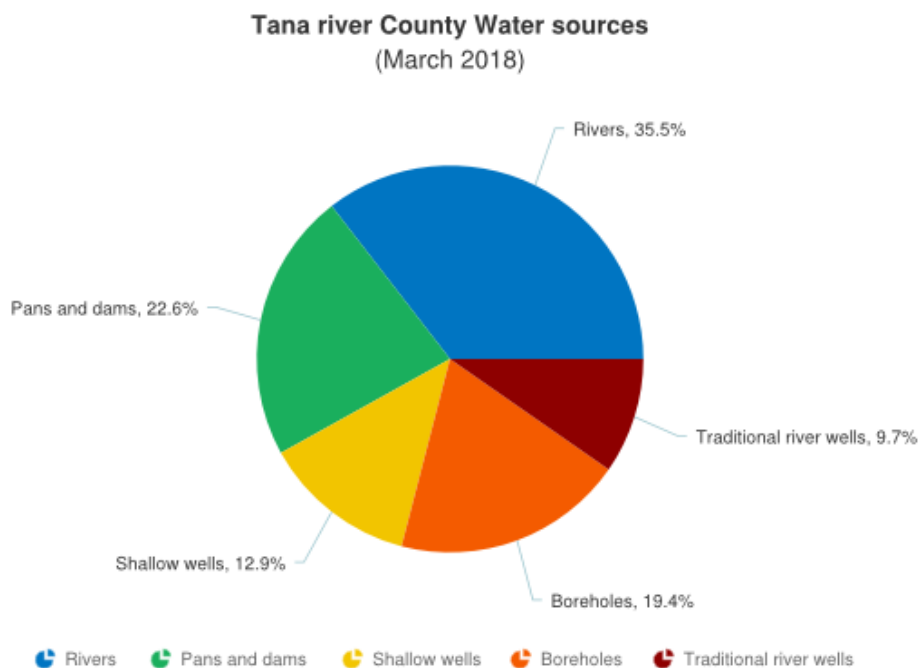
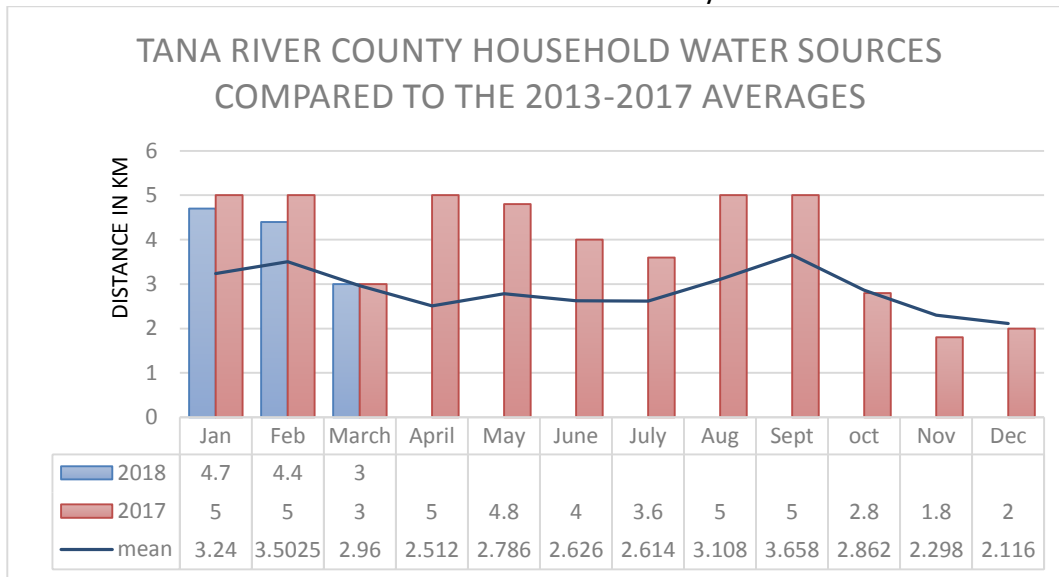


Fig 7. This pie chart shows the different water sources in the county for this month.

2.2.2 Household access and Utilization

- The average return distance from the households to the main water sources in March was 3 kilometres.
- In comparison to February where distance covered from the households to the main water sources was 4.4 Kilometres. The distances reduced in this month.

- Most of the H/H in the pastoral livelihood zones depends on the pans, shallow wells and traditional river wells for their water needs.
- All the water pans in the county have been replenished from the off seasonal rainfall received during this month.
- The households within mixed livelihood zones take approximately 1 hours to reach water points compared to households within Pastoral livelihood zones which take up to 2 hours to water points.
- The current distances are normal in this season of the year.



