

# National Drought Management Authority

## TANA RIVER COUNTY

### DROUGHT EARLY WARNING BULLETIN FOR MAY 2018



A Vision 2030 Flagship Project



#### MAY EW PHASE

**Drought Status: ALERT**



**Maandalizi ya mapema**

#### Drought Situation & EW Phase Classification

##### Biophysical Indicator

The County is currently experiencing alert and improving conditions according to EWS classification.

##### Rainfall:

- The county received an above average rainfall amount throughout month at 12.1mm. However, the county continued to suffer from floods due to rains from the highlands and spill-over from hydro-electric dams.
- The vegetation condition.** The 3-month VCI indicates that the County is currently experiencing an above normal vegetation greenness at 83.98. The values increased substantially when compared to the previous month where the VCI was at 56.3. All the Sub Counties are currently experiencing above normal vegetation greenness.

##### Socio Economic Indicators (Impact Indicators)

###### Production indicators

- Most livestock are currently back to the hinterlands of the county and are closer to the households after a very long time away from home in search of pasture.
- The browse and pasture condition in the county is currently very good.
- The livestock body condition for the grazers and browsers are good.
- Milk production at household level remained stable at 5.5 litres compared to that of the last month where the amount was at 5.8 litres. This is because most livestock are dry following the long dry spell.

###### Access indicators

- The average milk consumption in the county also increased to 3.4 litres compared to the last month which was at 3 litre. Milk consumption remains below the normal.
- The average livestock distance to the water sources remained below the normal at 4.5 km in this month. When compared to the last month where it was at 5 km. The return distance slightly reduced.

###### Utilization indicators

The percentage of children under the risk of malnutrition in this month was at 13.5% compared to that of May which was at 15.2%. The improved nutritional status is attributed to increased milk production and consumption and also the ongoing interventions

#### Early Warning (EW) Phase Classification

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

Biophysical Indicators	Value	Normal ranges
rainfall amount	12.1 mm	>10.4mm
3-Month VCI	83.98	>35
State of water sources	2	5

Production indicators	Value	Normal ranges
Livestock Migration Pattern	Normal	Normal
Livestock Body Conditions	Good	Good
Milk production	5.5 litres	>58 Litres
Livestock deaths (from drought)	No death reported	No death
Crops area planted (%)	Nil	67%of LTA

Access Indicators	Value	Normal ranges(LTA)
Terms of Trade (ToT)	84	81
Milk Consumption	3 litres	>37 Litres
Average return distance to the water sources	4.5 km	7.4 km

Utilization indicators	Value	Normal ranges
MUAC(% at mid-risk of malnutrition)	13.5%	<12(%)

<ul style="list-style-type: none"> <li>Short rains harvests</li> <li>Short dry spell</li> <li>Reduced milk yields</li> <li>Increased HH Food Stocks</li> <li>Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>Planting/Weeding</li> <li>Long rains</li> <li>High Calving Rate</li> <li>Milk Yields Increase</li> </ul>	<ul style="list-style-type: none"> <li>Long rains harvests</li> <li>A long dry spell</li> <li>Land preparation</li> <li>Increased HH Food Stocks</li> <li>Kidding (Sept)</li> </ul>	<ul style="list-style-type: none"> <li>Short rains</li> <li>Planting/weeding</li> </ul>
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

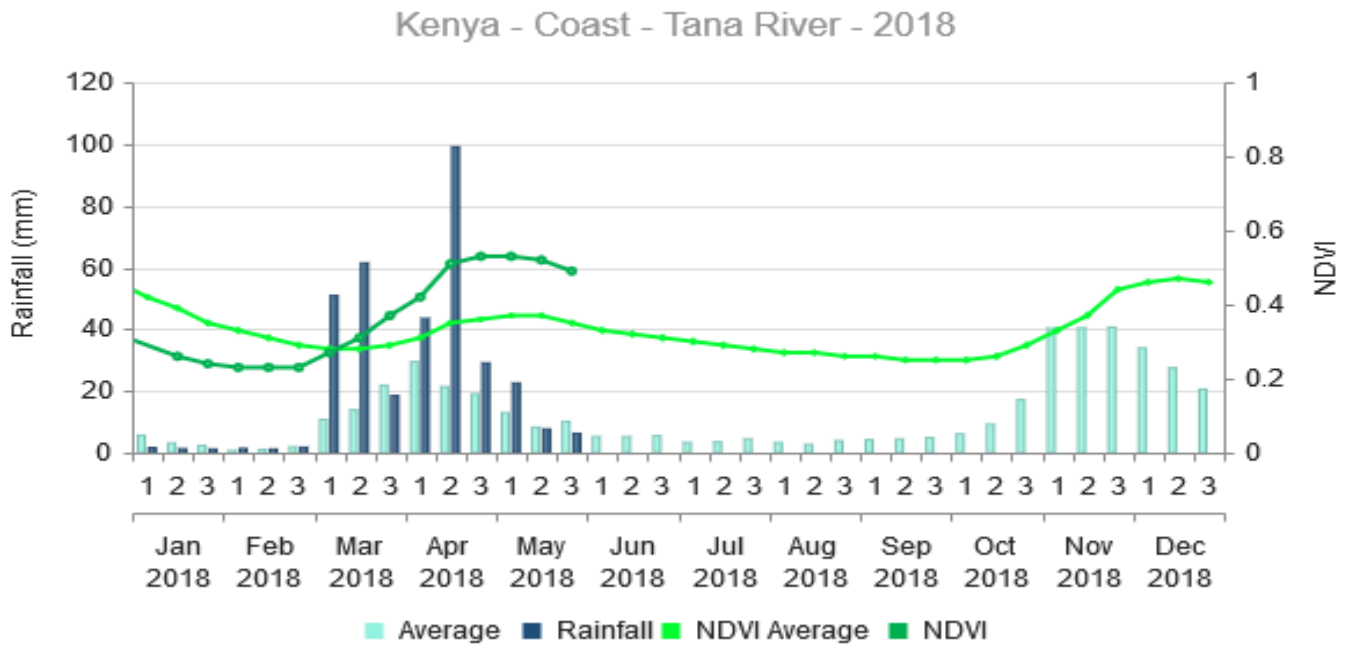


Fig. 1. The graph above shows the rainfall amounts received during the month of April and also the NDVI trend comparing both to the long term averages.

