



National Drought Management Authority
Tana River County
Drought Early Warning Bulletin for March 2016

MARCHEW PHASE

Drought Status: NORMAL



Shughuli za kawaida

Drought Situation & EW Phase Classification

Biophysical Indicators

The biophysical indicators show positive fluctuations within the expected seasonal ranges.

- **Rainfall:** no showers were received in the month of March.
- **The vegetation condition.** The 3-month VCI shows that the County vegetation condition is above normal ranges at **39.9** Bura (Tana North Sub County) recorded the lowest VCI of **31.09**
- Currently the state of water sources is at the range of **2-3** in the county. This is the normal range during this time of the year.

Socio Economic Indicators (Impact Indicators)

Production indicators

- The crop wilted on the farm due to extreme temperatures
- There is no unusual livestock migration patterns noted in the county.
- No livestock death was reported.
- Livestock body condition is fair in all livelihood zones.
- Milk production at household level was below the normal ranges at **43.05 litres**

Access indicators

- Milk consumption was below normal at 31.8 litres
- The return distance were shorter than normal

Utilization indicators

The malnutrition status of children under the age of 5 years who are at risk remained Stable at **4.85 %** in March compared to the month of February which stood at **5%**. This could be attributed to sufficient milk for consumption at the household level and the ongoing relief interventions.

Early Warning (EW) Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Pastoral	Alert	worsening
Marginal Mixed Farming	Normal	worsening
Mixed Farming	Normal	worsening

Biophysical Indicators	Value	Normal ranges
rainfall (% of Normal)	0.00	82.8
VCI-3month	39.9	>35
State of water sources	2-3	5

Production indicators	Value	Normal ranges
Livestock Migration Pattern	Normal	Normal
Livestock Body Conditions	Fair	Good
Milk production	43.05	>61.3 Litres
Livestock deaths (from drought)	No death	No death
Crops area planted (%)	N/A	67% of LTA

Access Indicators	Value	Normal ranges(LTA)
Terms of Trade (ToT)	93	65
Milk Consumption	31.8	>39.9 Litres
Return distance to water sources	2.6	0.0-5.0

Utilization indicators	Value	Normal ranges
MUAC	4.85%	>12(%)
Coping Strategy Index (CSI)	1.95	1.50 – 1.02

- Short rains harvests
- Short dry spell
- Reduced milk yields
- Increased HH Food Stocks
- Land preparation

- Planting/Weeding
- Long rains
- High Calving Rate
- Milk Yields Increase

- Long rains harvests
- A long dry spell
- Land preparation
- Increased HH Food Stocks
- Kidding (Sept)

- Short rains
- Planting/weeding

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

1. CLIMATIC CONDITIONS

1.1 Rainfall performance

Amount of rainfall

The County received an average rainfall of 0.00mm within the month of March. In comparison to the long term rainfall average of 12.00mm, the current rainfall situation reveals a below normal trend during this period of the year.

Temporal distribution

The county is currently experiencing short dry spell as per the seasonal calendar. No Showers experienced within Tana North, while light negligible showers were experienced in Tana River and Tana Delta Sub-Counties within the fourth week of March.

Spatial distribution

Rainfall situation data

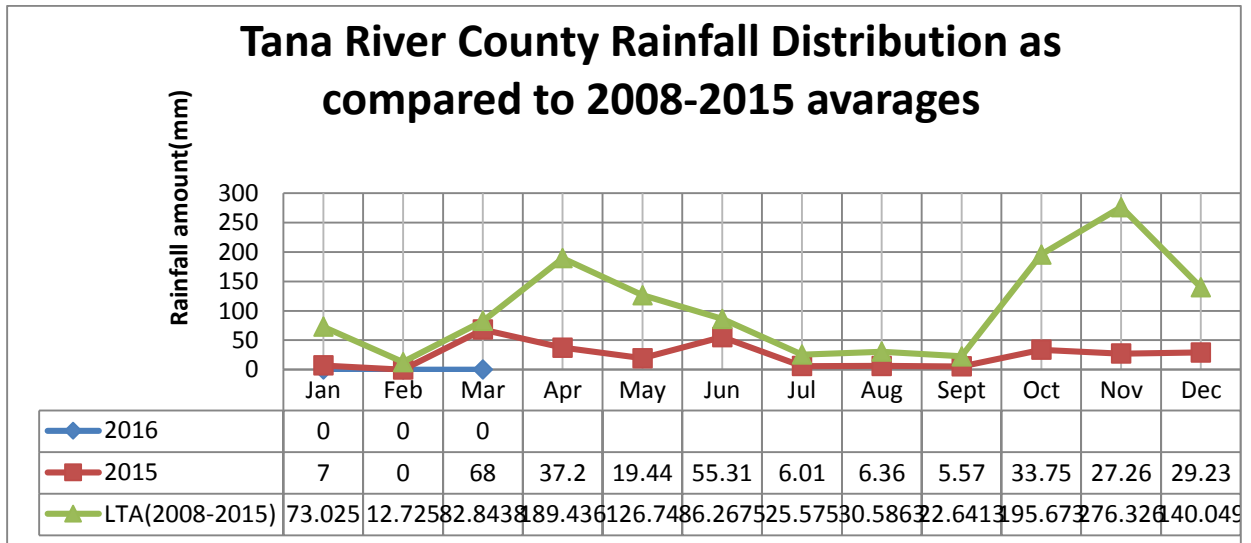


Fig. 1 shows an example of rainfall analysis: March recorded 0.00mm of rainfall against the long term rainfall average for the period amounting to 83 mm.

1.2 AGRICULTURAL DROUGHT

The vegetation condition is generally good in the county, however due to extreme day temperatures and evaporation rates, crops have wilted on the farms due to water stress.

The Vegetation Condition Index has significantly reduced in the County recording VCI of 39.9 in March as compared to the month of February which stood at 50.88. However the current VCI of 39.9 indicates that the county is experiencing above normal vegetation greenness.