2.2.3 Livestock access

- The average distance covered by livestock from the grazing areas to main water source in March was 6 kilometres. .
- In comparison to February where the livestock covered 12.9 kilometres, the distances covered by the livestock reduced during this month. This is attributed to the replenishment of the major water sources from the received rains.
- The distance covered by livestock to access water is lesser when compared to the long term averages.

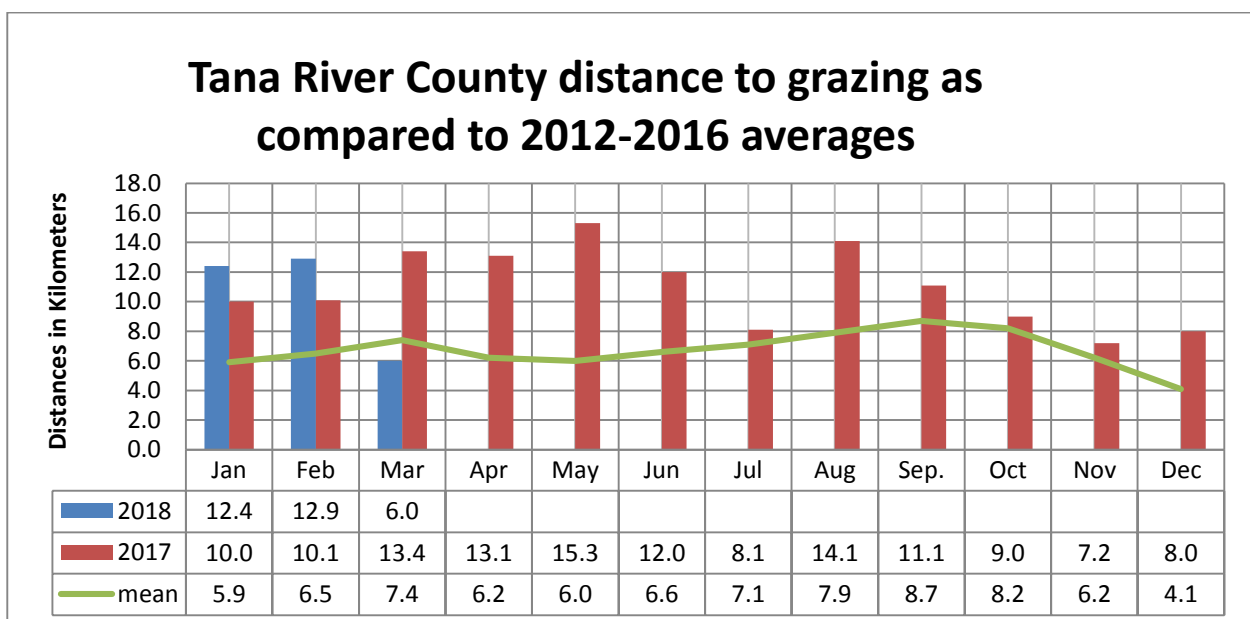


Fig 9 n=450 Households

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The Livestock body conditions of the browsers; Camels and goat is good while that of the grazers; cattle and sheep is fair. This is attributed to the quick recovery of the shrubs after the rains and also the longer time period it takes for the pasture to regenerate and be of good quality for livestock consumption.

3.1.2 Livestock migration

Most of the Livestock have remained in the Delta region but a few herds have started to migrate back to the hinterland region of the county.

3.1.3 Livestock Diseases

- The most vector borne diseases are Trypanosomiasis both for cattle and camels in the Delta and in other regions; heart water and babesiosis and others such as Helminthiasis have been reported. Fleas and ticks infestation has also been evidenced in most herds of livestock.
- The Delta region is worst in all the sub-counties in terms of Disease outbreak. There are cases of CCP and Trypanosomiasis have been reported in this sub county.
- Parasitic infestation cases have emerged especially fleas, mites and ticks in all livestock species.
- The grazers are the most affected than browsers due to large number cattle at delta grazing fields thus overwhelming the carrying capacity.

3.1.4 Milk Production

- On average the milk produced per household within Tana River County was 5.7 litres in the month of March. The amounts increased in this month when compared to the month of February which was at 2 litres.
- In comparison to the long term mean, the current average in milk production is still below normal average during this time of the year.

