

# National Drought Management Authority

## TURKANA COUNTY

### DROUGHT EARLY WARNING BULLETIN FOR APRIL 2019



A Vision 2030 Flagship Project



VCI-3 month (County)	30	>35
VCI-1 month (T. North)	17.5	>35
State of Water Sources	2-3	5-6

Production Indicators	Value	Normal Range
Livestock Migration Pattern	Not Normal	Normal
Livestock Body Condition	Poor	Good
Milk Production	Nil	> 1.7 Litres
Livestock deaths (attributed to drought)	Few Deaths	No Deaths

Access Indicators	Value	Normal Range
Terms of Trade (ToT)	38.2	>33.8
Milk Consumption	Nil	>1.3 Litres
Return distance to water sources	6.8 km	< 5.8 km
Cost of Water(Ksh/20L)	Ksh.10	<Ksh.10

Utilization Indicators	Value	Normal Range
Nutrition Status, MUAC (% at risk of malnutrition)	22.2	<22.4
Food Consumption Score (FCS)	29	>35
Coping Strategy Index (CSI)	16.1	<14.9

#### Drought Situation & EW Phase Classification

##### Biophysical Indicators

- The county experienced a late onset with rainfall received in varied amounts for 2-3 days being evenly distributed. Cumulative rainfall for the 6-month period (Nov 2018 to Apr 2019) accounted for only fifty three percent of the normal.
- No significant improvement in the condition of vegetation was observed, most areas exhibited moderate to severe vegetation deficit. Forage condition was generally poor.
- The water situation had deteriorated significantly but the situation was alleviated albeit slightly by the rainfall received in dekad three of the month under review.

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

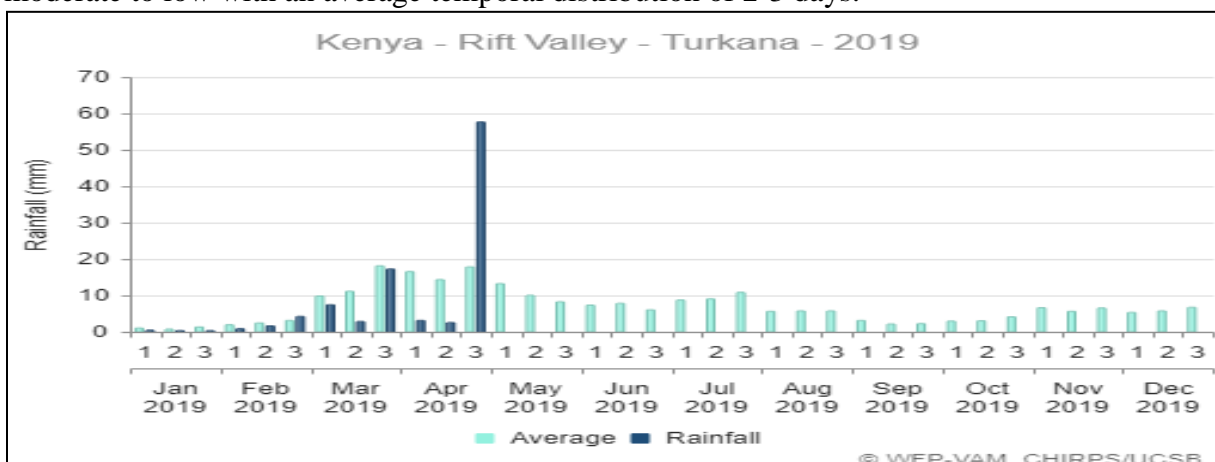
- The body condition of livestock in the plains was poor with some cases of emaciated shoats. Return distance to water source increased and fell outside the normal range.
- Nil milk production and consumption was reported with the terms of trade depicting a negative trend.
- Migration towards international borders was witnessed and some sites reported death of livestock especially shoats.
- Stability in food consumption was observed as households applied less severe coping strategies during the review period but the level of malnutrition as evidenced by the proportion of under fives 'at risk' was on the rise and at par with the long term average proportion for April.

<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</li> </ul>	<ul style="list-style-type: none"> <li>Short rains</li> <li>Planting/weeding</li> </ul>								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

# 1.0 CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

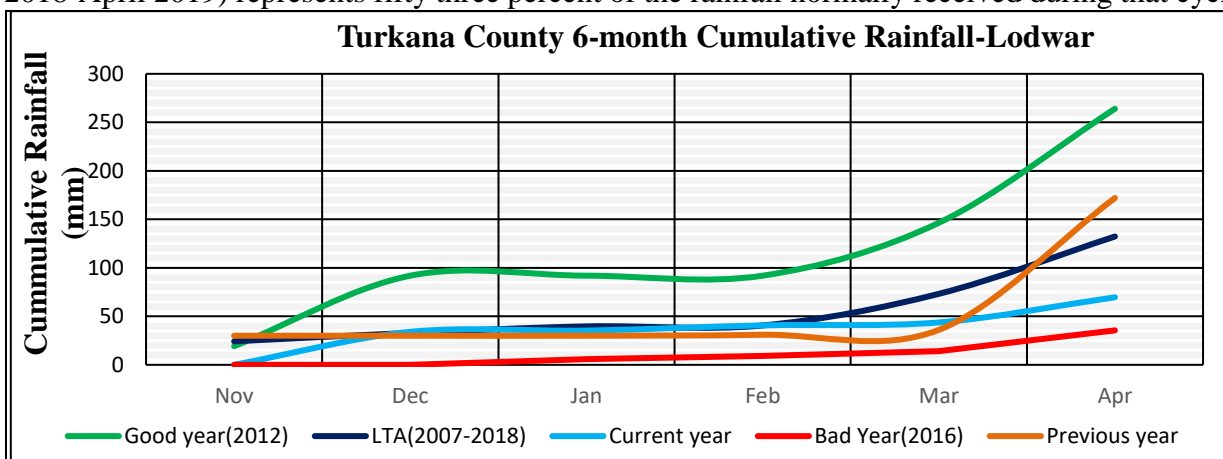
- The county experienced a late rainfall onset during the third dekad of the month under review. Notably, varied amounts were received across the seven sub counties with Turkana west and Kibish reporting the highest amounts. Amount of rainfall received in the other sub counties was moderate to low with an average temporal distribution of 2-3 days.



Source: VAM (World Food Programme)

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Amount of rainfall (25.9mm) recorded at the Lodwar meteorological station during the month under review accounted for only forty four percent of the expected rainfall with the observed distribution in space being relatively even.
- Referencing on a twelve year period, the cumulative rainfall for the 6-month period (November 2018-April 2019) represents fifty three percent of the rainfall normally received during that cycle.



Source: Meteorological Department (Turkana County)

- Additionally, the aforementioned former amount is exceeded by that of the previous year for the same period by sixty percent.
- Historically, the period between November 2016 to April 2017 is regarded as the bad year.