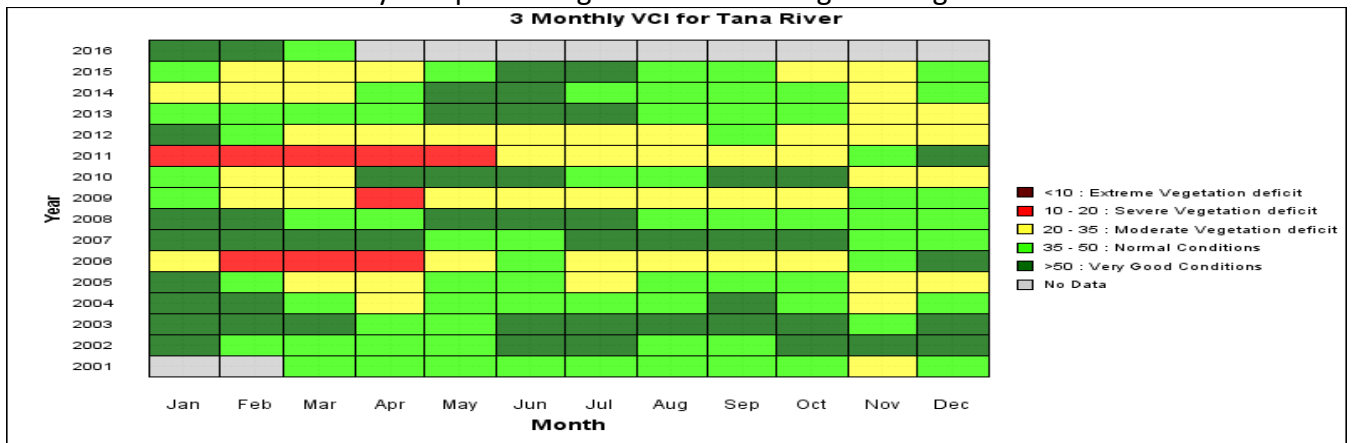
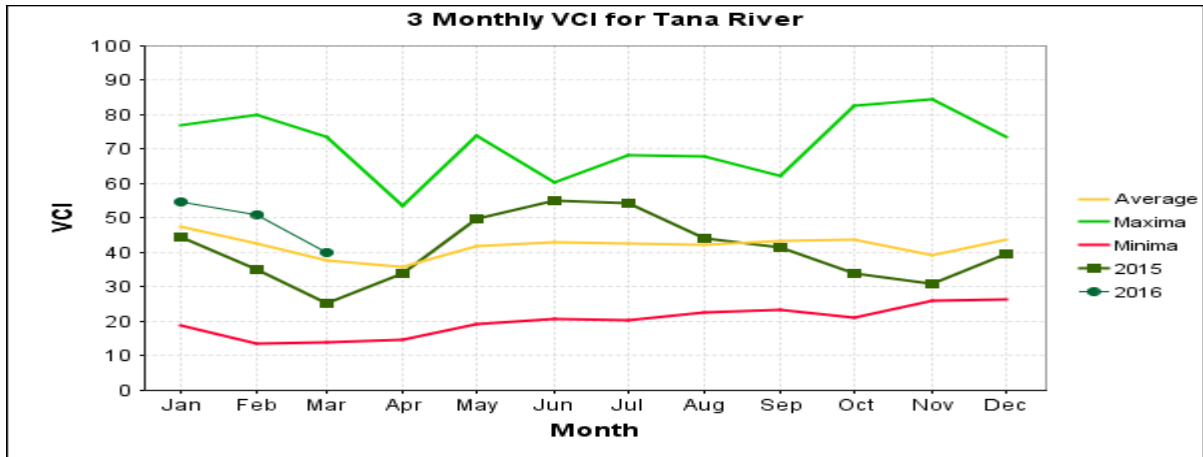


Fig. 2 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

- The graph below show the 3-month VCI trend for March and compares it to the 2015 values, the long term average, the maxima and minima. The vegetation condition in March continues to deteriorate and is just above the long term average.



Sub county VCI

The vegetation greenness for the County and all the Sub-counties is good and within normal ranges in March except for Bura that is experiencing moderate vegetation deficit.

The vegetation conditions are generally on a reducing trend in all the three Sub counties as outlined Below.

Bura

The 3-month VCI for Bura in March stands at 31.09, compared to the month of February where the VCI stood at 40.63. The Vegetation biomass has reduced in March. The VCI of 31.09 indicates moderate vegetation deficit within Bura and Tana North Sub County as a whole.

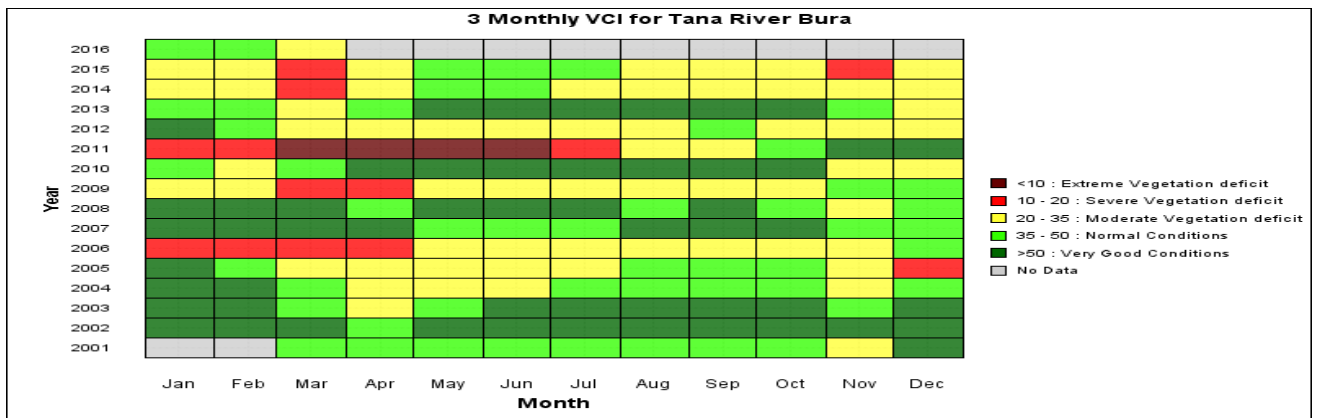


Fig. 2 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

Galole

The Vegetation cover for Galole is currently at 50.95 compared to last month's VCI of 62.48. The VCI reduced in the March. The VCI of 50.95 indicates above normal vegetation condition within Galole sub-county.