### 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Reduced rainfall amount was received in this month. The county received an average rainfall of 12.1 mm in this month, slightly above the long term average of 10.4mm.
- According to Kenya metrological department, the cessation of the March-May 2018 long-rains was predicted to be during 3<sup>rd</sup> week of May. However, the county received an above normal average during the first dekad of this month. The county received 22.5mm, 7.6mm and 6.2mm during the first, second and third dekad respectively. The county received below normal amounts during the second and third dekad of this month.
- The graph above shows the rainfall amounts received in may 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 an above normal vegetation greenness recording a VCI of 83.98 by the end this month. The VCI improved when compared to that of April which stood at 56.3.
- The improvement in the VCI is attributed to the good rainfall amount received in the county during the MAM season. In comparison to same time in the previous years, the vegetation conditions are above the normal average.
- The matrix below show the vegetation condition in the county;

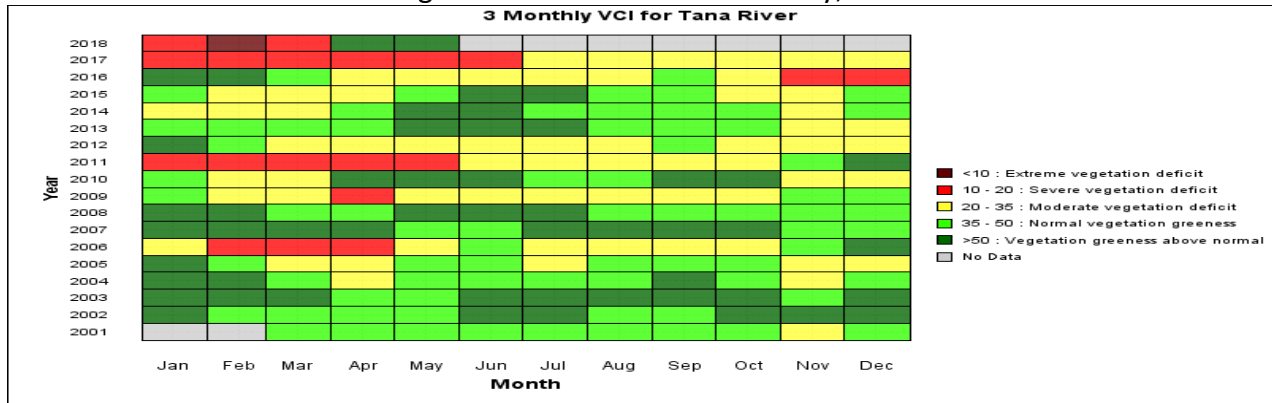


Fig. 2 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

- 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 is currently above the maxima when compared to the same time of the previous years.

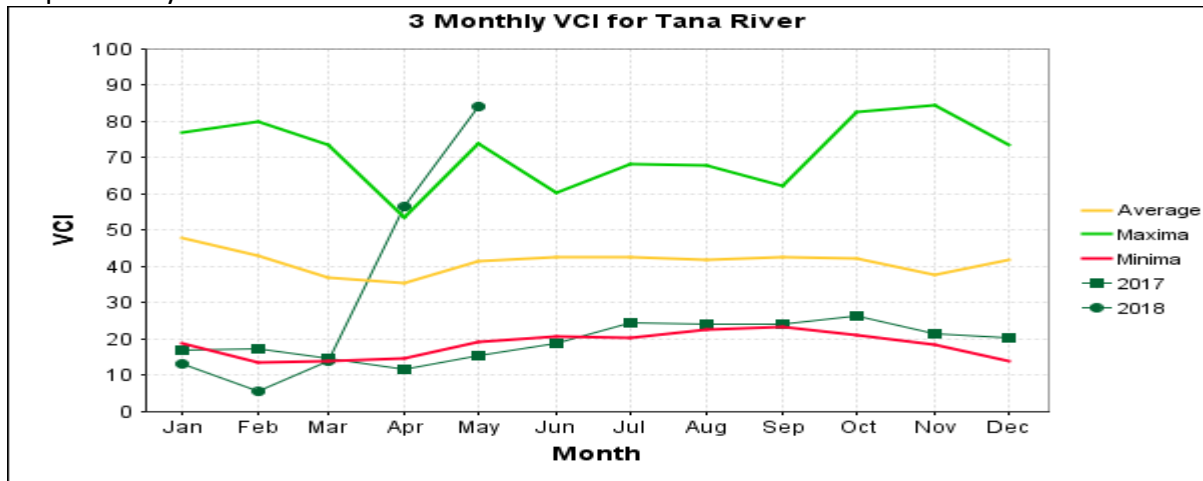


Fig. 3 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

#### Sub county VCI

All the sub counties in Tana River County; Bura, Galole and Garsen sub counties are currently experiencing an above normal vegetation greenness. There was a significant improvement in vegetation greenness in all the sub counties in this month when compared to that of April.

### Bura

The 3-month Vegetation cover for Bura is currently at 88.78 compared to last month's VCI of 50.97, the vegetation conditions have greatly improved and is currently above the normal.

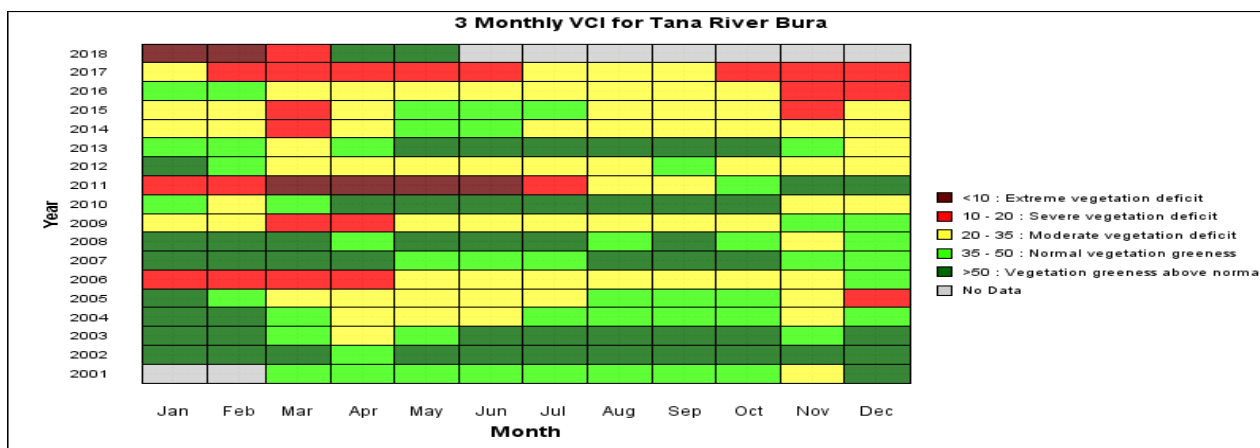


Fig. 4 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

### Galole

The 3-month Vegetation cover for Galole is currently at 83.83 compared to last month's VCI of 52.12. As shown in the matrix below, an above normal vegetation greenness is also being experienced in this sub county.