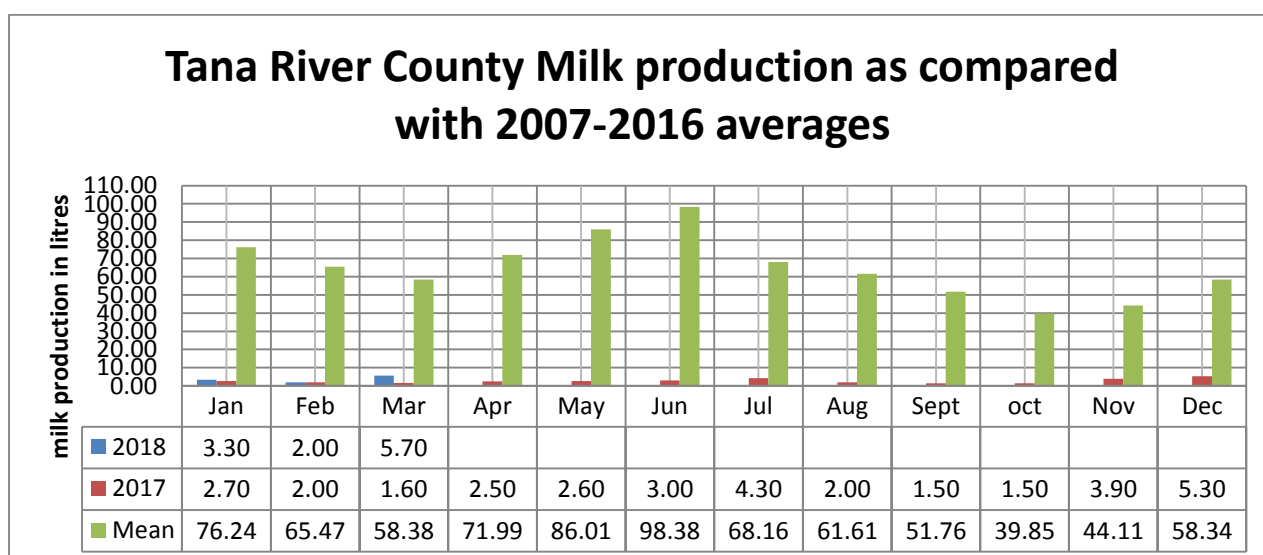


Fig 10n=450 Households

2.1.5 Livestock deaths

- During the first dekad of March, a few deaths of weak livestock was reported in Bangale region from adverse effects of the heavy downpour.

3.2 RAIN-FED CROP PRODUCTION

2.2 3.2.1 Stage and Condition of food Crops

- The main crops grown under rain fed production are maize, green grams, cowpeas and water melon. Other major crops include mangoes, bananas and tomatoes.
- The little acreage was achieved this time in mixed, marginal mixed farming zone.
- Currently, there are no food stocks available at the household level in all the livelihood zones and heavily depend on purchased foodstuff and relief food from the county and national governments.
- Subsistence farms in regions along the River Tana planted maize, cowpeas and green grams.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average market price of a mature 3 year old bull in the month of March was Ksh.19000. In comparison to the month of February, where the price of a 3 year old mature bull was Ksh. 12,500, the prices increased in this month.
- The increase in the prices is attributed to the market dynamics.
- The current cattle price of Ksh. 19,000 is above the normal at this period of the year as shown on the graph below.

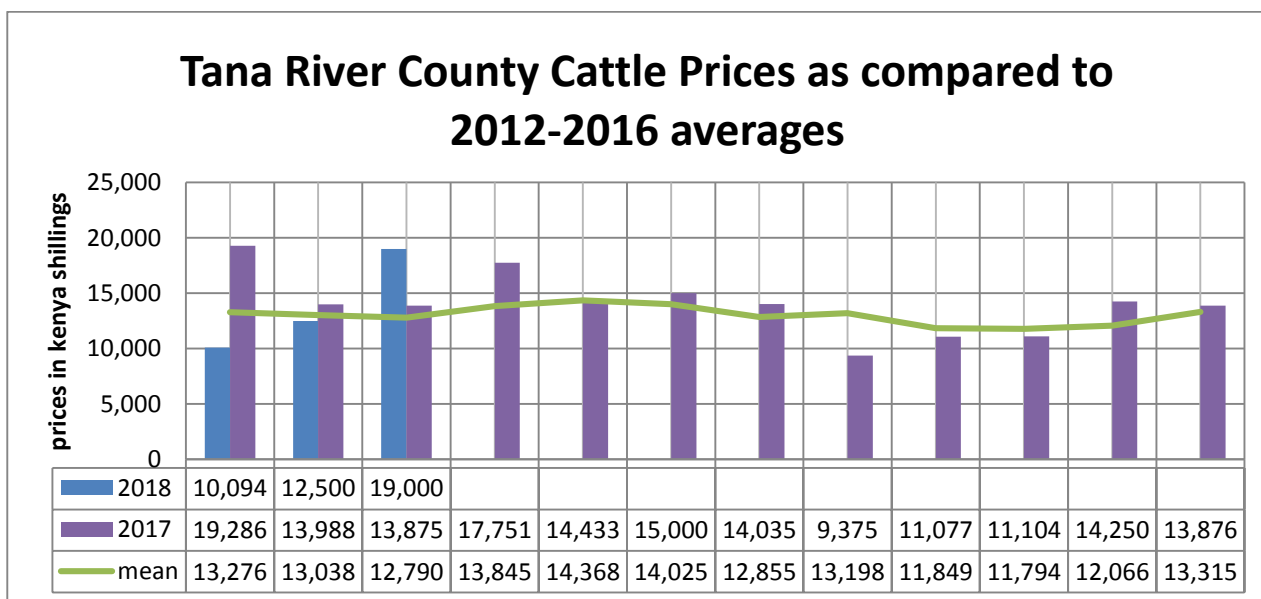


Fig 11n=450 Households

4.1.2 Goat Prices

- The average price of a medium size goat in the month of March was Kshs.3755. In comparison to the month of February where the average price of a medium size goat was Ksh. 3200. The prices in this month increased. The price variability is attributed to the market dynamics.
- The current goat price of Ksh.3755 is above the normal at this period of the year as shown on the graph below.