Garsen

The VCI for Garsen is currently at 40.46 compared to last month's VCI of 52.31. The VCI has reduced in the month of March. However this VCI of 40.46 indicates above normal vegetation condition within the sub county.

1.3 Field Observations (Pasture and Browse Conditions)

Quality

The pasture and browse quality is currently fair in all the livelihood zones. However there is indication of vegetation depletion around water sources due to livestock concentration. Pasture and browse is more abundant and lush as you move closer to the River Tana.

Quantity

The quantity of Pasture and browse within the County is currently normal at this time of the year. The quantity of pasture and browse within the County remains fair in march 2016. The overall vegetation conditions in the county are reflecting fair conditions and can sustain the livestock for the next 1-2 month if the present conditions prevail.

1.4 WATER RESOURCE

1.4.1. Sources

- Most of the communities within the Marginal mixed and the Mixed farming livelihood zones depend on water pans and natural rivers equally for domestic and livestock water consumption. Communities within the pastoral livelihood depend on pans and dams for both domestic and livestock water use. The water situation is rated fair though deteriorating as the levels in some of water sources have begun declining while the catchment pools are drying up.

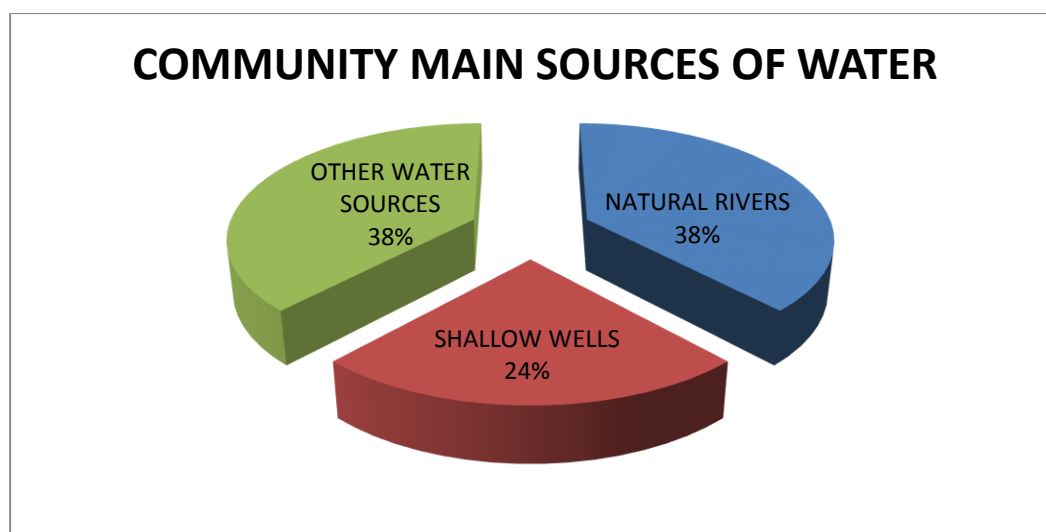


Fig 3.the fig 6 above shows the different water sources in the county by the end of March 2016. The main community water sources are natural river, shallow wells and other sources which include; pans and dams, springs, traditional wells, boreholes and natural ponds.

1.4.2. Household access to Water

The average return distance from the households to the main water sources in the month of March 2016 was 2.6kilometres. In comparison to the month of February2016 where distances covered from the households to the main water sources was 2.73Kilometres, the distances have remained stable by the end of March. This is attributed to the fact thatlevels of the main water sources are gradually declining while the catchment pools are drying up. Households within Mixed livelihood zones takes an average of 1.7hrs to water points compared to households within Pastoral livelihood zones which takes 2.8hrs to water points. The current distances are normal in this season of the year.

1.4.3. Livestock access to water

The average distances covered by livestock from the grazing areas to main water sources in the month of March 2016 were 5.8 kilometres. In comparison to the month of February 2016 where the livestock covered 5.45 kilometres, the distances covered by the livestock in the month of March slightly increased. The increase in the distance covered by livestock from the grazing areas to main water sources is attributed to the drying up and also reduction of water volumes in the nearest water reservoirs. However there is no water stress in all the county livelihood zones; the distances remain below the mean at this time of the year.