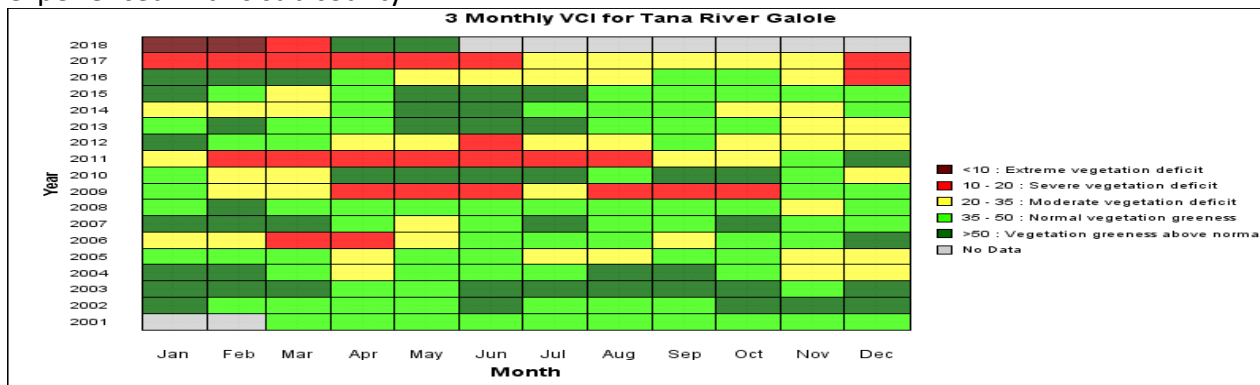


Fig. 5 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

### Garsen

The 3-Month VCI for Garsen is currently at 80 compared to last month's VCI of 63.43. The VCI in this sub county also increased in this month. The VCI of 80 indicates that the sub-county is experiencing an above normal vegetation greenness in this month.

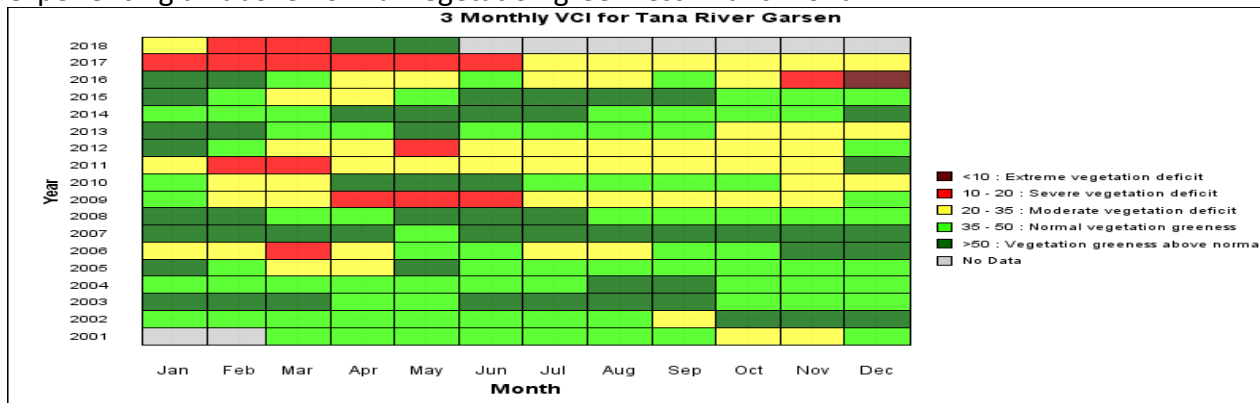


Fig. 6 Source: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Surveying, Remote Sensing and Land Information

### 2.1.2 Pasture

- The pasture quality and quantity has improved and is good in the county.
- This is due to the good rainfall amounts that was received all over the county during the the last month.
- The pasture quality and quantity is currently above 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 is good and can sustain the livestock for more than 2 month.

## 2.2 WATER RESOURCE

### 2.2.1 Sources

- The communities within the pastoral livelihood zone depend on seasonal rivers bed, 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 of March April and may has Recharged all the major water sources and all the livelihood zones are no longer facing water stress.

