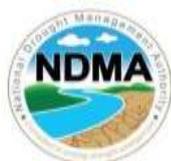


National Drought Management Authority

TURKANA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR JUNE 2019



A Vision 2030 Flagship Project



JUNE EW PHASE

Drought Status: NORMAL



Shughuli za kawaida

Early Warning (EW) Phase Classification

| LIVELIHOOD ZONE | PHASE | TREND |
|----------------------|--------|-----------|
| PASTORAL-ALL SPECIES | ALERT | IMPROVING |
| AGRO-PASTORAL | NORMAL | STABLE |
| FISHERIES | NORMAL | STABLE |
| COUNTY | NORMAL | STABLE |

Drought Situation & EW Phase Classification

Biophysical Indicators

- Enhanced rainfall was experienced during the first dekad of June with depressed amounts being recorded thereafter culminating to cessation during the third dekad. Additionally, the 6-month seasonal cumulative rainfall was below the long term average and accounted for only thirty nine percent.
- Condition of vegetation improved further across the county as evidenced by the VCI-3month that adjusted upwards.
- Improved water situation was evident with open water sources recharging up to 50-75 percent capacity.

Socio Economic Indicators (Impact Indicators)

- During the period under review, the body condition of livestock was fair to good while the household/livestock return distance to water source dropped significantly consequently falling within the normal range.
- The terms of trade and milk consumption remained stable but the amount of milk produced rose but was at par with the long term average for the month of June.
- Save for the normal in-migration taking place, there was death of livestock reported attributed to starvation.
- There was no fluctuation in the food consumption pattern and coping strategies applied from the previous month, however, the proportion of under fives rated as being 'at risk' of malnutrition declined falling within the normal range .

| Biophysical Indicators | Value | Normal Range |
|------------------------|-------|--------------|
| Rainfall (% of Normal) | 39 | 60-100 |
| VCI-3 month (County) | 27.0 | >35 |
| VCI-1 month (T. North) | 19.4 | >35 |
| State of Water Sources | 4-5 | 5-6 |

| Production Indicators | Value | Normal Range |
|--|--------------|--------------|
| Livestock Migration Pattern | Normal | Normal |
| Livestock Body Condition | Fair to Good | Good |
| Milk Production | 2Litres | > 2.0 Litres |
| Livestock deaths (attributed to drought) | No Deaths | No Deaths |

| Access Indicators | Value | Normal Range |
|----------------------------------|---------|--------------|
| Terms of Trade (ToT) | 38.2 | >36.5 |
| Milk Consumption | 1 Litre | >1.6 Litres |
| Return distance to water sources | 3.9 km | < 6.3 km |
| Cost of Water(Ksh/20L) | Ksh.0-5 | <Ksh.5 |

| Utilization Indicators | Value | Normal Range |
|--|-------|--------------|
| Nutrition Status, MUAC (% at risk of malnutrition) | 18.0 | <19.9 |
| Food Consumption Score (FCS) | 29 | >35 |
| Coping Strategy Index (CSI) | 15.6 | <16.9 |

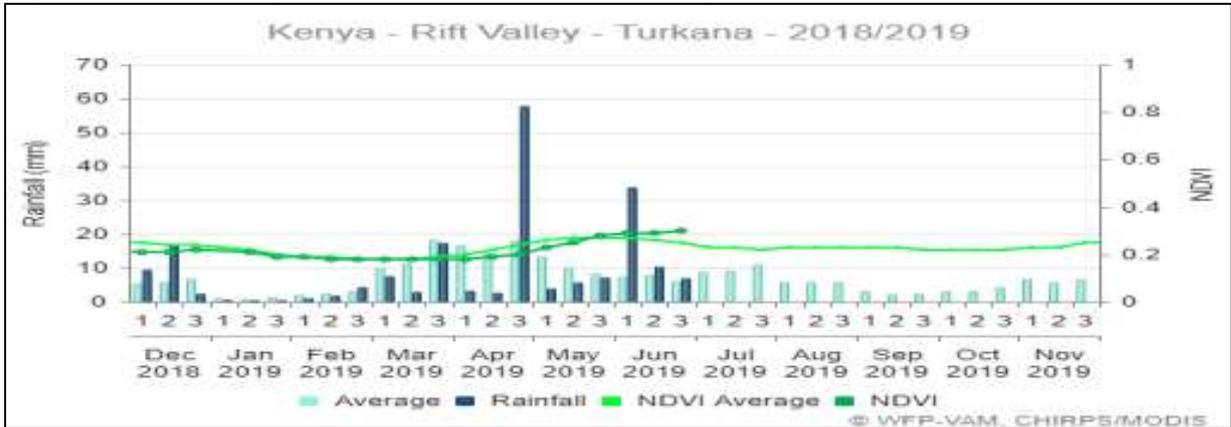
- | | | | |
|--|---|--|---|
| <ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks Land preparation | <ul style="list-style-type: none"> Planting/Weeding Long rains High Calving Rate Milk Yields Increase | <ul style="list-style-type: none"> Long rains harvests A long dry spell Land preparation Increased HH Food Stocks Kidding | <ul style="list-style-type: none"> Short rains Planting/weeding |
|--|---|--|---|