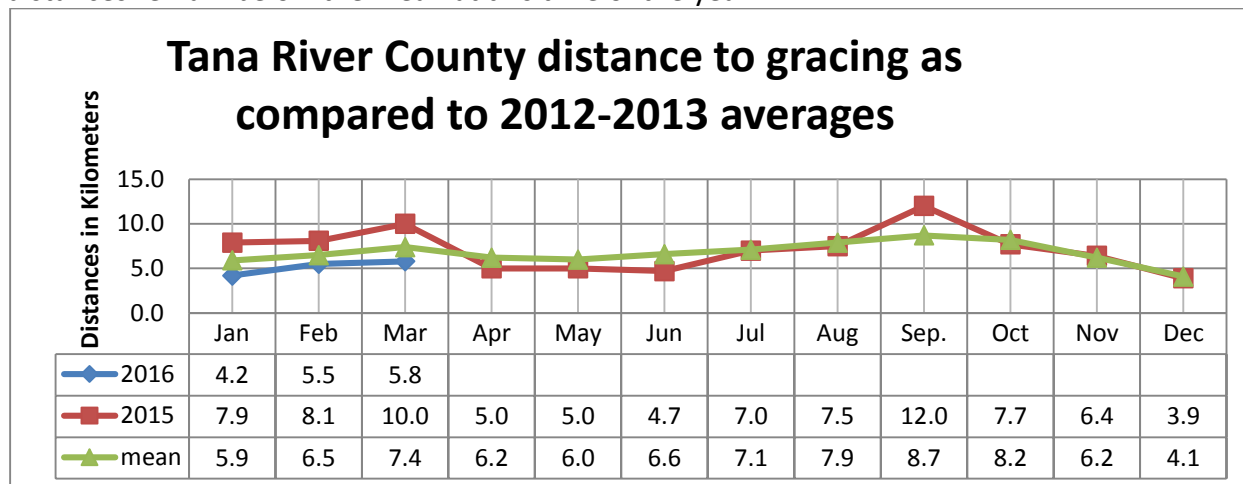


Fig 4 n=450 Households

SOCIO-ECONOMIC INDICATORS

2.0 PRODUCTION INDICATORS

2.1 Livestock production

2.1.1 Livestock Ownership

2.1.2 Livestock Migration Patterns

There was no abnormal livestock migration reported in the month of March. This is attributed to the fact that there is enough pasture and water for livestock. However there is a negligible (normal) migration of livestock towards the River Tana. This is a normal pattern this season of the year.

2.1.3 Livestock Body Condition

Livestock body conditions are generally good with a score of 4 within the mixed livelihood zones whereas Livestock within Marginal and Pastoral livelihood zones ranges at 3-4. This is attributed to the longer distances covered by livestock from the grazing area to the water source. Livestock in pastoral livelihood cover longer distance to the water sources.

BODY CONDITIONS	SCORE	WARNING STAGE
Emaciated, little muscle left	1	Emergency
Very thin no fat, bones visible	2	
Thin fore ribs visible	3	Alert Worsening/Alarm
Borderline fore-ribs not visible. 12th & 13th ribs visible	4	Alert
Moderate. neither fat nor thin	5	Normal/Alert
Good smooth appearance	6	
Very Good Smooth with fat over back and tail head	7	Normal
Fat, Blocky. Bone over back not visible	8	
Very Fat Tail buried and in fat	9	

Fig 5

2.1.4 Livestock Diseases

No outstanding disease outbreaks reported, however CCPP, CBPP outbreak reported in Tana River and Tana Delta. Trypanosomiasis and worms remained endemic across all the livelihood zones. The areas affected most are Garsen, Assa, Nanighi and Kone.

2.1.5 Milk Production

On average the milk produced per household within Tana River County was 43.05 litres in the month of March compared to 43.50 litres of the month of February. The milk production has remained stable as compared to that of the last month. In comparison to the long term mean, the current average in milk production is below normal average of 61 litres during this time of the year. This is attributed to the ongoing short dry spell.

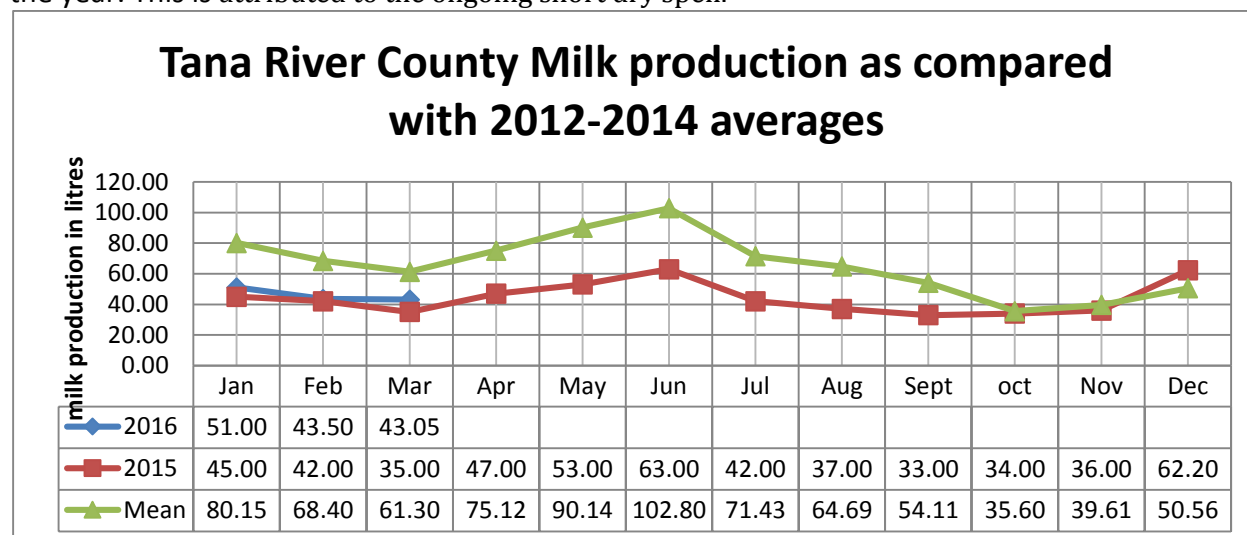


Fig 6n=450 Households

2.1.6 Livestock deaths

No major livestock deaths reported in the month of March 2016.

2.2 Rain fed Crop Production

2.2.1 Date of Planting and Area planted

2.2.2 Stage and Condition of food Crops

Farms in Bura and Hola irrigation schemes are at cob forming stage. In most parts of the delta, most crops under rain fed have wilted on farm due to low soil moisture as a result of low rainfall intensity.

2.2.3 Harvest

Water melon, Maize, and green grams harvests have been reported in Tana River and Tana Delta Sub-Counties. No good harvests were reported in mixed and marginal mixed zones.