## 1.3 OTHER EVENTS

### 1.3.1 Floods

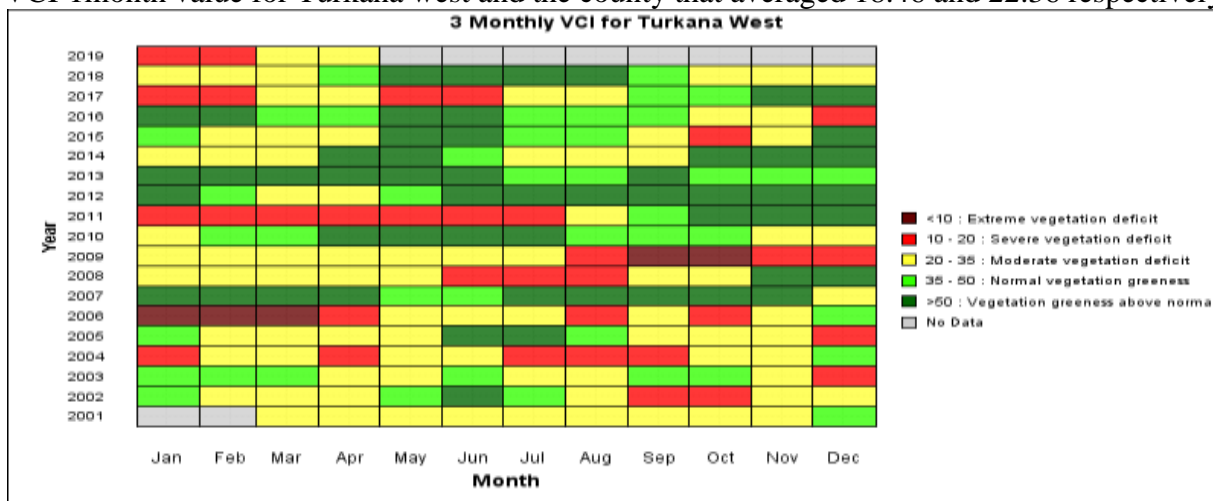
- Flooding was reported in Letea ward following the bursting of river Tarach with a similar situation being replicated in Kapua where flash floods were experienced resulting in loss of a number of shoats.

## 2.0 IMPACTS ON VEGETATION AND WATER

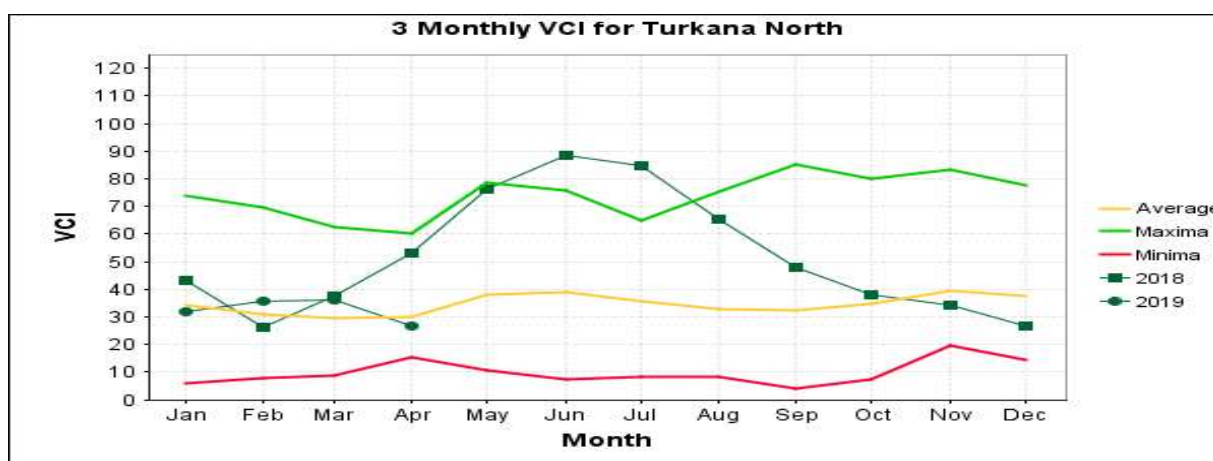
### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

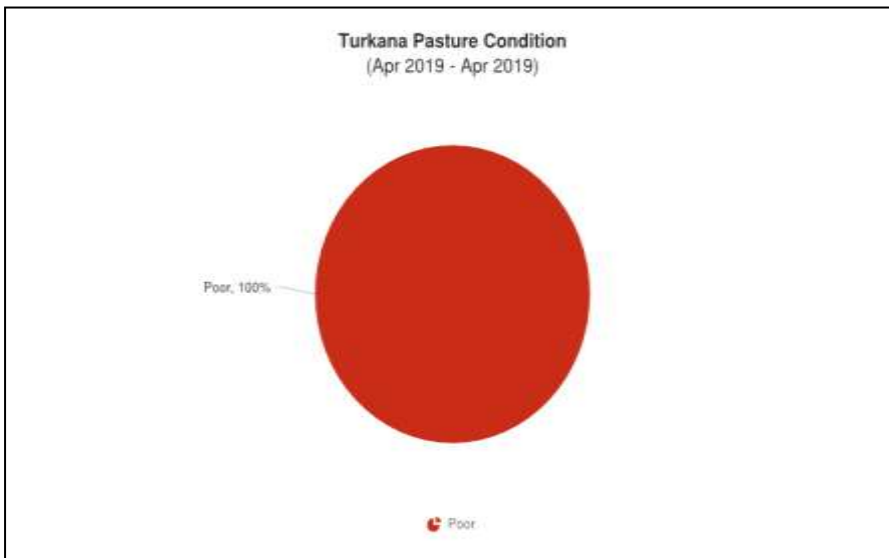
- Below is a matrix of Turkana west Sub County that illustrates how months have been classified based on the level of vegetation deficit.
- There was no significant recovery in terms of vegetation regeneration witnessed during the month under review despite the county experiencing rainfall. Consequently, typical moderate to severe vegetation deficit conditions were exemplified across most areas as for instance evidenced by the VCI-1month value for Turkana west and the county that averaged 18.46 and 22.36 respectively.



- All the sub counties recorded significant deterioration in the condition of the vegetation especially during the first two dekads of the month under review.
- The most affected wards remained Kalapata, Nanaam, Kerio, Songot, Kakuma, Kalobeyei, Katilia, Nakalale, Kaaleng/Kaikor, Loima among others.
- Turkana north and Loima recorded the highest deterioration in the condition of vegetation as evidenced by the shift in the VCI-1month from 31.91 and 41.51 to 17.54 and 25.87 accordingly.



- The observed condition could be attributed to the late onset of the long rains compounded by the prevailing dry and hot weather conditions during the month under review that accelerated degeneration.