Tana River County goat prices as compared to 2012-2016 averages

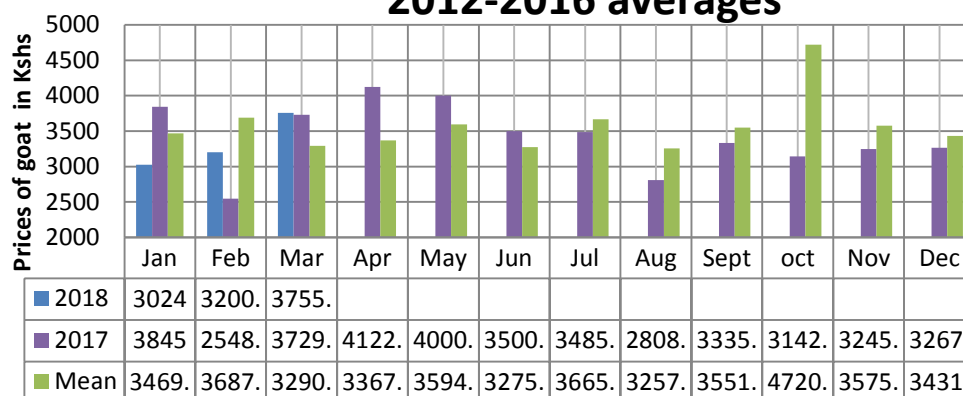


Fig 12n=450 Households

4.1.3 Sheep Prices

- The average price of a sheep in the month of March was Kshs.2380. The prices slightly increased in this month when compared to that of the month of February which was at Ksh. 2,200. This is attributed to the market dynamics.
- Compared to the mean of 2012-2016, the current price is below the normal at this time of the year.

Tana River County sheep Prices as compared to 2012-2016 averages

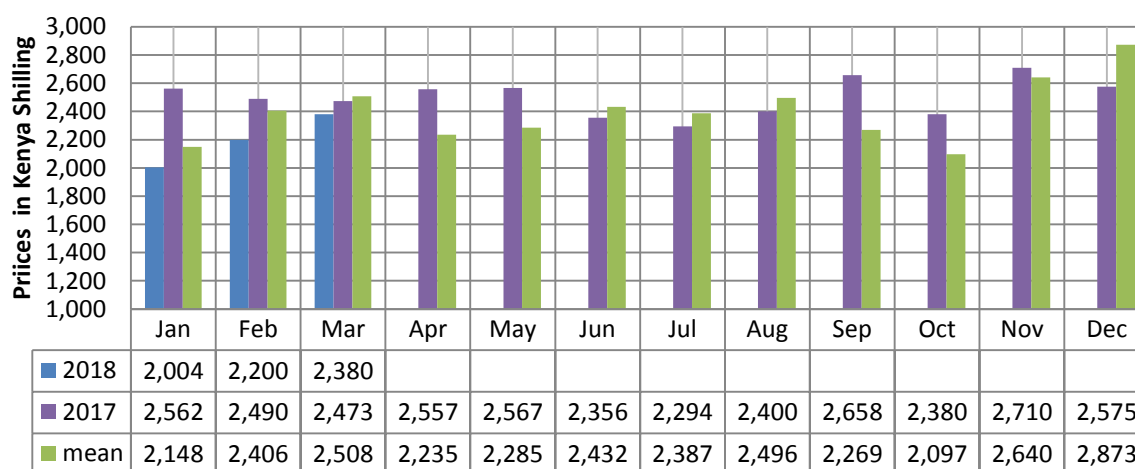


Fig 13n=450 Households

4.1.4 Milk Prices

Currently milk is retailing at an average of Kshs.75 per litre. The prices slightly reduced in March when compared to the month of February which recorded a price of Ksh 80 per litre. This milk price remains above the average prices recorded during this time of the year.

4.1.5 Terms of Trade

Currently the terms of trade are 64.7 Kg of maize for a goat. Compared to the month of February which recorded an average of 58, the terms of trade increased in this month. The current terms of trade is below the long term mean of 68 Kg for a goat.