ACCESS INDICATORS

3.1 Livestock Prices

3.1.1 Livestock Terms of Trade

3.1.2 Cattle Prices

The average price of a mature 3 year old bull in the month of March 2016 was Kshs.23, 917. In comparison to the month of February 2016, where the price of a 3 year old mature bull was Kshs.22, 717, the prices in March recorded an increase of 5.28%. The increase in the cattle prices is attributed to market dynamics. The current cattle price of Kshs.23, 917 is above normal at this period of the year as shown on the graph below.

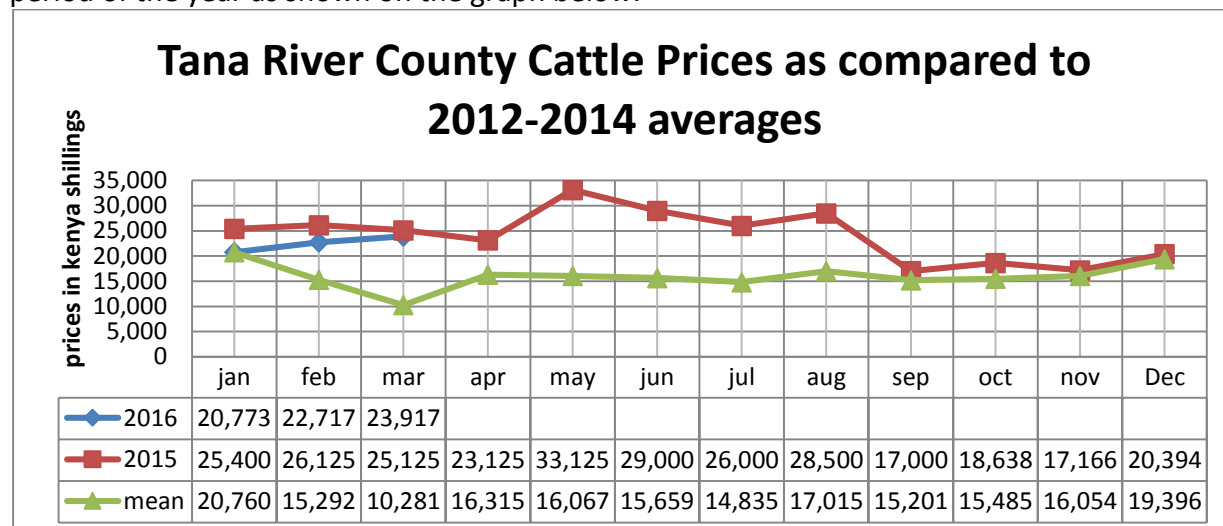


Fig 7n=450 Households

3.1.3 .Small Ruminants Prices

3.1.3.1. Goat Prices

The average price of a medium size goat in the month of March 2016 was Kshs.3, 558. In comparison to the month of February 2016 where the average price of a medium size goat was Ksh.3, 856. The prices in March have slightly reduced. The price variability is attributed to the market dynamics. The current goat price of Kshs.3, 558 is above average price at this period of the year as shown on the graph below of average goat prices

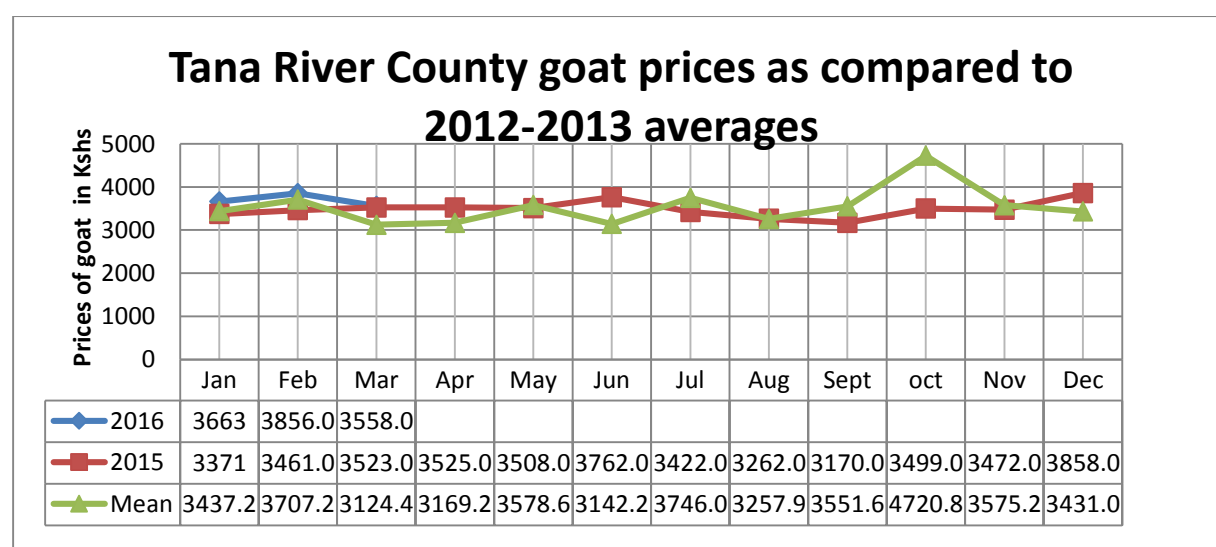


Fig 8n=450 Households

3.1.4 Sheep Prices

The average price of a sheep in the month of March was Kshs.2, 667. The prices slightly increased in March as compared to the month of February which was at Ksh.2, 260. Compared to the mean of 2012-2014, the current price is normal at this time of the year.