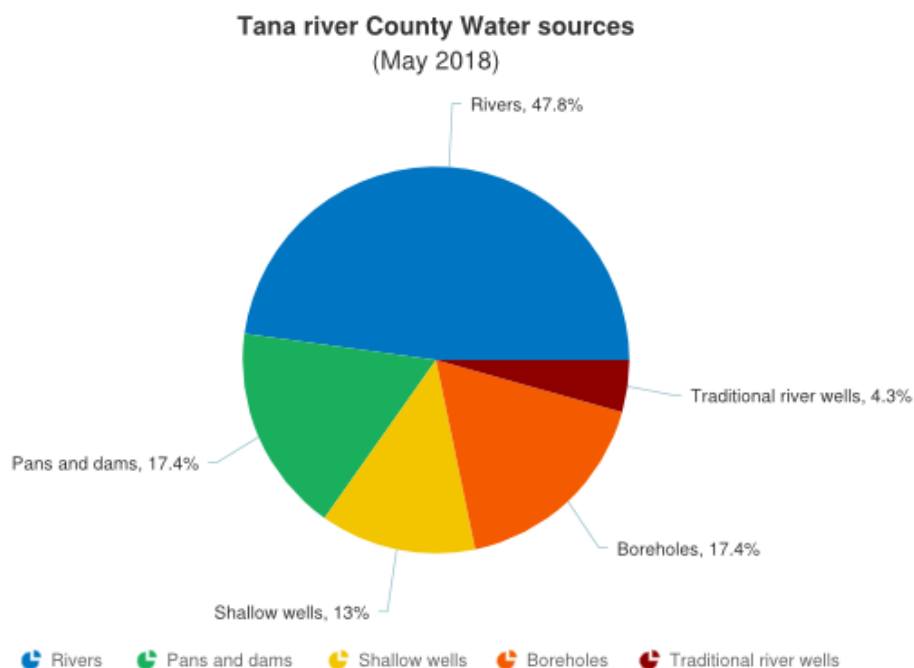
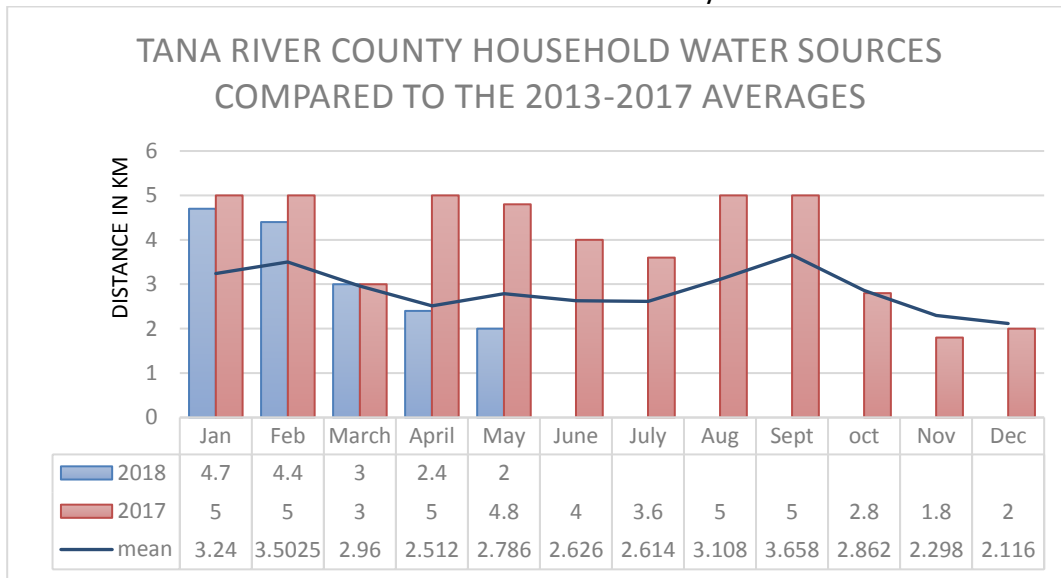


Fig 7. This pie chart shows the different water sources in the county for this month.

### 2.2.2 Household access and Utilization

- The average return distance from the households to the main water sources in May was 2 kilometres.
- In comparison to April where distance covered from the households to the main water sources was 2.4 Kilometres. The distances remained stable 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 MAM rainfall received during the season.
- The households within mixed livelihood zones take approximately 45 minutes 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 May was 4.7 kilometres. .
- In comparison to April where the livestock covered 5 kilometres, the distances covered by the livestock slightly 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.

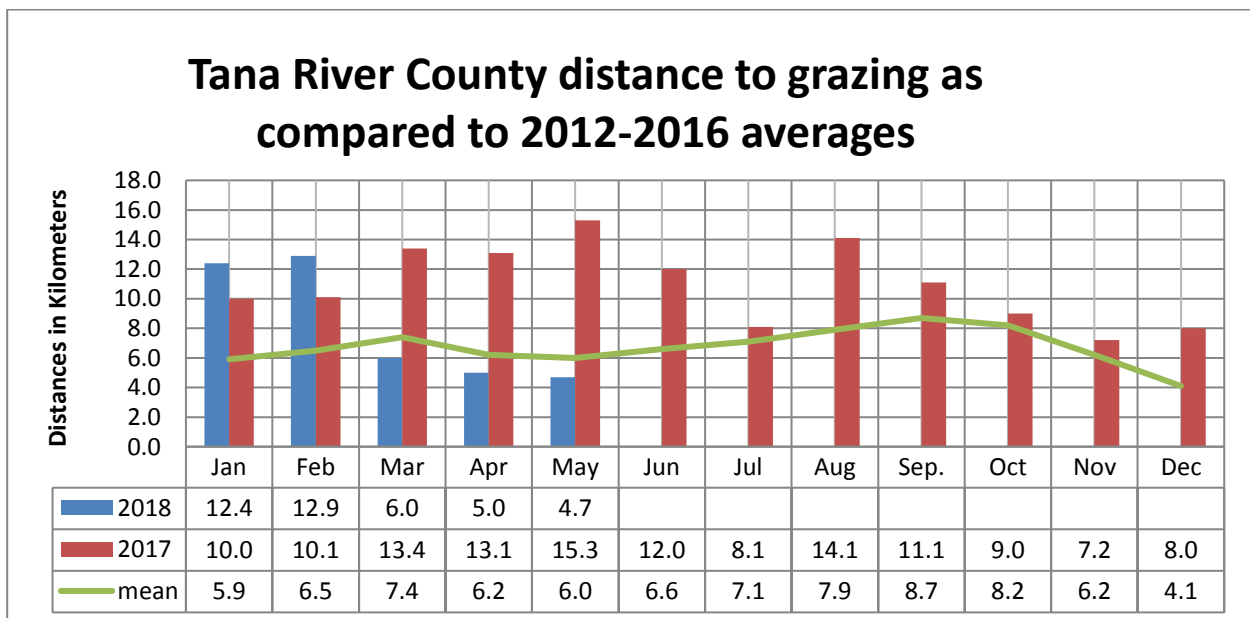


Fig 9 n=450 Households

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

- The current Livestock body conditions of the browsers and grazers is good. This is attributed to the availability of sufficient browse and pasture for the livestock and also the shorter distance covered from the grazing area to the water sources.

##### 3.1.2 Livestock migration

- Most of the Livestock are currently in hinterlands of the county. The herds are now at the household and this will improve the milk availability at the household level.