## 2.1.2 Pasture

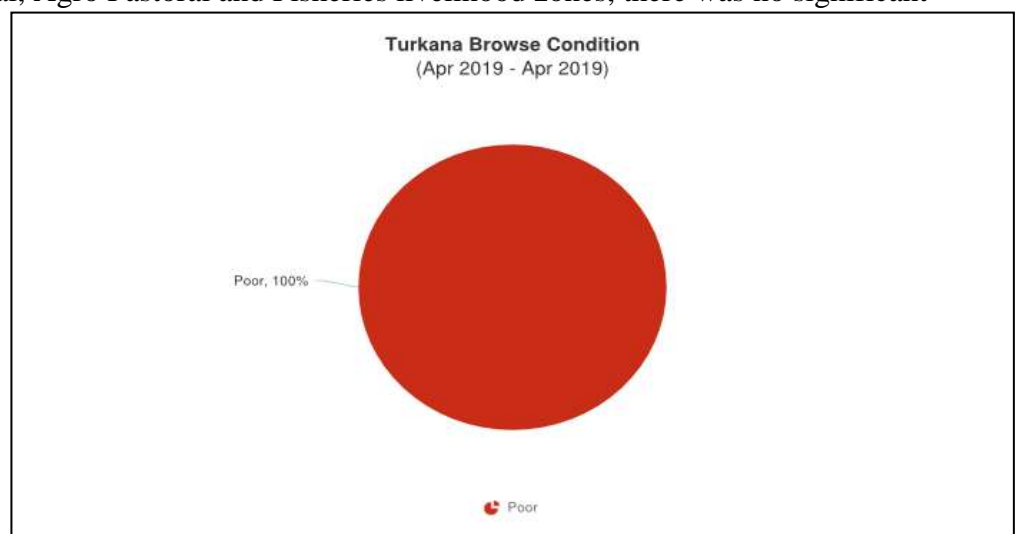
- During the month of April, the condition of pasture within the dry season grazing areas along the county borders where a significant portion of livestock had migrated to was poor and dwindling. It thus remained significantly below the level normally observed for the month under review and the

condition could be attributed to precipitation deficit for the better part of the month.

- Pasture along Turkwel River where a considerable number of livestock had migrated to had started depleting and as a consequence, migration towards the international borders was observed during the first half of the month.
- Insecurity (in Turkana south, East and Kibish) and livestock diseases were the major impediments to pasture access during the month under review.
- There was no notable variation in terms of the quantity and quality of pasture observed across the three livelihood zones during the month of April.

## 2.1.3 Browse

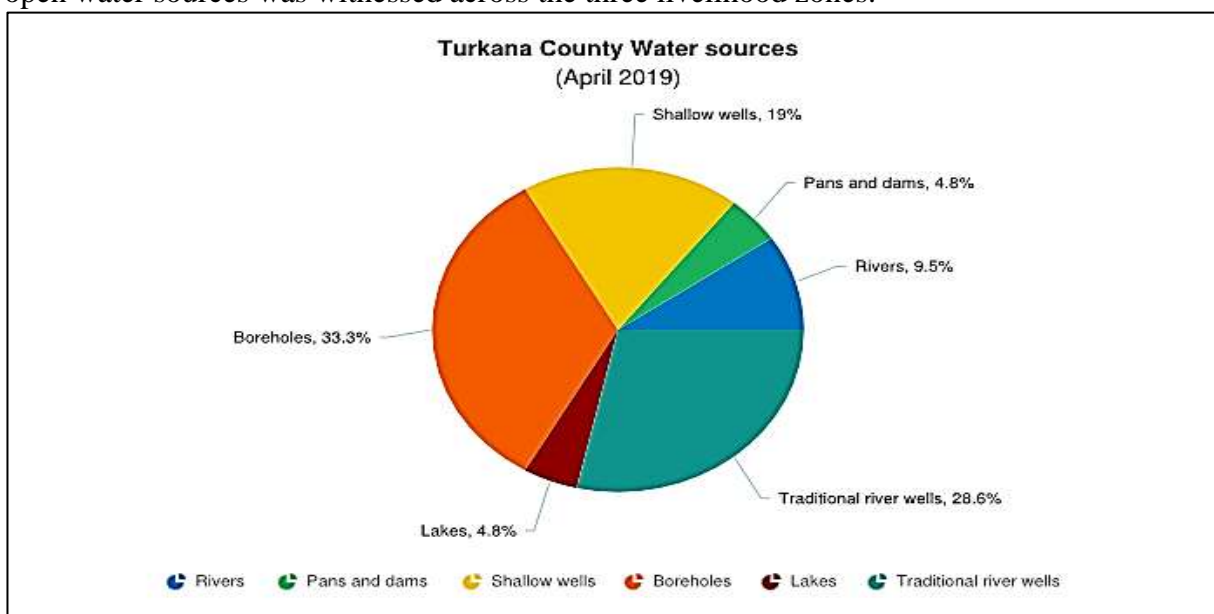
- The observed browse during the period under analysis was poor across all sites in the county and significantly below the level witnessed normally at such a time of the year.
- Precipitation deficit coupled with dry and hot weather conditions dominating most areas were the major factors influencing the observed condition during the month under review.
- However, available browse within the county in select sites mainly in the Agro Pastoral livelihood zone albeit of poor quality would last at least for a period of two months if the regeneration witnessed towards the end of the month could be sustained through further receipt of rainfall.
- The major constraints to browse access during the period under review were insecurity along the major conflict corridors and endemic diseases.
- Across the Pastoral, Agro Pastoral and Fisheries livelihood zones, there was no significant variation observed in terms of the quality and quantity of browse.



## 2.2 WATER RESOURCE

### 2.2.1 Sources

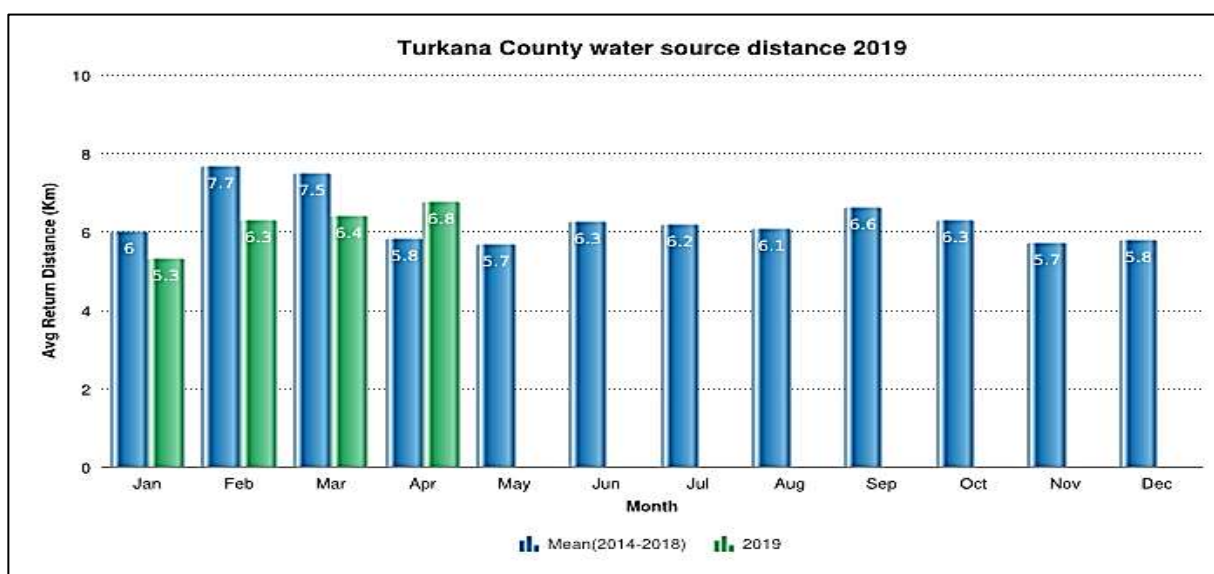
- The major water sources (boreholes, shallow wells and traditional river wells) in use by the community remained relatively the same as the previous month.
- Proportion of households utilizing traditional river wells as their source of water increased by ten percent in relation to the previous month with a slight increase in borehole use being recorded. Despite rainfall being experienced during the period under review, no significant recharge of the open water sources was witnessed across the three livelihood zones.