Tana River County January TOT as compared to 2012-2016 averages

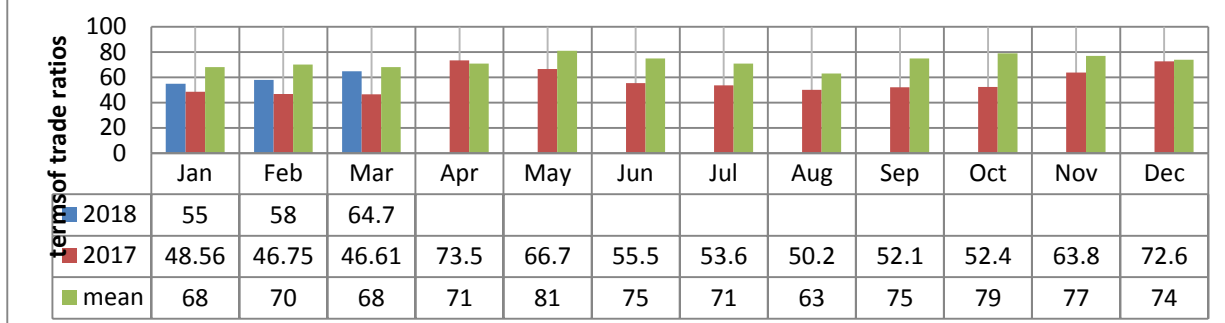


Fig 13n=450 Households

4.2 CROP PRICES

4.2.1 Maize

- The average maize market price per kilogram for the month of March was Ksh 58.
- When compared to the month of February, where the average price per kilogram of maize was Kshs.55, maize prices slightly increased by the end of March. This is attributed to the market dynamics.
- In comparison to the average maize price at this time of the year, the current maize prices are above long term averages of Ksh 33 per kg.

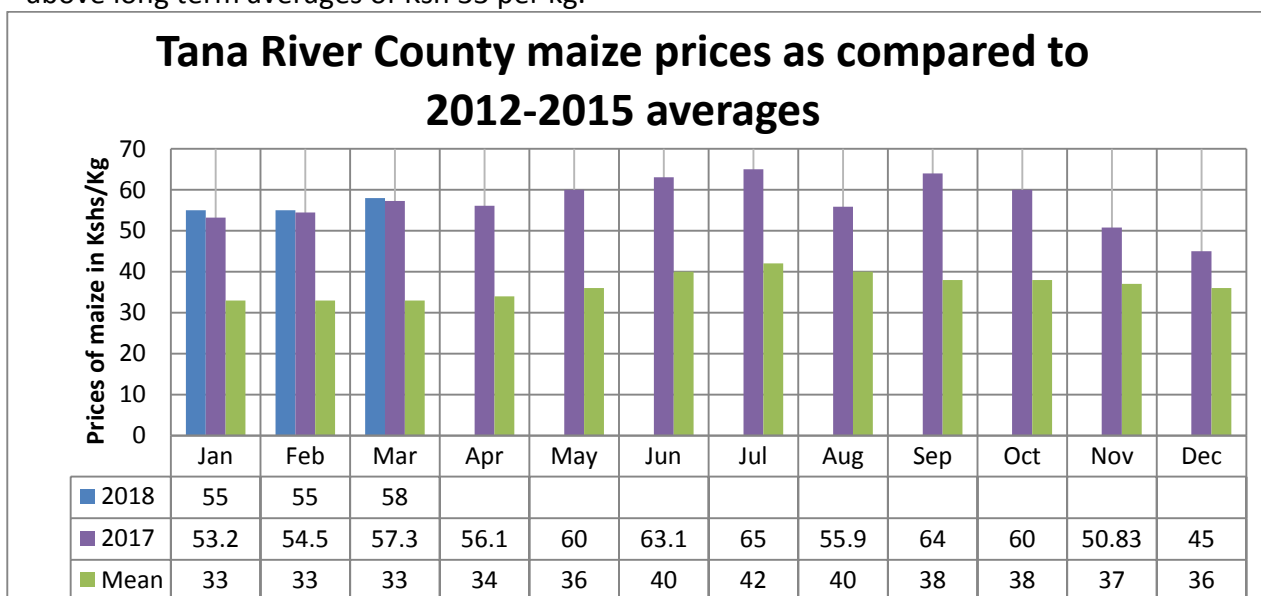


Fig 14 n=450 Households

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- On average the milk consumed per household was 3 litres in the month of March.
- In comparison to the month of February, where the average milk consumed per household was 0.5 litre, the milk consumption increased in this month.
- In comparison to a normal year, the current milk consumption rate per household is below normal at this time of the year.