##### 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 continuously is reported in this sub county.
- Parasitic infestation cases have is also prominent especially fleas, mites and ticks in all livestock species.
- Both he grazers and browsers affected due to settled rain water on the plains of the county.

##### 3.1.4 Milk Production

- On average the milk produced per household within Tana River County was 5.5 litres in the month of May. The amounts slightly decreased in this month when compared to the month of April which was also at 5.8 litres. This is attributed to the fact that the livestock are in the breeding season.
- In comparison to the long term mean, the current average in milk production is still below normal average during this time of the year.

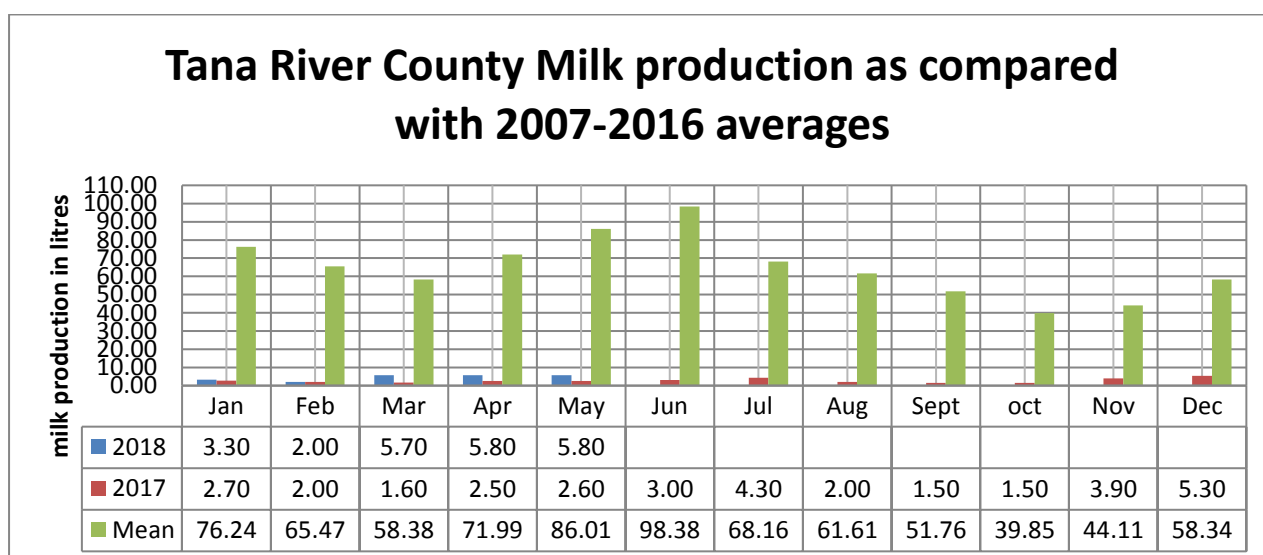


Fig 10n=450 Households

##### 2.1.5 Livestock deaths

- No livestock death reported.

### 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and Condition of food Crops

- Most of the farms are now at the planting stage after the flood waters have receded in some regions. Others are still waiting for the flood waters to recede.
- 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 KRCS, the county and national governments.

## 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 May was Ksh.25600. In comparison to the month of April, where the price of a 3 year old mature bull was Ksh.27889, the prices increased in this month.
- The slight decrease in the prices is attributed to the market dynamics.
- The current cattle price of Ksh. 25600 is above the normal at this period of the year as shown on the graph below.