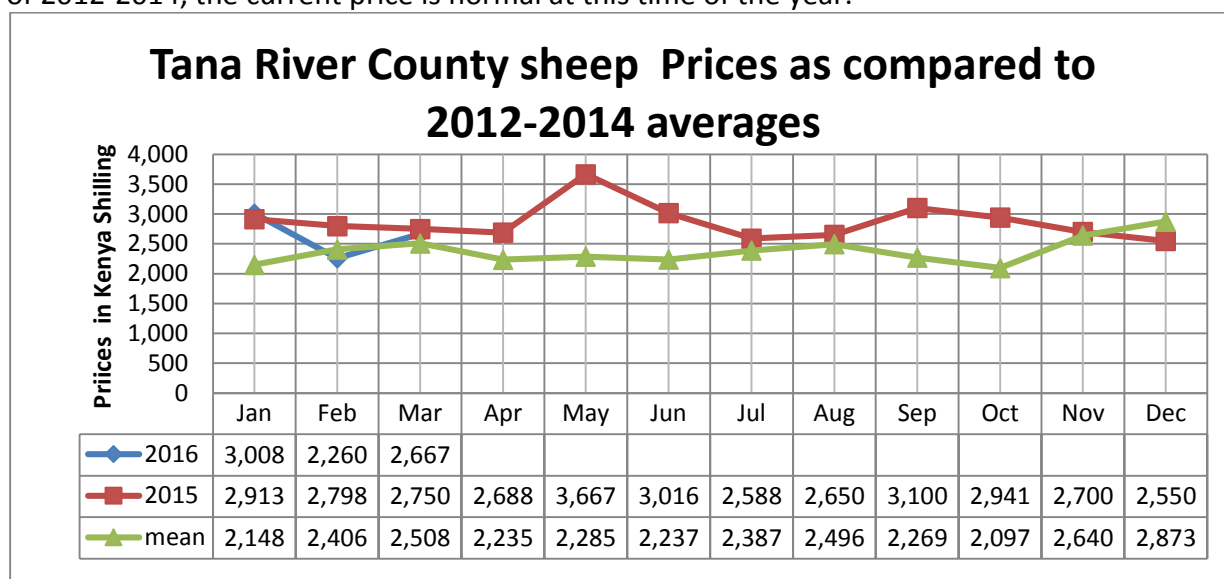


Fig 9n=450 Households

3.1.5 Milk Prices

Currently milk is retailing at an average of Kshs.50.63 per litre. The prices remained stable in March as compared to the month of February which recorded a price of Ksh.51.88 per litre. This is attributed to market dynamics.

3.1.6 Terms of Trade

Currently the terms of trade are 92.78Kg of maize for a goat. Compared to the month of February which recorded an average of 98, the terms of trade have decreased. The current terms of trade are above long term mean of 62Kg for a goat.

Tana River County January TOT as compared to 2012-2013 averages

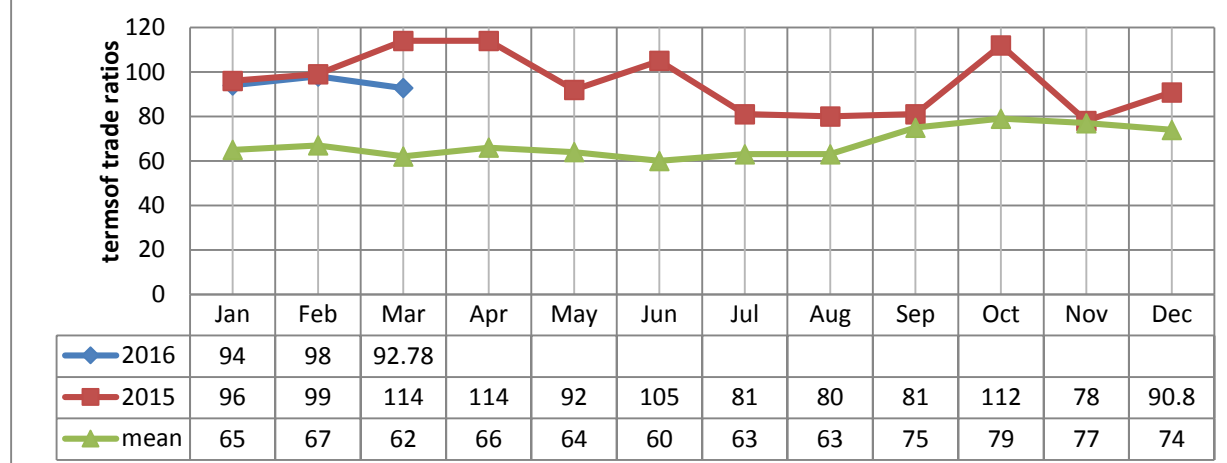


Fig 10n=450 Households

3.2 Price of cereals and other food products

3.2.1 Maize

The average maize price per kilogram for the month of March was Kshs.38.35. In comparison to the month of February, where the average price per kilogram of maize was Kshs.39.38, the prices have remained stable by the end of March. In comparison to the average maize price at this time of the year, the current maize prices are above long term averages and this is attributed to market dynamics.