| | | | | | | | | | | | |
|-----|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|
| Jan | Feb | Mar | Apr | June | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|-----|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The county experienced rainfall during the month under review with a gradual decrease in amount being witnessed from the first dekad to the third. Rainfall received in the western side of the county was enhanced while that experienced in the north eastern and south eastern strip was depressed. The average distribution in time was 3-4 days in June.

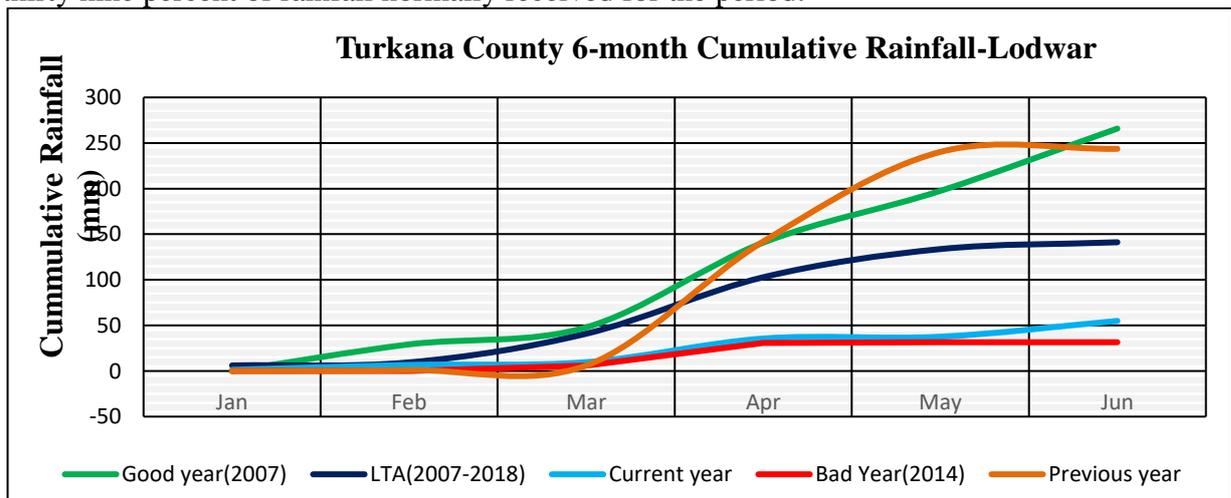


Source: VAM (World Food Programme)

- Notably though the following hotspots depicted drier than normal conditions, these include: Nakwei, Lokoiyoo, Nayanangalalio, Nakitoongber, Lokitangober, Kaalem, Riokomor, Koskolei, Naurendiria, Nimwae, Kanakurudio, Lolupe, Lokudure Kobiin, Ekoropus, Ekoropus, Kangirega, Kekunyuk, kagete, Kapelo, Katilu centre, Nakosmae, Loturerei, Lochwaa, Kalapata and pockets of Kasuroi, Lokitoliwo, pockets of Lopii and Lokwamosing

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- The meteorological station located in Lodwar recorded 17.3mm of rainfall and that amount was over two hundred percent above what is normally received during the month of June. The distribution in space was even.
- Cumulative rainfall for the six month period ranging from January 2019- June 2019 represents thirty nine percent of rainfall normally received for the period.