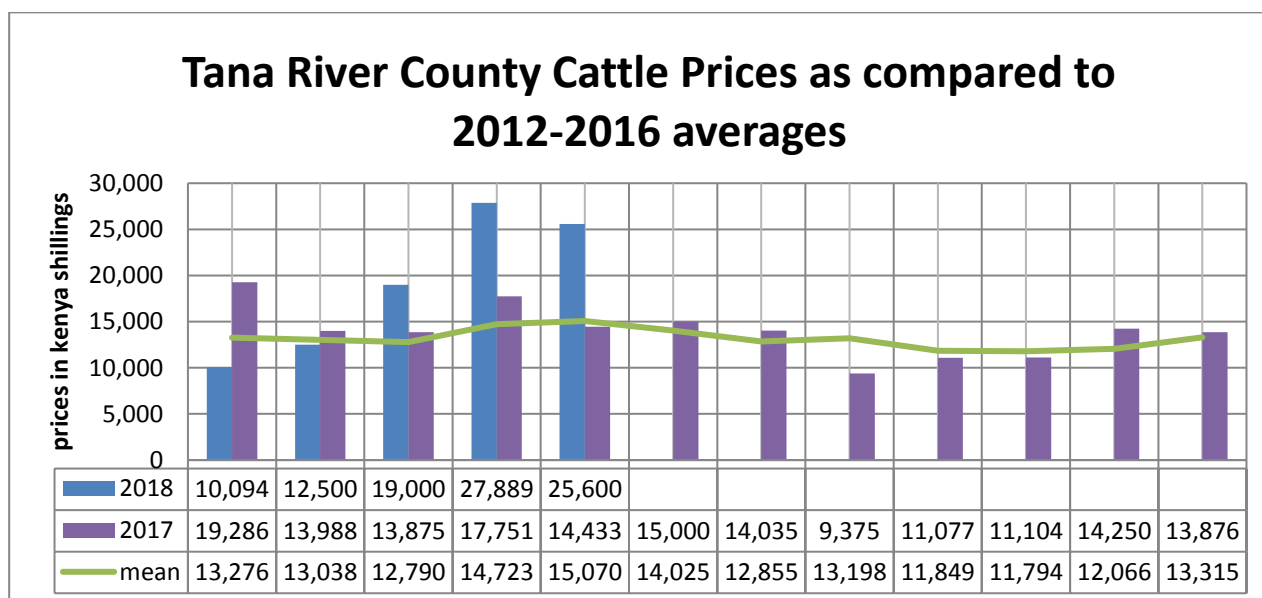


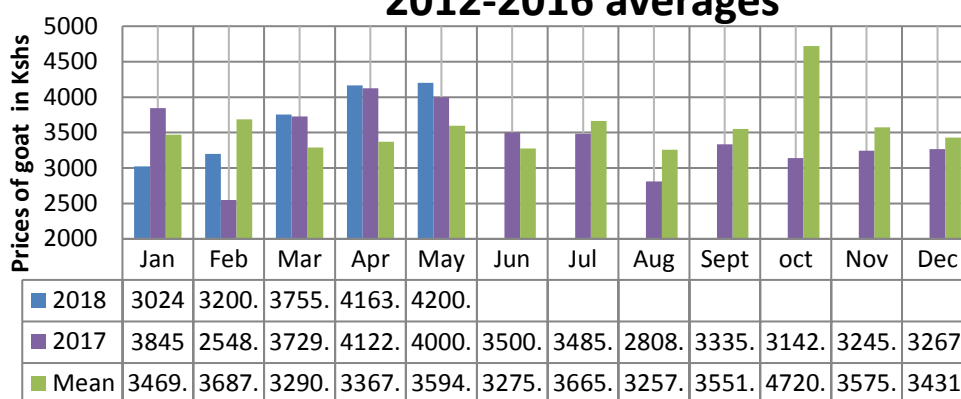
Fig 11n=450 Households

#### 4.1.2 Goat Prices

- The average price of a medium size goat in the month of May was Kshs.4200. In comparison to the month of April where the average price of a medium size goat was Ksh. 4163. The prices in this month slightly increased. The price variability is attributed to the market dynamics.
- The current goat price of Ksh.4200 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

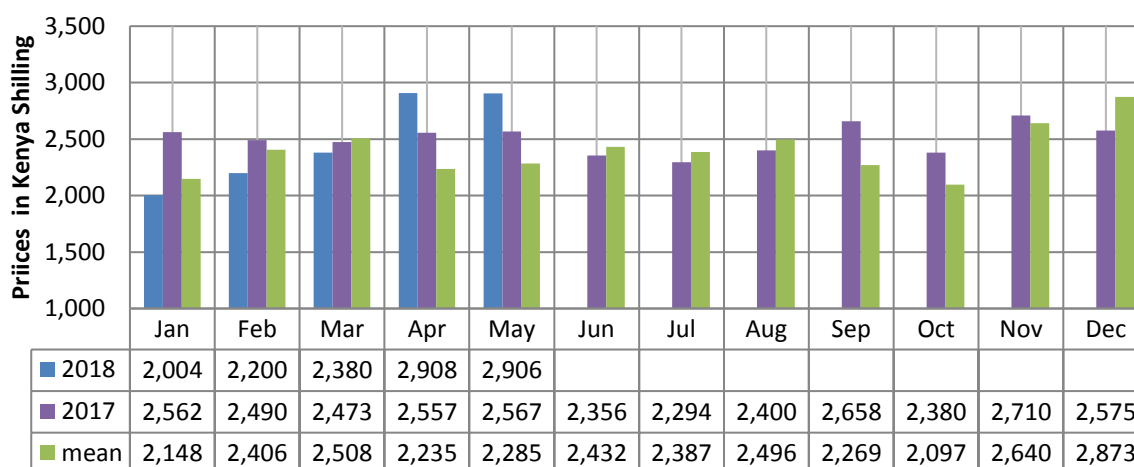


**Fig 12n=450 Households**

### 4.1.3 Sheep Prices

- The average market price of a sheep in the month of May was Kshs.2906. The prices remained stable in this month when compared to that of the month of April which was at Ksh. 2908. This is attributed to the market dynamics.
- Compared to the mean of 2012-2016, the current price is above 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.60 per litre. The prices slightly reduced in this month when compared to the month of April which recorded a price of Ksh 64 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 84 Kg of maize for a goat. Compared to the month of April which recorded an average of 83.3, the terms of trade slightly increased in this month. The current terms of trade is above the long term mean of 81 Kg for a goat.

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

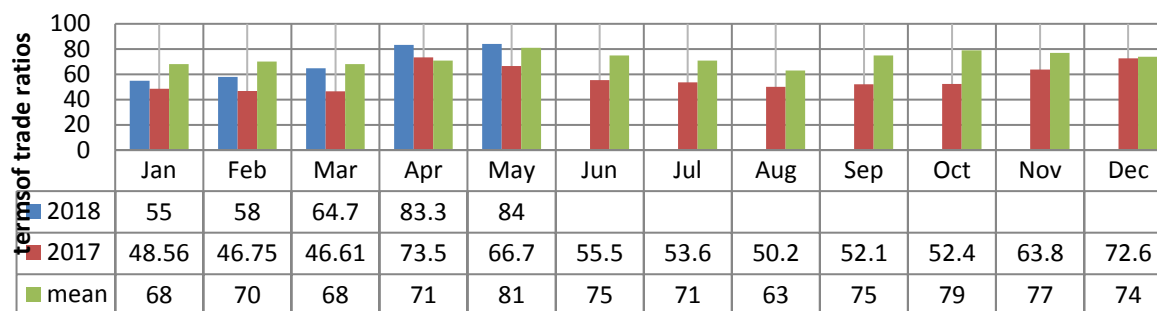


Fig 13 n=450 Households

## 4.2 CROP PRICES

### 4.2.1 Maize

- The average maize market price per kilogram for the month of May was Ksh 50.
- When compared to the month of April, where the average price per kilogram of maize was also Kshs.50, maize prices remained stable by the end of May. 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 36 per kg.