- Water flow albeit for a limited number of days was observed along seasonal rivers such as Natiira, Tarach, Kawalase, Lokichar, Kalokol among others and that had an impact in terms of capping the depth of hand dug wells at a manageable level.
- Most households normally rely on rivers and water pans at such a time of the year, the observed variation during the month of April could be attributed to the late onset of the long rains.

### 2.2.2 Household access and Utilization

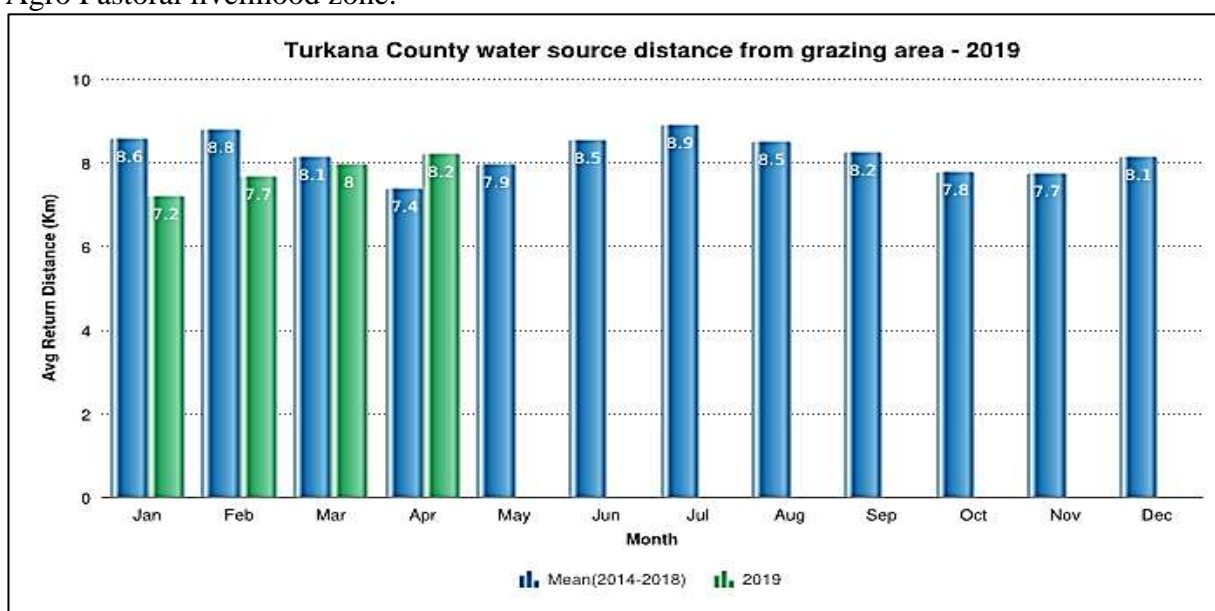
- Household return trekking distance to water source adjusted upwards slightly and notably unlike the previous three months fell outside the normal range by a margin of fifteen percent.



- The Agro Pastoral livelihood zone reported the longest distance followed by the Pastoral livelihood zone. Nevertheless, the Pastoral livelihood zone reported the highest average waiting time of one hundred and twenty minutes with the other two zones reporting ninety minutes before the onset of the long rains.
- Household water consumption per person per day during the first half of the month averaged less than ten litres in the Pastoral livelihood zone while for the Agro Pastoral and Fisheries livelihood zones it was less than fifteen litres. However, the situation improved slightly especially during the last week of the month.
- Cost of water at source was free but water vendors in major urban centres dispensed a twenty litre jerry can at a varied cost of five to ten shillings.

### 2.2.3 Livestock access

- The return trekking distance to water source from grazing areas during the period under review remained relatively stable but was higher than the long term average distance for the month of April by eleven percent.
- The Pastoral livelihood zone reported the longest distance followed by that recorded along the Agro Pastoral livelihood zone.



- The longer than normal trekking distance witnessed during the month under review was occasioned by the drying up of open water sources in close proximity to grazing areas, increased number of borehole breakdowns being reported owing to overuse especially in areas with huge livestock population as well as a general drop in the water table that rendered others non-functional.
- The watering frequency for cattle and shoats during the month of April along the Pastoral livelihood zone remained 2-3 days while that of the same species in the other two zones was 3-4 times per week. Across all the zones, watering frequency for camel was on average once per week during the same period.
- Decrease in the number of days livestock accessed water could be ascribed to reduced water availability in areas adjacent to grazing sites (where animals had migrated to) especially along the Pastoral livelihood zone owing to high rates of breakdowns being reported.

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

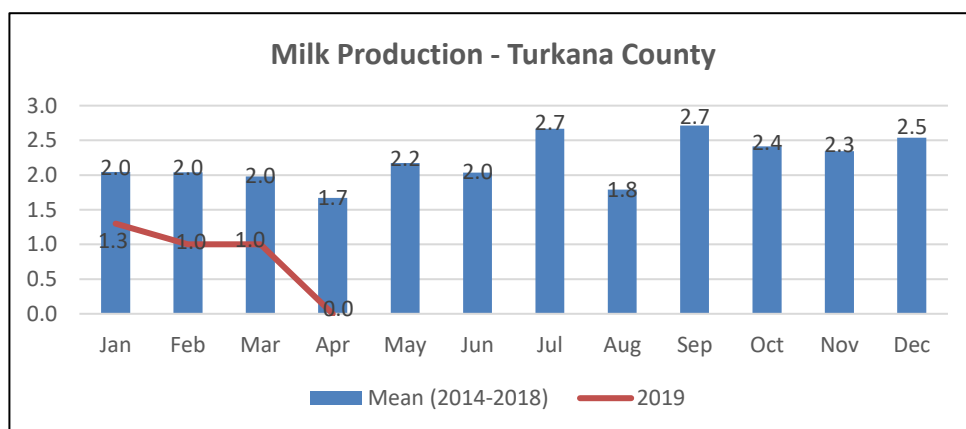
- Generally, the body condition of shoats and cattle within the county was poor during the month of April with some cases of emaciated shoats in select sites mainly in the Pastoral livelihood zone. All livestock species exhibited a thin body with little fat and bones clearly visible especially for the small stock.
- Following receipt of the long rains during the third dekad of the month under review, it is anticipated that livestock body condition shall improve gradually as forage regenerates over successive months provided an early cessation is not witnessed.
- Longer than average trekking distance, high prevalence of livestock diseases coupled with pasture/browse in availability within the plains were the major drivers of the observed poor and deteriorating body condition during the period under analysis across all the livelihood zones.

##### 3.1.2 Livestock Diseases

- Haemorrhagic Septicaemia cases reported were still high across most parts of the county during the month under review. Additionally, some sites in the Pastoral livelihood zone reported incidents of Pest Petis Ruminantes in shoats and some cases of Contagious Caprine Pleuropneumonia (CCPP).

##### 3.1.3 Milk Production

- Among the sampled households within the sentinel sites, none reported to have milked during the period under review and this was a significant shift



from the previous month when at least an average of one litre was reported across the three livelihood zones.

- As a consequence, the production level for the month under review was one hundred percent below the normal production for the month.
- Continued migration of some lactating livestock in search of water and pasture/browse coupled with the low calving rate were the major factors influencing the observed negative trend in milk production during the month of April.