Milk Consumption Trend-Tana River County

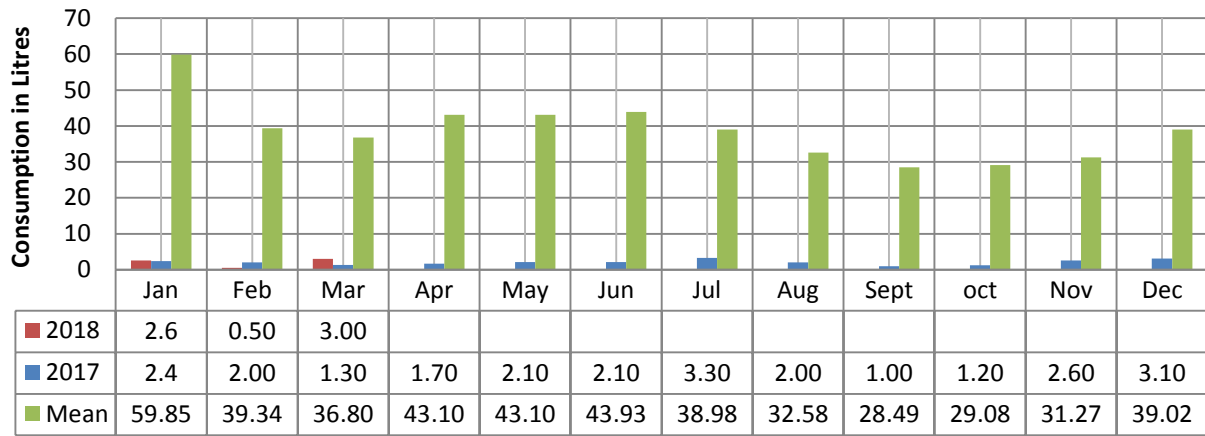


Fig 15 *n=450 Households*

5.2 FOOD CONSUMPTION SCORE

- The percentage of households with poor food consumption score in the county in March was 32.1% while those with border line score were 39.1% and with acceptable at 28%.
- Tana River Sub County has the highest proportions of households with poor FCS at 53.3% and also the lowest in the acceptable category at 0%.
- Tana delta has the highest in the acceptable category at 50%

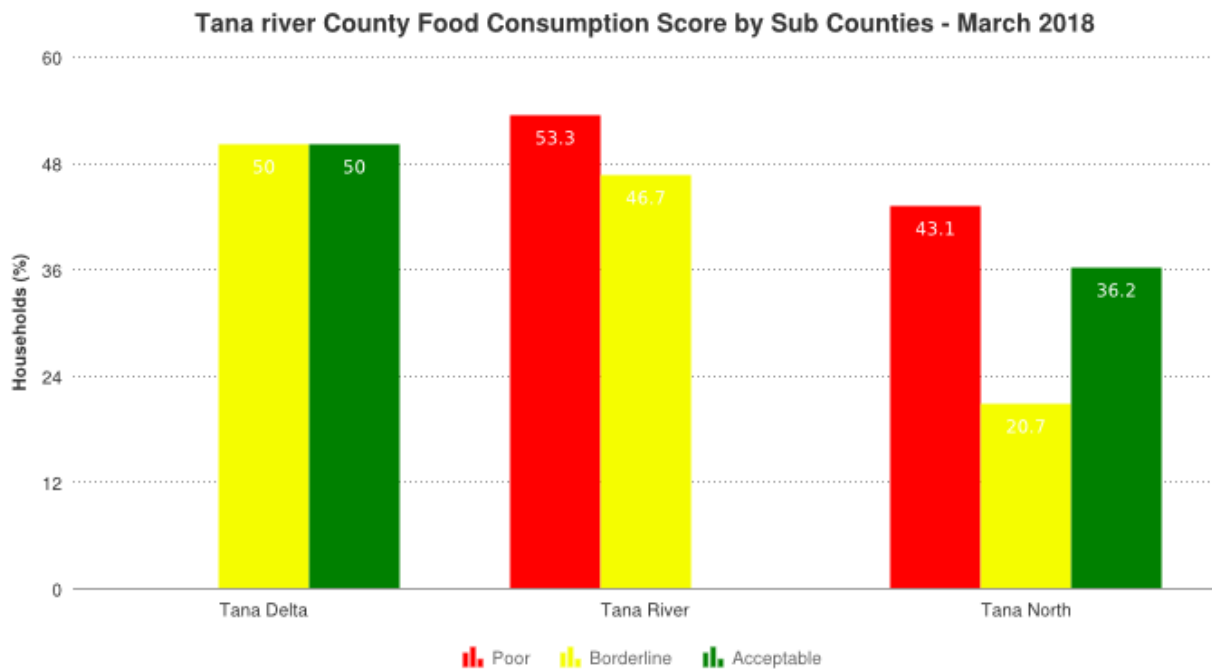


Fig 16. This figure show the food consumption score in the 3 sub counties of Tana River county

5.3 HEALTH AND NUTRITION STATUS

5.3.1 MUAC

- The percentage of children under the risk of malnutrition within the month of March was at 18.3% compared to that of February which was at 13%.