## Tana River County maize prices as compared to 2012-2015 averages

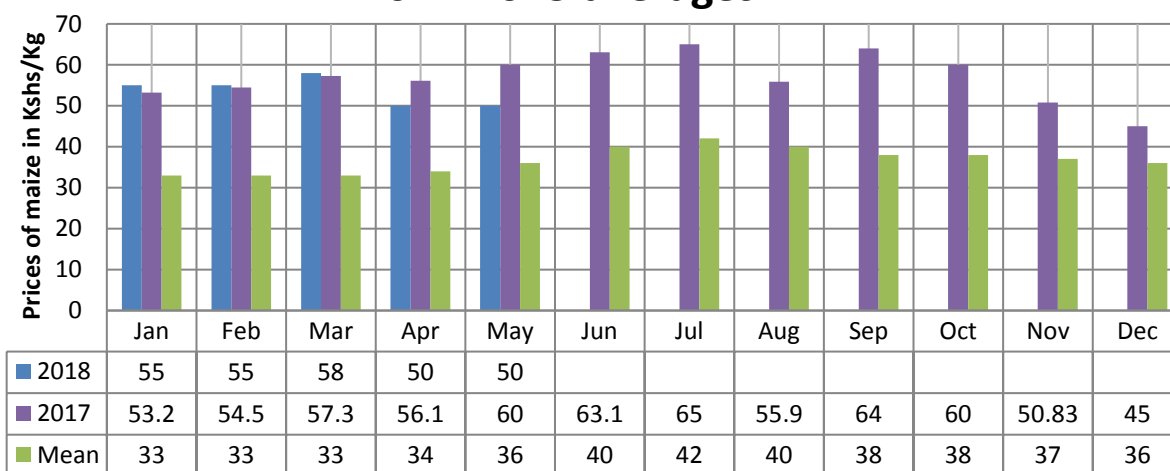


Fig 14 n=450 Households

## 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 May.
- In comparison to the month of April, where the average milk consumed per household was 3.2 litre, the milk consumption also slightly decreased 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.

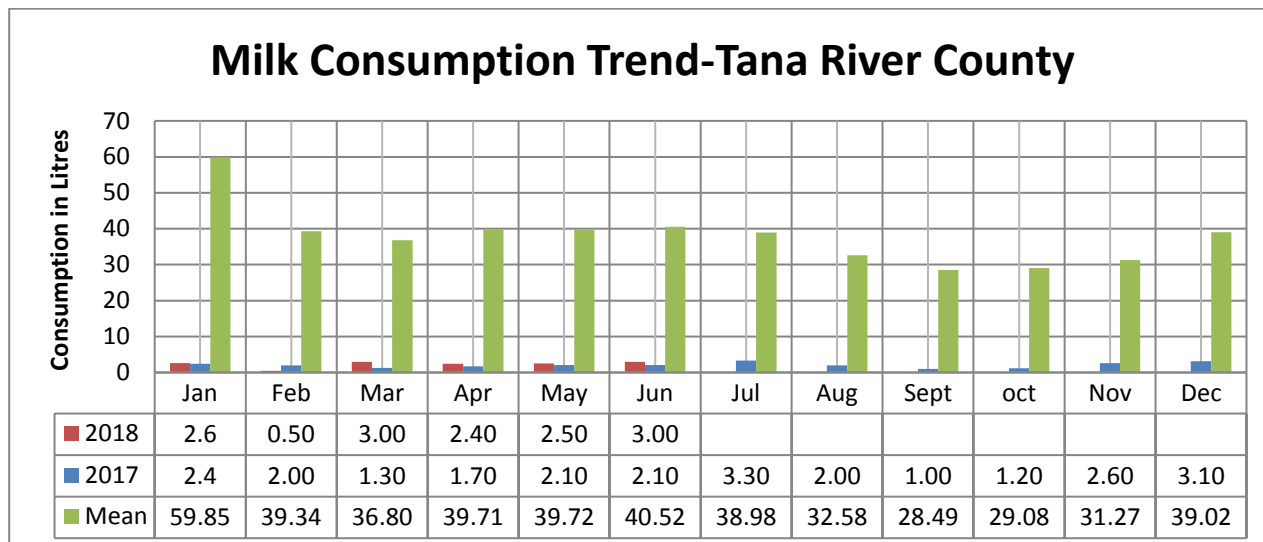


Fig 15 *n=450 Households*

### 5.2 FOOD CONSUMPTION SCORE

- The percentage of households with poor food consumption score in the county in April was 34.17% while those with border line score were 30.53% and with acceptable at 34.5%.
- The pastoral livelihood zone has the highest proportions of households with poor FCS at 51.6% and while the the mixed livelihood zone has the lowest in the acceptable category at 0%.
- Tana delta has the highest in the acceptable category at 78.7%

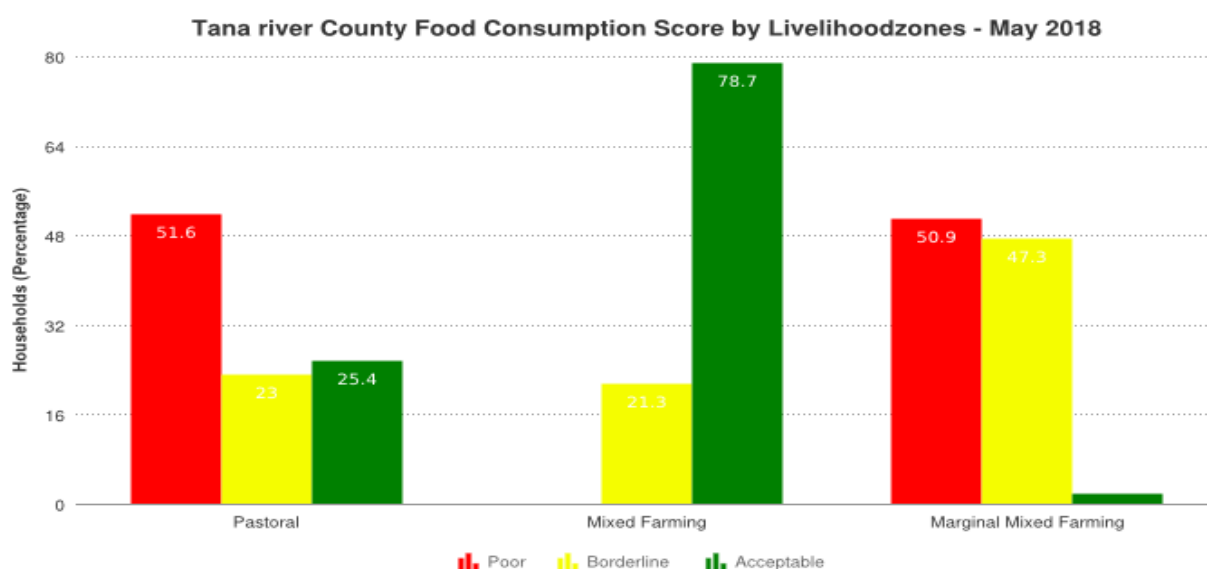


Fig 16. This figure show the food consumption score in the 3 livelihood zones of Tana River county

### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 MUAC

- The percentage of children under the risk of malnutrition within the month of May was at 13.5% compared to that of April which was at 15.2%.
- The number of the children under the risk malnutrition slightly reduced but still has remained high. This is attributed to the low milk production and consumption and also reduced food availability in the county. Compared to long term averages of 12.65%, the current percentage is above normal at this time of the year.