### 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and Condition of Food Crops

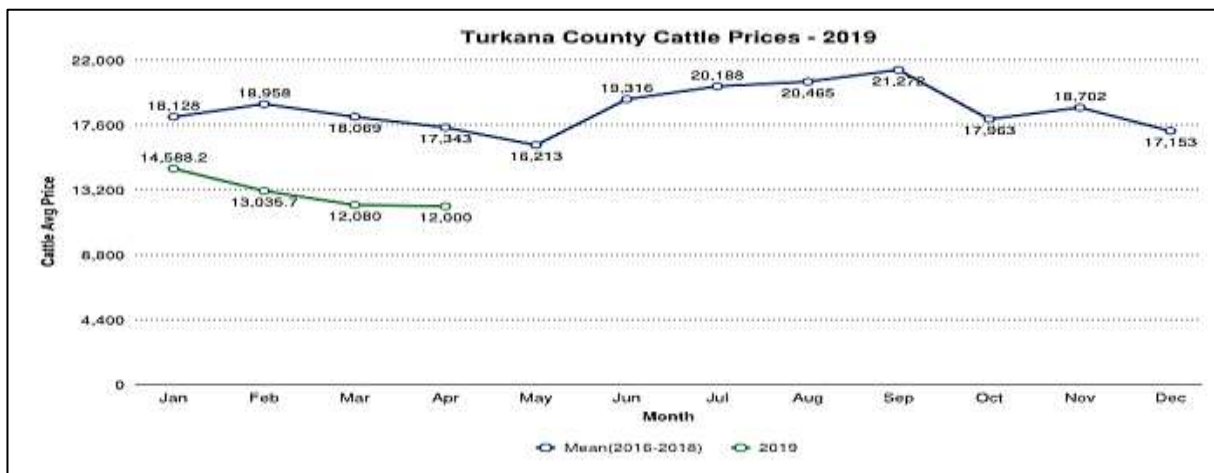
- Maize, cowpeas and sorghum are the major crops cultivated by majority of the farms during the long rains season mainly in the Agro Pastoral livelihood zone. Notably, no planting had taken place during the month under review due to the late onset of the long rains and therefore the ongoing agricultural activity was basically continued land preparation.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

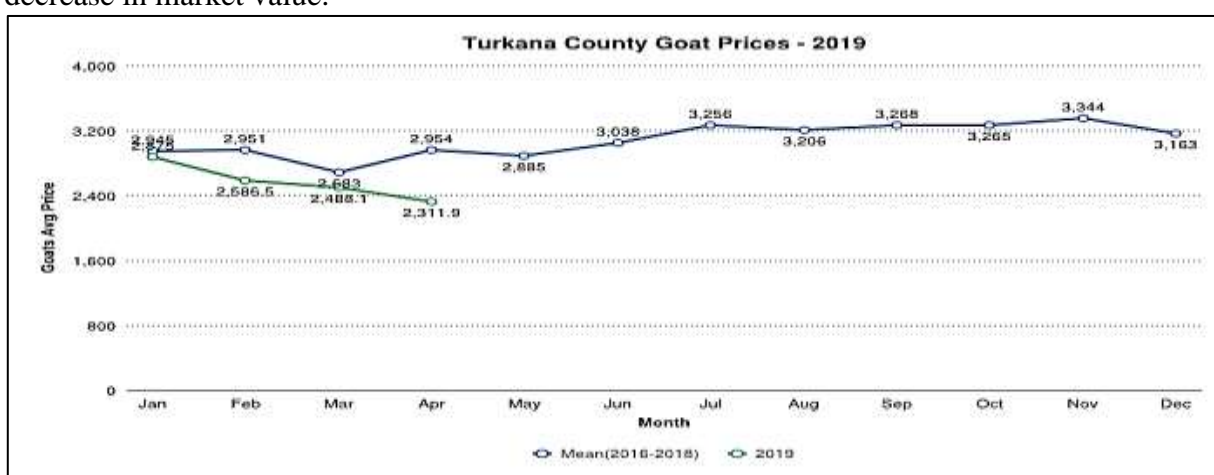
- Stability in the market price of a 4-year old medium sized bull was observed in April.



- There was no considerable change in the production push factors like pasture and water availability despite the county experiencing rainfall during the last week of the month, coupled with the already poor cattle body condition hence the observed stability.
- The highest price of Ksh.13,000 was reported in the Pastoral livelihood zone (Kakuma market) with the lowest price of Ksh. 11,000 being reported along the Agro Pastoral livelihood zone (Kalemngorok market).
- The current cattle price is significantly lower than the short term average price of cattle for the period under review by thirty one percent.

#### 4.1.1 Small Ruminants Prices (Goat price)

- During the month of April, the price of a 2-year old medium sized goat dropped slightly in relation to the one recorded in March.
- Continued deterioration in the body condition of goat was witnessed across all the livelihood zones owing to constraints in accessing quality palatable browse within shorter distances thus the decrease in market value.

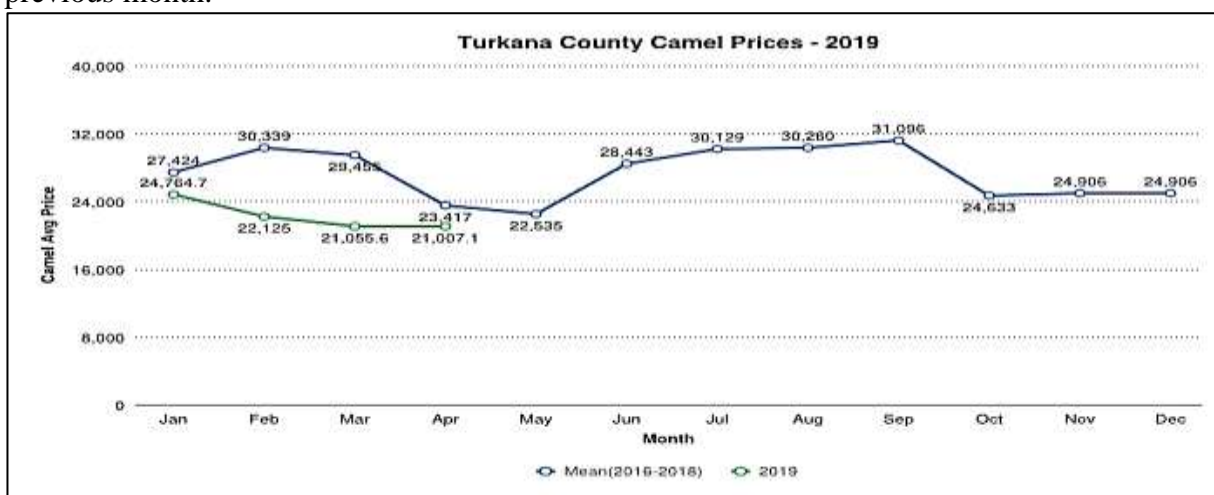


- The Fisheries livelihood zone reported the highest price of Ksh.2,400 followed by the Pastoral livelihood zone at Ksh.2,305 with the least price of Ksh.2, 280 being reported in the Agro Pastoral livelihood zone.
- The short term average price of goat for the month of April is higher than the current price by twenty two percent.



#### 4.1.4 Camel Prices

- The price of a 4-year old camel during the month under review remained stable in relation to the previous month.