Source: Meteorological Department (Turkana County)

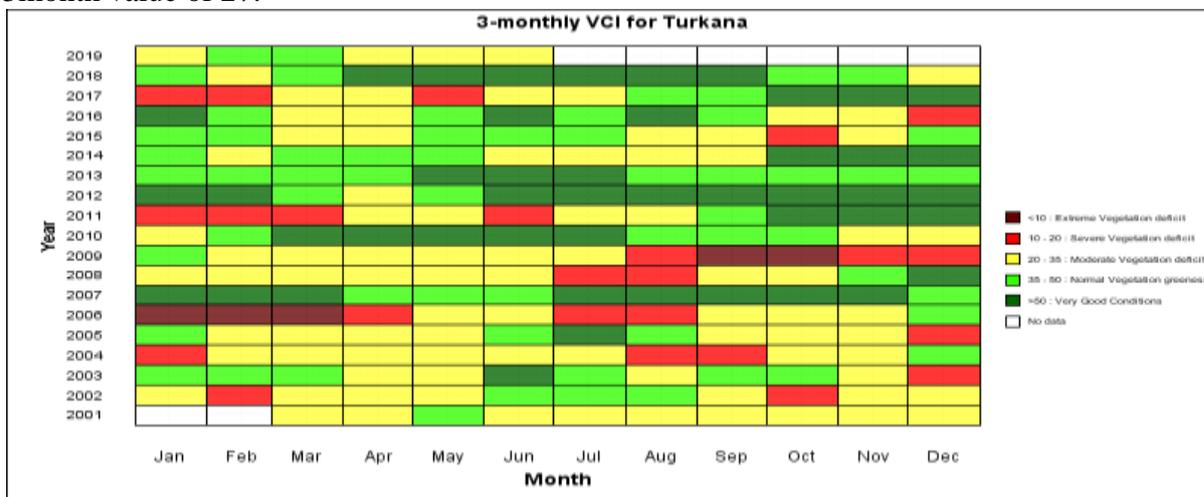
- Comparatively, cumulative rainfall for the period January to June for the previous year remains significantly higher by a margin of 188.7mm to that of the current year for the same period. Historically, the period between January to June 2014 is considered to be the bad year.
- During the month under review, floods were experienced in some sites in Turkana west including Letea and Lokangae, consequently, massive destruction was witnessed.

2.0 IMPACTS ON VEGETATION AND WATER

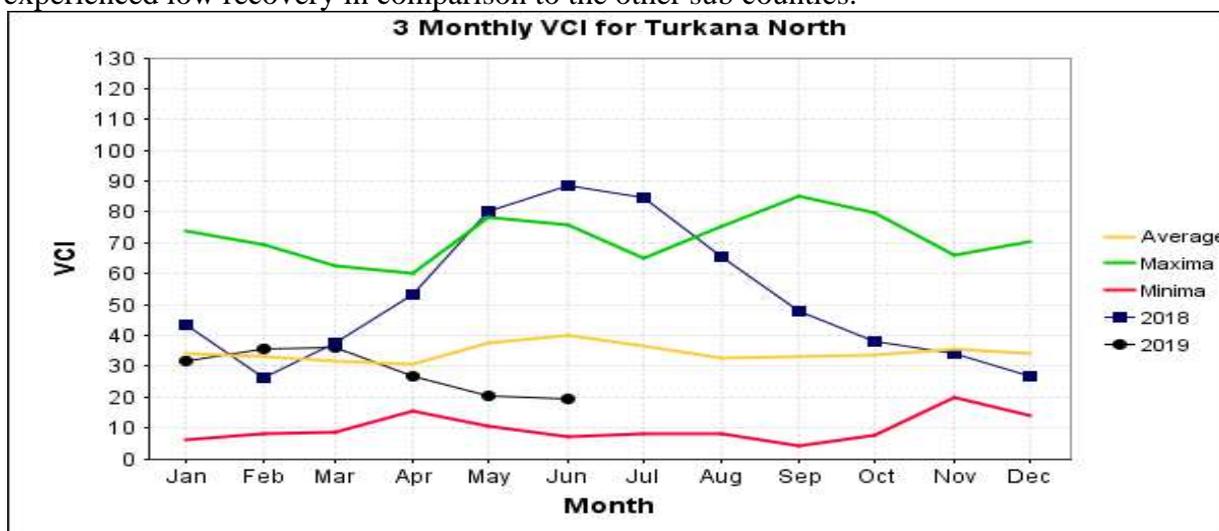
2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