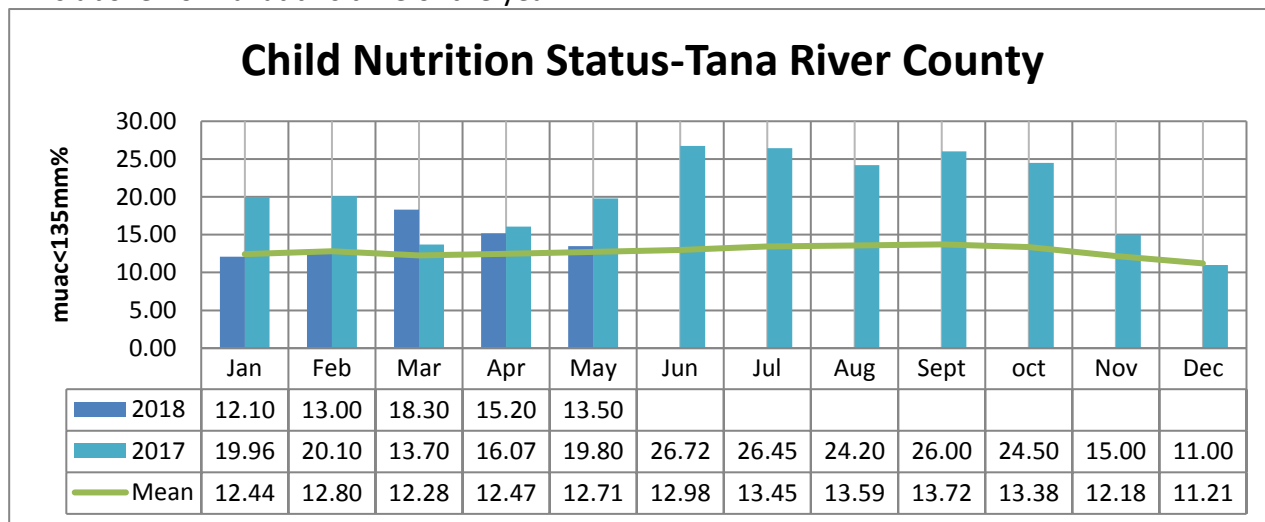
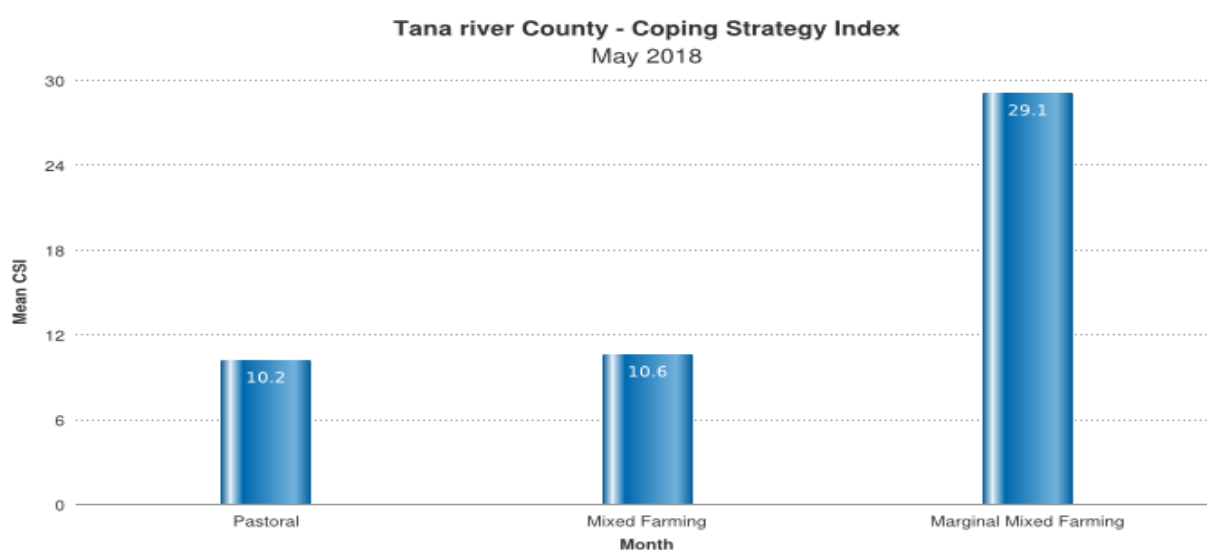


Fig 17n= 2,255 Children

#### 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 14.67.
- Compared to the month of April where, the CSI for the county was at 16, the CSI reduced.

- When compared across the livelihood zones, coping strategy index for Pastoral, mixed and marginal mixed livelihood zones were 10.2, 10.6 and 29.6 respectively hence households in marginal mixed livelihood zones employed more coping strategies than those in the mixed livelihood zone and pastoral livelihood zone.
- The graphs above show the mean coping strategy based on the livelihood zones.
- The coping strategies adopted by the mixed and marginal mixed livelihoods 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 during the dry spell
- 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**

- The ongoing floods from long rains have caused severe destruction of property and infrastructure in the county.
- River Tana broke its banks and is currently flowing through the marginal mixed farms along its banks and has advanced to the homesteads of the communities living in the region.
- The flash floods also collected large volumes of water flooding the hinterlands and cutting off the roads accessing this regions. The waters from the seasonal riverbed from Kitui county only worsened the situations in this region.

### **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.
- Currently, the households have no food stocks and the prices of essential commodities continues to increase, making it inaccessible to most households. This is attributed to the previous severe drought conditions followed by severe flooding from the ongoing long rains.

## **8. RECOMMENDATIONS**

- Enhance relief food distribution in areas affected by floods and previous drought.-Distribution of NFI to the affected households.
- Enhance support to large and small scale irrigation activities through provision seeds and fertilizers.
- Disease surveillance within the areas affected by floods and the continuation of malaria control initiatives to undermine the prevalence rates.
- 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.