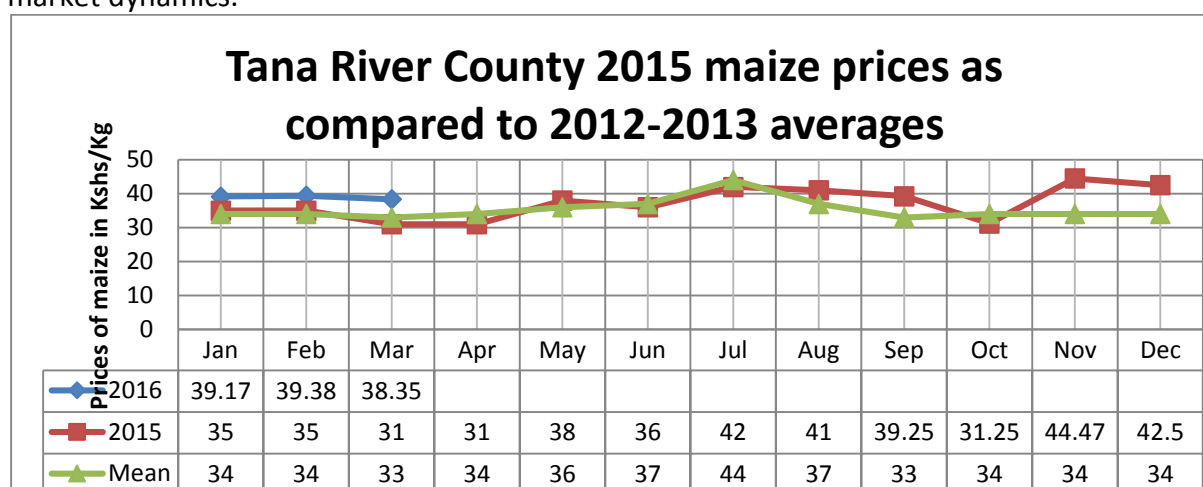


Fig 11 n=450 Households

3.3 Access to Food and Water

3.3.1 Food Consumption score

3.3.2 Availability of milk for household consumption

On average the milk consumed per household was 31.8 litres in the month of March. In comparison to the month of February, where the average milk consumed per household was 34 litres, the milk consumption level has decreased within the month of March. This is attributed to the fact that the amounts of milk produced is constantly reducing and in addition it is sold for cash in order to provide other needs for the households. Meanwhile, water and pasture availability have also reduced and the livestock are far away from the households since the herders tend to migrate to favourable areas where they can easily access water and pasture. In

comparison to a normal year, where on average, milk consumed per household is 39.7 litres; the current milk consumption rate per household is below normal at this time of the year.

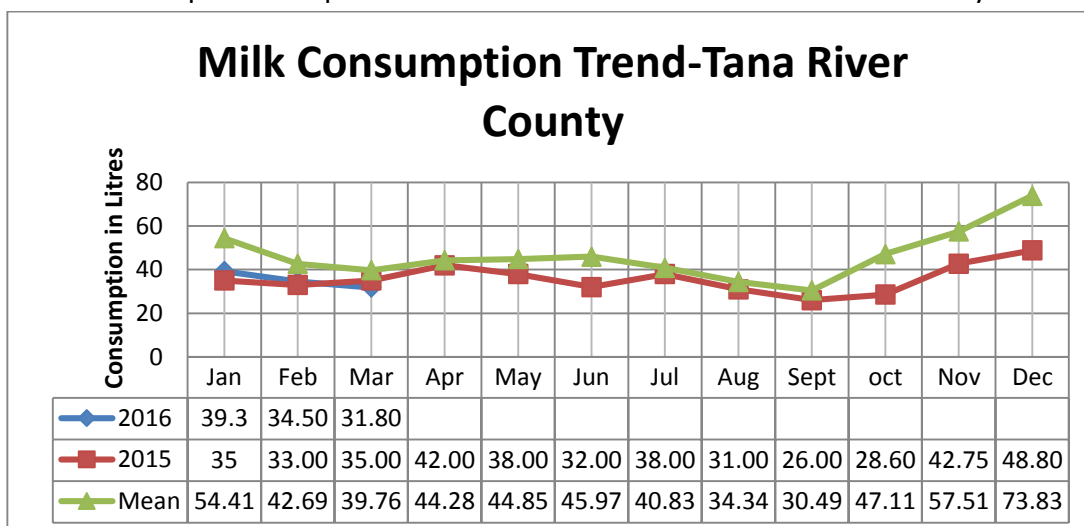


Fig 11 *n=450 Households*

3.3.3 Availability of water for household consumption

Most of the communities within the Marginal mixed livelihood zones and the Mixed farming livelihood zones depend on natural rivers for both domestic and livestock consumption. Communities within the pastoral livelihood depend on pans and dams for both domestic and livestock consumption. The average distance from the households to the main water sources in March was 2.6kilometres. In comparison to the month of March where distances covered from the households to the main water sources was 2.73Kilometres, the distances have remained constant. This is attributed to the gradual decline of water levels and drying up of the reservoirs.

UTILISATION INDICATORS

4.1 Health and Nutrition Status

4.1.1 MUAC

The percentage of children under the risk of malnutrition in the County within the month of March was4.85% In comparison to the month of February where the percentage of children at risk of malnutrition was 5%.The nutritional status for children under the age of 5 years remained stable within the month of March. This is attributed to the availability of enough milk quantity for consumption. Compared to long term averages, the current percentage is below normal at this time of the year.