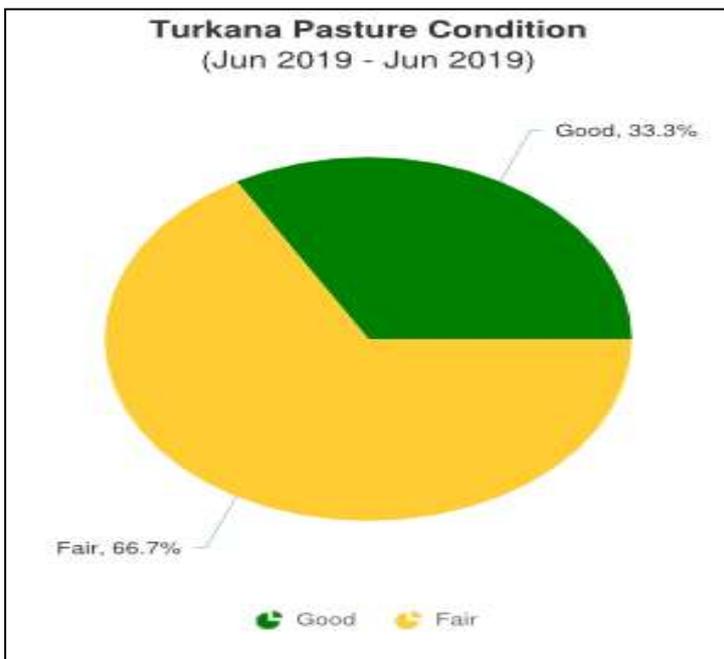
- The matrix below depicts the trend in vegetation condition in the county. Despite significant recovery in the condition of vegetation being witnessed during the month under review, some parts of the county were experiencing moderate vegetation deficit as evidenced by the VCI-3month value of 27.



- Significant improvement in the condition of vegetation was observed across all the sub counties with Turkana west and Loima boosting dense canopies.
- However, recovery was low in Lake zone, Kaeris, Katilia, Lokori, Lokichar, Kerio, Kanamkemer, some parts of Kaaleng, Lapur and Kalokol wards.
- Generally, Turkana north and east were ranked top among those sub counties that had experienced low recovery in comparison to the other sub counties.



- Receipt of significant rainfall during the month under review coupled with the cumulative effect of the rainfall received in April and May was the major factor influencing the observed improvement in the condition of vegetation.



2.1.2 Pasture

- The condition of pasture during the period under review was fair across all the sites in the county. In addition, the level of pasture observed in June was at par with that witnessed normally. The improved pasture condition could be attributed to the precipitation experienced during the review month and preceding ones.

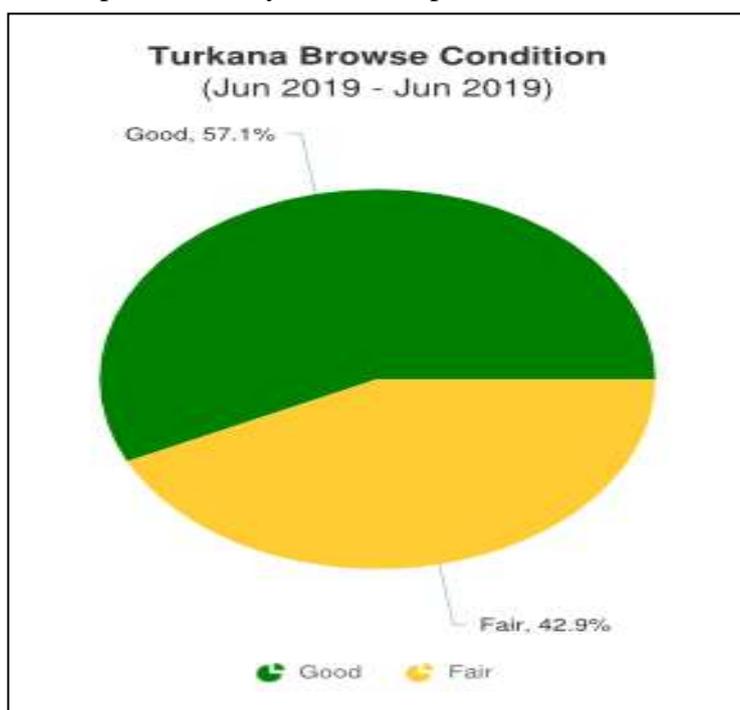
- Improved pasture condition was evident in areas mainly within the plains formerly exhibiting depleted pasture characteristics. Available pasture is projected to last for a period of 1-2 months.