- The number of the children under the risk malnutrition increased and has remained high. This is attributed to the poor milk production and consumption and also reduced agricultural production in the county.
- Compared to long term averages of 12.28%, the current percentage is normal at this time of the year.

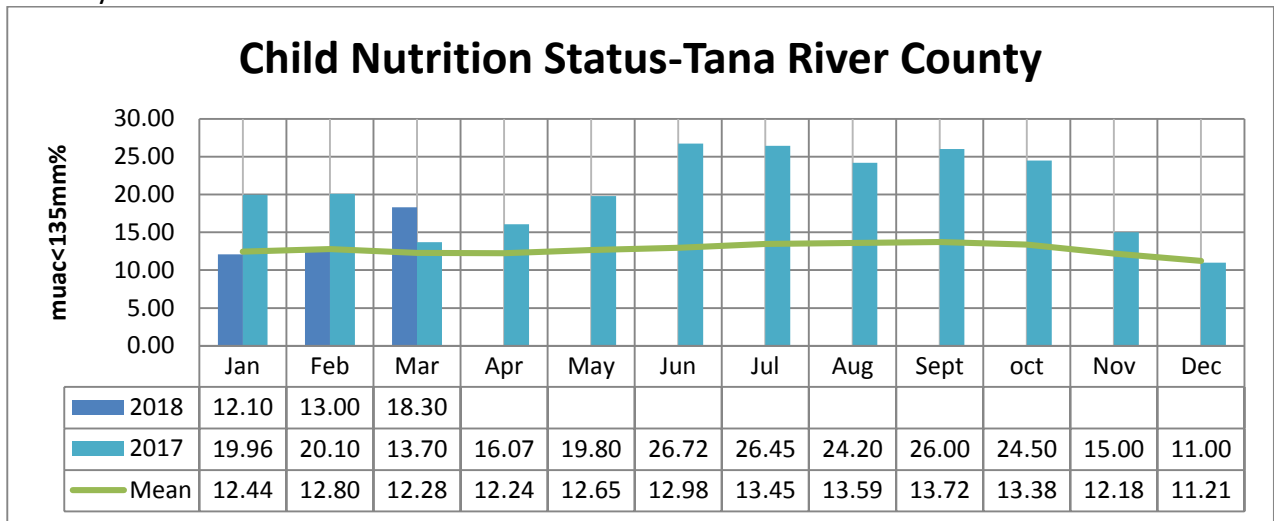
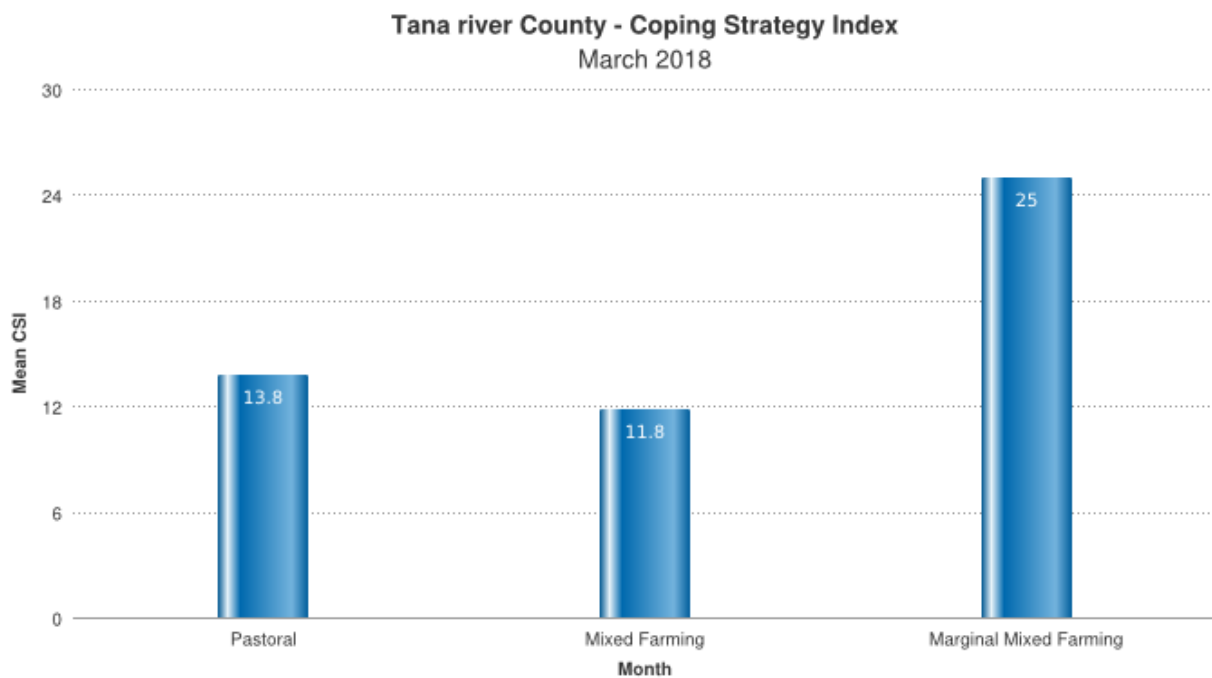