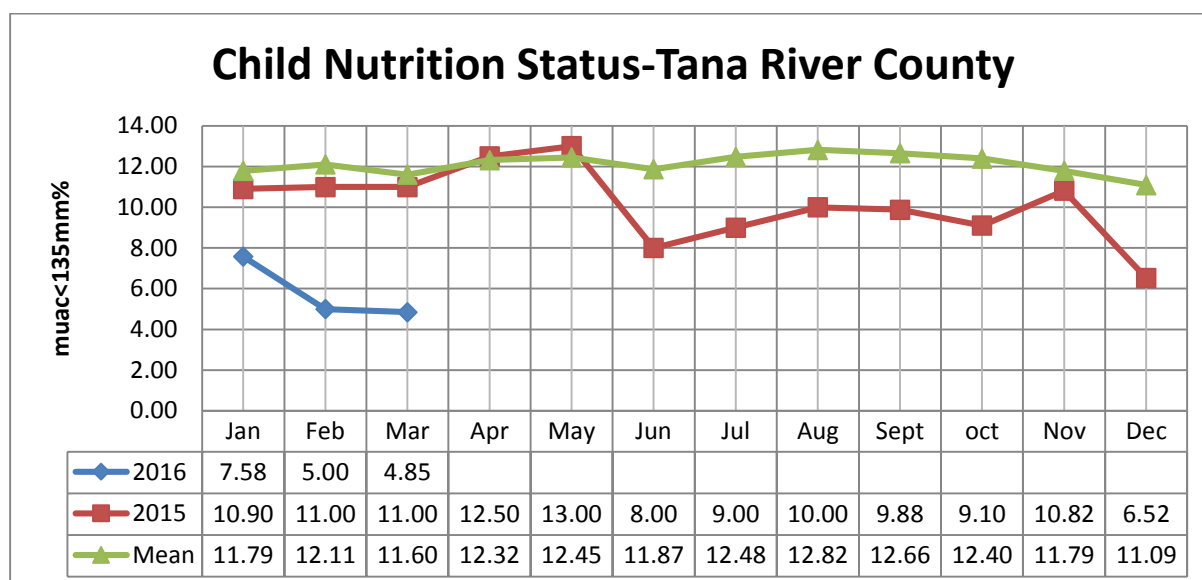


Fig 12n= 2,255 Children

Health

No Major outstanding human disease reported apart from Malaria reported in most areas. There has been an upsurge of malaria and pneumonia related ailments which are also leading in morbidity rates.

4.2 Coping Strategy

- Provision of relief food and supplementary feeding for the vulnerable groups of the communities in the divisions most affected remained the top most coping strategy.
- Reduced Food ration (for approximately 70% of the population) was being practiced across most households in all the zones.
- Majority of households resorted to food acquisition by credit and to a larger extent aid from relatives and friends

Current Interventions and Recommendations

5.1 Non-food interventions

- Over 500000 heads of cattle were vaccinated against RVF, FMD, and CBPP. Shoats were also vaccinated against CCP. By NDMA /Veterinary department
- Construction of water tanks, Construction of energy efficient stoves, Construction of classroom, Supply of desks, Sanitary Pads for girls, Installation of solar panels in schools, Establish and support environmental clubs at schools, Construction of latrines and hand washing facilities implemented but by welthungerhilfe/ GermanAgroAction and funded by DFID.
- Construction of Shallow wells in Garsen division, Construction of Schools, Construction of fodder Warehouse by UNDP, Green house projects by UNDP, Nutritional Projects by German Agro Action, Supply of Energy saving Jikos by UNDP, Supply of Grass seeds by UNDP, Restocking of goats to farmers by UNDP, Supply of Motorbikes to 6 CBOs in Garsen-UNDP.
- Establishment of small scale irrigation projects and group demonstration farms by Water Irrigation and drainage, MOA, UNDP and other partners like German Agro-Action.
- Water harvesting, dry land farming, small scale irrigation and range rehabilitation initiatives through Food for Assets initiatives, NALEP, Kenya Dry Land Development Program (KDLDLP), MOLD, MDNK&OAL, and NDMA.

- Mother to mother support groups programme and baby friendly hospital initiatives by MOH, UNICEF, IMC. Youth initiative project by SAMARITAN PURSE
- Security surveillance, peace building, conflict resolution and management initiatives by the OOP, KRC, UNDP Peace Committees.
- Vaccination against FMD and CC by County Government
- Integrated outreach activities by MOH, IMC and UNICEF.
- Coordination of ongoing activities by NDMA.
- Supply of new Ambulances to three sub counties health facilities-COUNTY GOVERNMENT

5.2. Food Aid

- WFP distributed 650mts of cereals, pulses and vegetable oil to 41,000 beneficiaries who are displaced by the Elnino floods.
- 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. FFA activities include irrigation for crop production, range reseeding and rehabilitation, tree planting and construction of water pans.
- Some public primary schools and an equivalent number of ECD centres 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 56,427 vulnerable people -by GOK.

Emerging Issues

6.1 Insecurity/Conflict/Human Displacement

Tensions among locals of Tana Delta have been suppressed by presence of security officers. This has been triggered by past attacks in Lamu, Mpeketoni and Garissa. These have resulted to outward human migrations. Security has been beefed up since then in the county to curb such incidences. Tension is still high in the County over terror attacks.

Recent conflicts that led to human displacements reported among two communities within Tana Delta due to scarce resources.

6.2 Migration

With the onset of the short rains, migration of livestock away from Tana Delta was reported. The fall back in In-migration of livestock has been reported in Bangale towards Ukambani and Garissa via Boji Bridge.

6.3 Food Security Prognosis

The previous depressed long rains has negatively affected food security situation in all the livelihood zones. With scarce pasture and water and recent meagre long rains harvests reported, households have less food stocks and the prices of essential commodities have increased, making it accessible to fewer households.

The food security situation in the mixed farming remained stable but threatened by in-migration while marginal mixed and pastoral livelihood zones have worsened. This is expected to continue with the onset of the dry spell

7.0. Recommendations for action

Recommendations to County Steering Group/ Kenya Food Security Meeting.

- Enhance food distribution in areas affected by Elnino floods.-Distribution of Nfi's to the affected households since no intervention has been done in most of the camps, WASH program, Provision of clean water in the camps, hygiene awareness campaign and outreach programs, provision of portable toilets-Action: County Government: CSG/Partners
- Explore sustainable measures to overcome incidences of human/wildlife conflicts which have become a food insecurity threat across the livelihood zones.
Action: KWS/CSG/Partners/Communities.
- Disease surveillance within the areas affected by drought and the continuation of malaria control initiatives to undermine the prevalence rates.
Action: MOH/CSG/Partners/Communities.
- Enhance support to small scale irrigation activities through provision of water pumps and restocking of vulnerable families to improve food security at household level.
Action: DAO/MDNK&OAL/CSG/Partners/Community
- Continue with malaria control initiatives to undermine the prevalence rates.
Action: MOH/CSG/Partners/Communities.
- Enhance access to water resource during the drought period for both domestic and household use
Action: GOK-County Commissioner/Ministry of Water.
- Construction of shallow wells and boreholes, Construction of pans and major dams along the laghas. Action: CSG, Ministry of Water and Other Partners