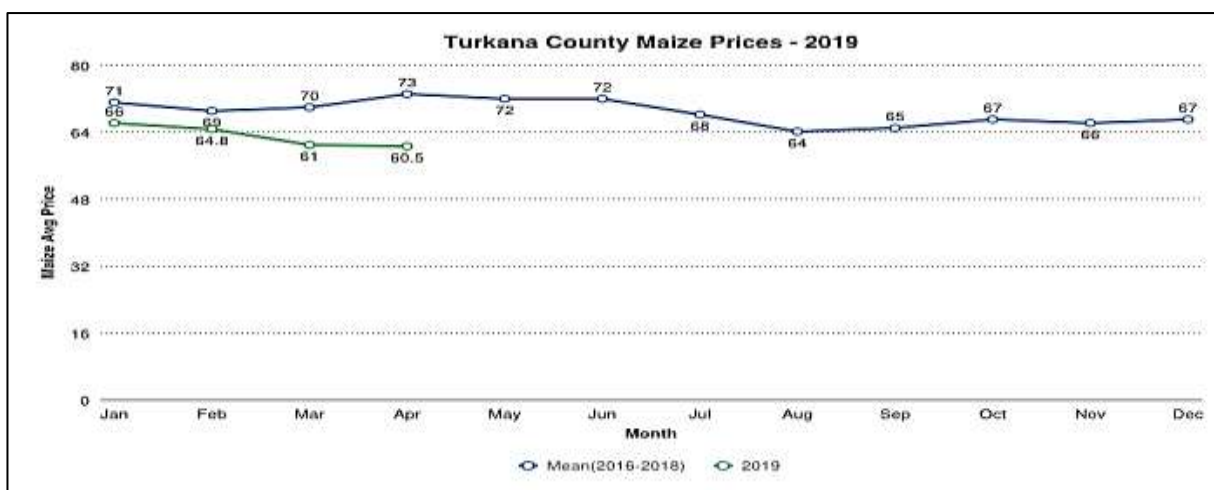


- The observed stability could be ascribed to the fact that no significant improvement was witnessed in the body condition of camel during the month of April owing to constraints in accessing browse coupled with the impact of the prevalent Haemorrhagic Septicaemia disease.
- The lowest camel price of Ksh. 20,850 was reported in the Agro Pastoral livelihood zone with the Pastoral livelihood zone reporting the highest price of Ksh. 21,080 during the period under review.
- The three year short term average price of camel for the period under analysis was higher than the recorded price above for April by ten percent.

## 4.2 CROP PRICES

### 4.2.1 Maize

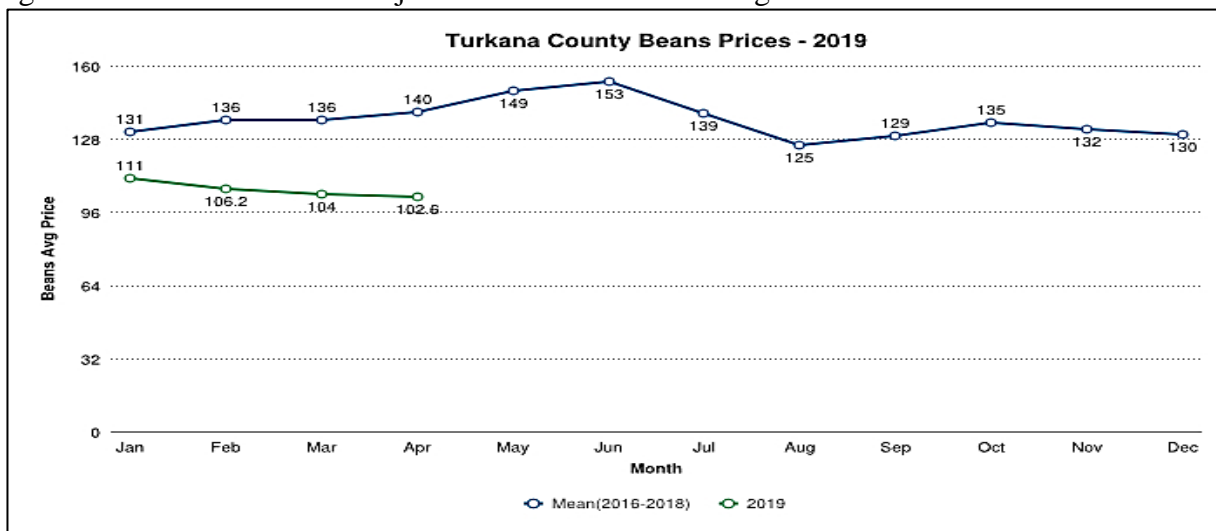
- The price of maize remained unchanged with a kilogram retailing at Ksh.61 just like the previous month of March.



- Markets (Kakuma, Loruqum, Lokichar, Turkwel, Kaeris and Lowarengak) across the three livelihood zones reported a uniform price per kilogram of maize (Ksh.60- Ksh.63). There were no notable outlier areas of concern during the reporting period.
- Continued supply of maize into the county by various stakeholders including the national government, county government, United Nations agencies and other non-governmental organizations was the major factor influencing the observed stability. Maize price during the month under analysis remained within the seasonal range.

## 4.2.2 Beans

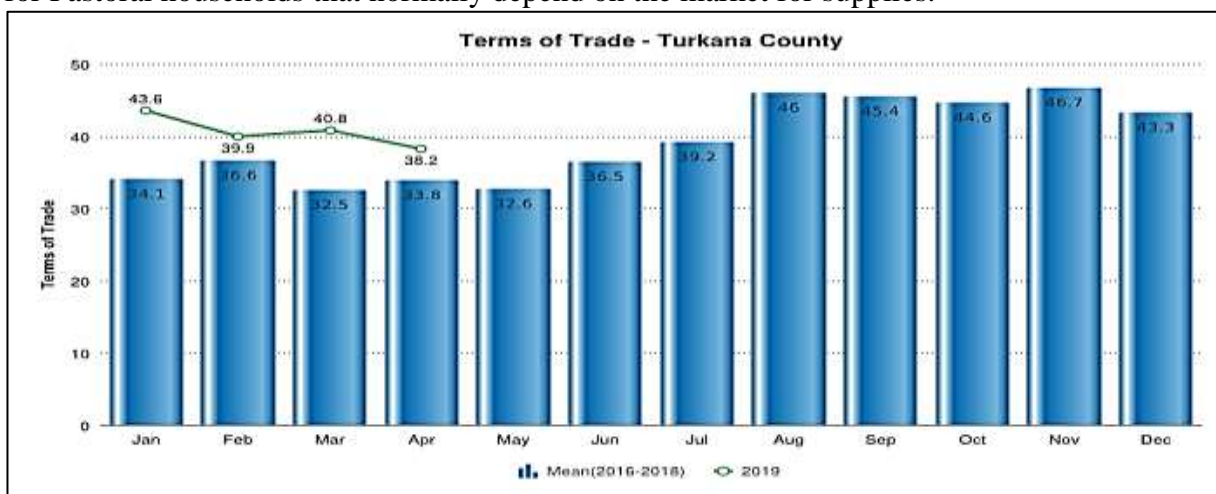
- During the period under review, the price of beans per kilogram remained the same as that reported previously. Increased imports and supply from external markets in form of relief through various agencies were the major factors contributing to the observed stability.