Fig 17n= 2,255 Children

5.3.2 Health

- The most prevalent disease in the general population was Upper Respiratory Tract Infection (URTI) as result of dust and wind. URTI was also the most prevalent disease among the under-fives followed by diseases of the skin, attributed to low sanitation and hygiene practices.
- Up to 80 percent do not treat their drinking water. These are some of the factors, which have led to the increase of diarrheal cases in the county.

5.4 COPING STRATEGIES



- The coping strategy index for the month under review was at 16.9.
- Compared to the month of February where, the CSI for the county was at 19.3, the CSI reduced.

- When compared across the livelihood zones, coping strategy index for Pastoral, mixed and marginal mixed livelihood zones were 13.8, 11.8 and 25 respectively hence households in the Pastoral and marginal mixed livelihood zones employed more coping strategies than those in the mixed livelihood zone.
- The graphs above show the mean copying strategy based on the livelihood zones.
- The copying strategies adopted by the pastoralist included;
 - Credit from petty traders.
 - Relief food
 - Livestock migration and herd splitting
 - While marginally mixed and mixed livelihood zone heavily depend on;
 - Charcoal burning
 - sale of wood product
 - manual labour
- Consumption based coping strategies adopted by all households in the month under review were dependence on less preferred, less expensive food, reduced frequency of consumption and portion size of meals.

6. CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- Water trucking to institutions(schools and health facilities) by GAA/WHH
- Measles vaccination for children under 5 years by KRCS/UNICEF
- Cash transfer programmes to OVC by Catholic Relief services
- Construction of a water pan (Bulto Abarufa dam in Wayu Ward) by NDMA/KRDP
- Repair of water bowser by NDMA

6.2 FOOD AID

- FFA targeting 45,900 beneficiaries in Tana delta and Tana river sub-county, supplementation of feeding program in the entire county targeting PLWC, agricultural market access and linkage project (AMAL), school meal program(SMP) in all 161 primary schools, will also be responding to provide food and non-food items to 700 households in need who are displaced by the floods in the entire county through KRC
- SFP/OTP with FFA/GFD linkage being undertaken by GOK, MOH, IMC UNICEF in all operational health facilities across the County
- RED CROSS-FFA-targeting 21,939 people within Tana River, Tana Delta and Tana North. PRRO/Food for Assets - The New PRRO beneficiary target for the county is 34,320 out of whom 45,900 households will be under FFA while GFD is 4,900.
- Public primary schools are under regular School Meals Program - current primary enrolment stands at 59,419 pupils.
- Food aid in terms of cereals, pulses and oil for the general public targeting 10,000 H/H -by National Government.

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Tensions in Tana North and Tana River sub counties along the Kitui border between communities from the two counties.

- Cholera outbreak was reported in Tana north Sub County. The Outbreak started on 24/1/2018 within Matagala Village spreading to neighbouring villages. Affected areas are Matagala, Dukanotu, and Bilbil and Bura

7.2 Food Security Prognosis

- Recurrent failure of the seasonal rains for the last 3 seasons has negatively affected food security situation in all the livelihood zones in the county.
- With scarce pasture and water and the past poor harvests in the county, households have no food stocks and the prices of essential commodities continues to increase, making it inaccessible to most households.
- The food security situations in all the livelihood zones have worsened.

8. RECOMMENDATIONS

- Enhance relief food distribution in areas affected by drought.-Distribution of NFI to the affected households.
- Enhance support to small scale irrigation activities through provision of water pumps and restocking of vulnerable families to improve food security at household level.
- Peace building and community dialogues.
- Disease surveillance within the areas affected by drought and the continuation of malaria control initiatives to undermine the prevalence rates.
- Destocking, livestock off-take, Feed supplementation and establishment of feed reserves.
- Disease surveillance, vaccination and de-worming
- Conduct integrated outreaches and health promotion activities, Treatment of Cholera cases, water sampling and decontamination of surfaces, Active case finding and provision of food supplements
- Explore sustainable measures to overcome incidences of human/wildlife conflicts which have become a food insecurity threat across the livelihood zones.
- Desilting of water pans, rehabilitation of shallow wells, pipeline extensions, water trucking.
- Construction of shallow wells and boreholes, Construction of pans and major dams along the *lagas*. Action: CSG, Ministry of Water and Other Partners

Continuous peace meetings need to be conducted in order to maintain peaceful coexistence between the farmers and the pastoralists