- The lowest price of Ksh.100 was reported in the Agro Pastoral and Fisheries livelihood zones with the highest price of Ksh.105 being reported along the Pastoral livelihood zone during the month of April.
- The three year average price of beans for the month under review exceeds the current price by twenty six percent.

## 4.3 Livestock Price Ratio/Terms of Trade

- The terms of trade adjusted downwards slightly during the month under review. Therefore, Pastoralists obtained two kilograms of maize less than those purchased in March from sale of a similar goat.
- However, the three year average terms of trade was lower than the reported terms of trade during the period under review by twelve percent.
- Despite depicting a negative trend, the terms of trade was still favourable albeit by a slight margin for Pastoral households that normally depend on the market for supplies.

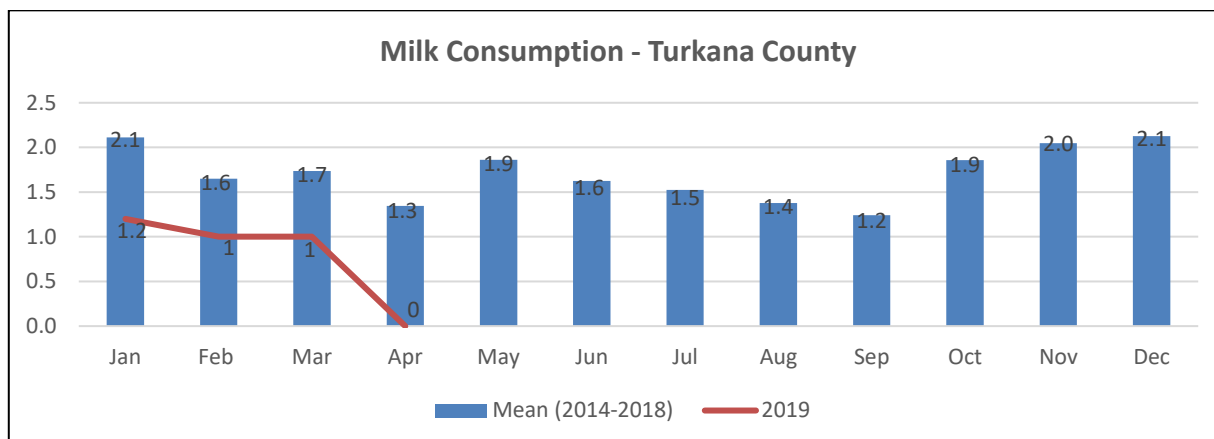


- The decline in the terms of trade could be attributed to the drop in the price of the goat during the period under review.
- Nonetheless, the terms of trade is forecasted to be on ascendancy over the next one month as the rangeland conditions improve following receipt of the long rains and on condition that an earlier cessation that will probably impact on recovery is not witnessed.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

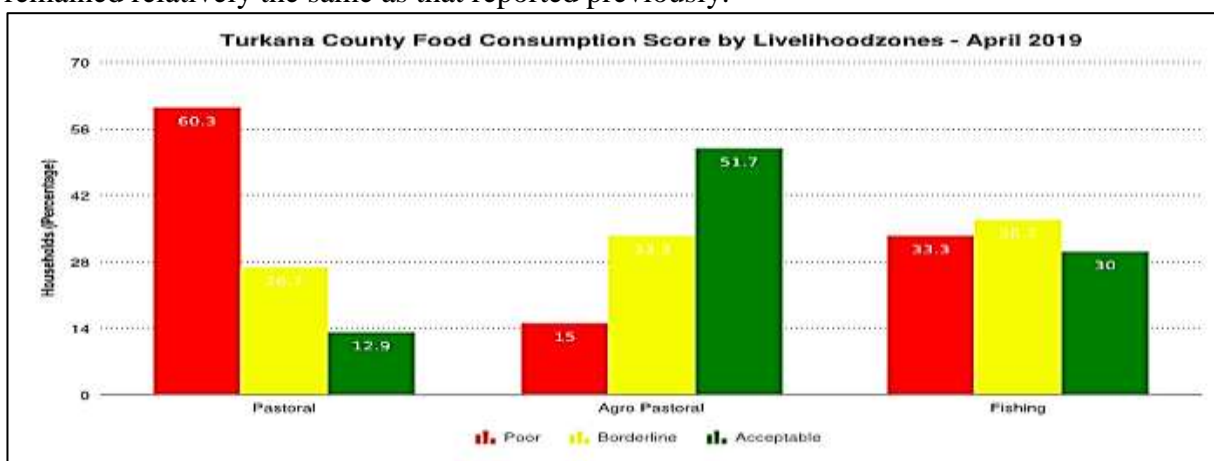
- From the sampled two hundred and six households, none reported to have consumed milk during the month under review.



- The observed trend could be attributed to the zero production reported at household level during the month under analysis occasioned by migration of the lactating herd owing to constraints in accessing browse within household vicinity.
- Consequently, the long term average consumption was one hundred percent above the consumption for the month of April.

### 5.2 FOOD CONSUMPTION SCORE (FCS)

- Forty three percent of the sampled two hundred and six households during the month under review had a poor FCS while thirty percent were classified to be in the borderline with the rest constituting twenty seven percent falling under the acceptable FCS band.
- Despite a number of households exhibiting negative food consumption characteristics, the proportion was not significantly different from that of the previous month owing to continuous provision of relief food by various stakeholders.
- Stability in the food consumption pattern was observed as evidenced by the FCS of 29 that remained relatively the same as that reported previously.

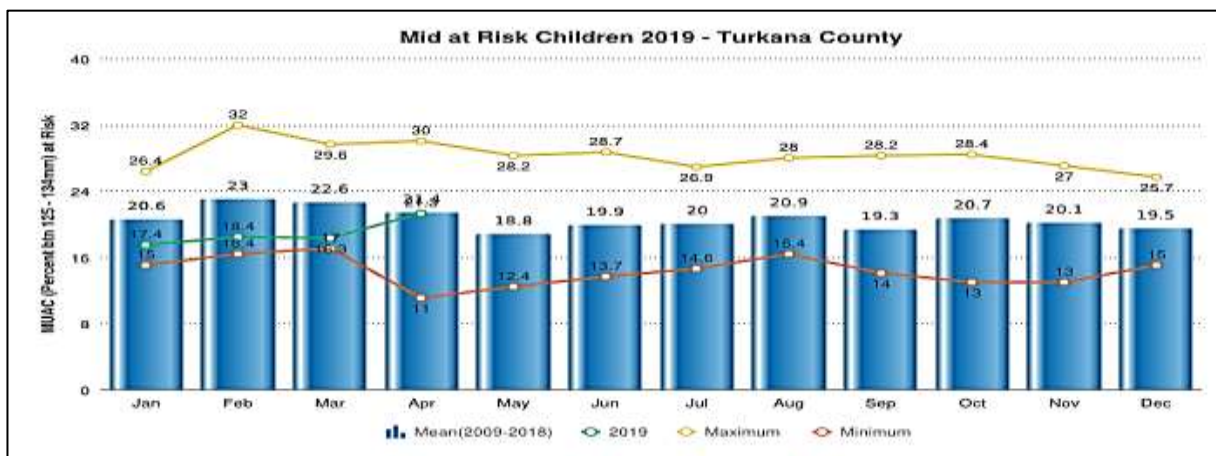


- The Pastoral and Fisheries livelihood zones recorded an increase in the number of households classified as having a poor FCS as illustrated above. Sub counties reporting significant proportion of households within the lower categories were Turkana west, Loima and Turkana north.
- Pastoral livelihood zone returned the lowest FCS of 23 during the reporting period.

## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- From the sampled nine hundred and forty under fives whose mid upper arm circumference measurement was taken, fifty six percent were males while forty four percent were females.
- Proportion of children rated as being 'at risk' of malnutrition during the month under review rose from that reported during the previous month of March.



- The recorded proportion for the month of April was at par with the long term average proportion of children normally rated as being 'at risk' of malnutrition for the period under review.
- Reduced/ absence of milk consumption at household level among the under fives coupled with poor child care practices especially among the migrating Pastoral households were the major factors influencing the observed negative trend.

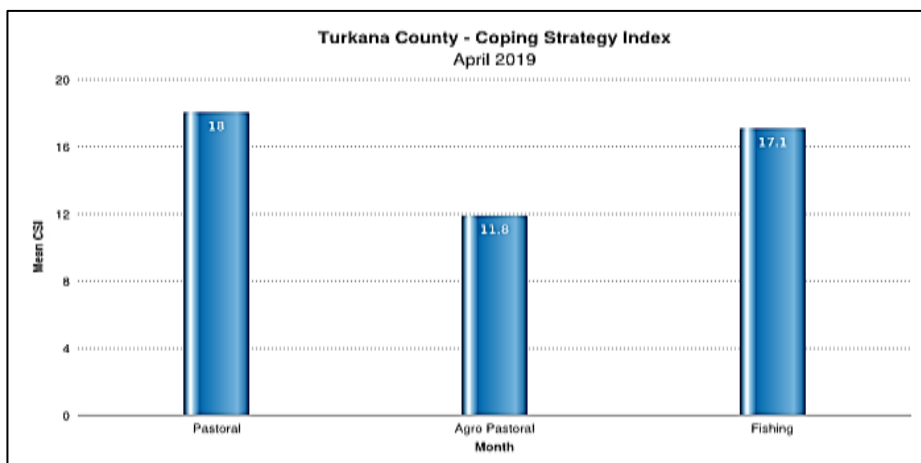
### 5.3.2 Health

- Fever with chills like malaria was the prevalent ailment reported among under fives during the month of April across the three livelihood zones.

## 5.4 COPING STRATEGY

### 5.4.1 Coping Strategy Index (CSI)

- During the month under review, the coping strategy index decreased slightly to 16.1 from the 17.4 reported in March. Therefore, there was less application of severe consumption based coping mechanisms such as reduced consumption by adults.
- Generally, improved ease of access to food (mainly in form of relief) was observed as evidenced by the drop in the CSI across all the three livelihood zones during the month of April.
- The prevalent coping strategies applied by the households coping during the month under review were borrowing with some households consuming less preferred food especially in the Fisheries and Pastoral livelihood zones.



## 6.0 CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 FOOD

- During the month under review, different agencies conducted relief food distribution as outlined below.

Intervention(s)	Sub-County/Ward/Location	No. of Beneficiaries	Implementers
Distribution of relief food	Kapedo Napeitom Kamungei Lomelo Ngilukia	480 HH 209 HH 450 HH 450 HH 600 HH	Kenya red cross society
Distribution of 597.86 MT of Cereals, 119.75 MT of Pulses and 39.944 MT of Vegetable Oil (SFSP)	Turkana West	5,537 HHs (3,222beneficiaries)	World Vision Kenya
Cash-Transfer	Karuko,Lokwamosing Lopii,Katamanak,Losmekori,Lot iman,Ngilomokemer Kakulit,Lochakula,Ngiminaye	1529 HH	Kenya red cross society
	Nakalei,Katir,Chokchok,Kakalel	671 HH	Kenya red cross society

### 6.2 NON-FOOD

Intervention	Sub-County/Ward/Location	No. of Beneficiaries	Implementer/Organization
Distribution of livestock drought pellets [50 kg per HH].	Turkana Central/Township/Kakwanyang, Monti, Napetet & Kerio.	419 HHs.	Catholic Relief Services in partnership with CARITAS Lodwar and TCG-department of livestock production.
	Turkana North/Lake zone/Kataboi & Nachukui.	400 HHs.	
	Loima/Turkwel/Kaitese & Nangereny.	391 HHs.	
Distribution of fruit tree seedlings and vegetable seeds to mother groups	Turkana South Sub-county, Kaputir ward, Nakwamoru location	200	World Vision Kenya
Repair of cattle trough, water kiosk, tank tower footing and pipeline extension in Lomokomol	Turkana South Sub-county, Kaputir ward, Nakwamoru location	400	
Cash and dignity Kits distribution	Turkana Central (Kanamkemer, Township and Kalokol) Turkana South (Lokichar, Katilu, Kaputir and Lobokat)	1,961 1,635	
Integrated mass screening	Turkana Central – Kerio Delta ward	2, 378 under fives 993 PLWs	Save the Children International
	Kibish and Lapur wards	2,110 under 5yrs 1,004 PLWs	

## 7.0 EMERGING ISSUES

### 7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- During the month under review, cases of insecurity involving banditry attacks continued being reported in Turkana south and east sub counties with some households losing livestock.

### 7.2 MIGRATION

- Migration from plains towards areas with pasture/browse reserves along the international borders was witnessed during the first half of the month under review.

### 7.3 FOOD SECURITY PROGNOSIS

- Based on the late onset of the long rains whose amounts have been moderate to low across most areas with the continuity being erratic too, the following food security outcomes are anticipated over the next three months.
- Household food stocks will most likely remain low owing to less agricultural activity being witnessed during the long rains season with cessation expected in mid-May.
- Livestock productivity will most probably stabilize with minimal improvement in terms of body condition, milk production and price likely to be observed. Therefore, the likelihood of the purchasing power at household level remaining low shall be high as the terms of trade stagnate.
- Resource based conflicts are likely to go up after the second month as forage starts to dwindle (due to partial recovery) across most areas and that will most likely have a negative impact on markets situated along conflict prone corridors.
- Generally, 'crisis' food insecurity outcomes shall persist especially in the Pastoral livelihood zone affecting poor households with most households in the other zones falling within the 'stressed' phase of food insecurity for a significant period of time.

## 8.0 RECOMMENDATIONS

- **Health and Nutrition:** Up scaling of medical outreaches targeting sites exhibiting high malnutrition rates while advocating for utilization of various methods of water treatment to minimize the risk of water borne disease outbreak.
- **Water:** Intensify the repair of broken down water structures while installing water tanks at strategic points to facilitate effective water trucking in all sites that are currently water stressed.
- **Food and Safety Net:** Provision of relief food/cash to the increasing number of households transitioning into the 'crisis' phase of food insecurity across all sites in the county.
- **Peace and Security:** Enhance efforts towards peace building and conflict mitigation targeting areas with high livestock concentration through conducting inter-county and cross-border dialogue meetings leveraging on the peace ambassadors network.
- **Livestock:** Provision of supplementary livestock feeds like drought pellets to the core lactating herd that has not migrated from the plains while rolling out preparatory activities for selective off take in the event an early cessation is witnessed.