- Restricted access to pasture during the month under review was mainly attributed to insecurity within the major conflict hotspots such as Kapedo and Lomelo in Turkana east, Lobokat and Kaputir wards in Turkana south and this was further compounded by the high prevalence of livestock diseases such as Contagious Caprine Pleuropneumonia reported in June.

- There was no significant variation in the pasture quantity and quality observed during the month under review across the three livelihood zones save for some few sites along the Fisheries livelihood zone that had not experienced considerable recovery.

2.1.3 Browse

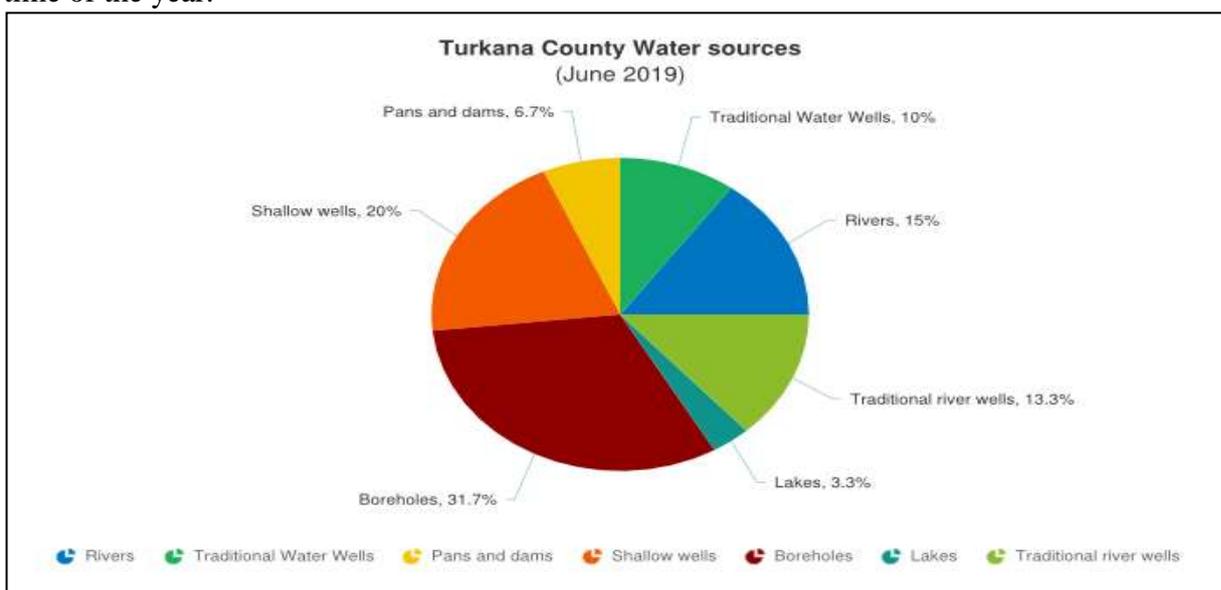
- During the month of June, the condition of browse was generally good across most sites in all the three livelihood zones. Consequently, the observed level in terms of density was at par with the one normally witnessed at such a time of the year.
- Receipt of relatively enhanced rainfall for the month under review coupled with the cumulative effect of the precipitation experienced in April and May were the push factors behind the observed browse condition.
- Available browse across all the livelihood zones is forecasted to last for a period not less than 3-4 months with the possibility of extending to five months if rainfall is received over the remaining segment of the JJA season especially along the western side of the county.
- The major impediment to browse access especially in the northern part (Todonyang and Kibish), eastern side and some parts of north west of the county was insecurity.
- The level of browse was relatively uniform across all the three livelihood zones.



2.2 WATER RESOURCE

2.2.1 Sources

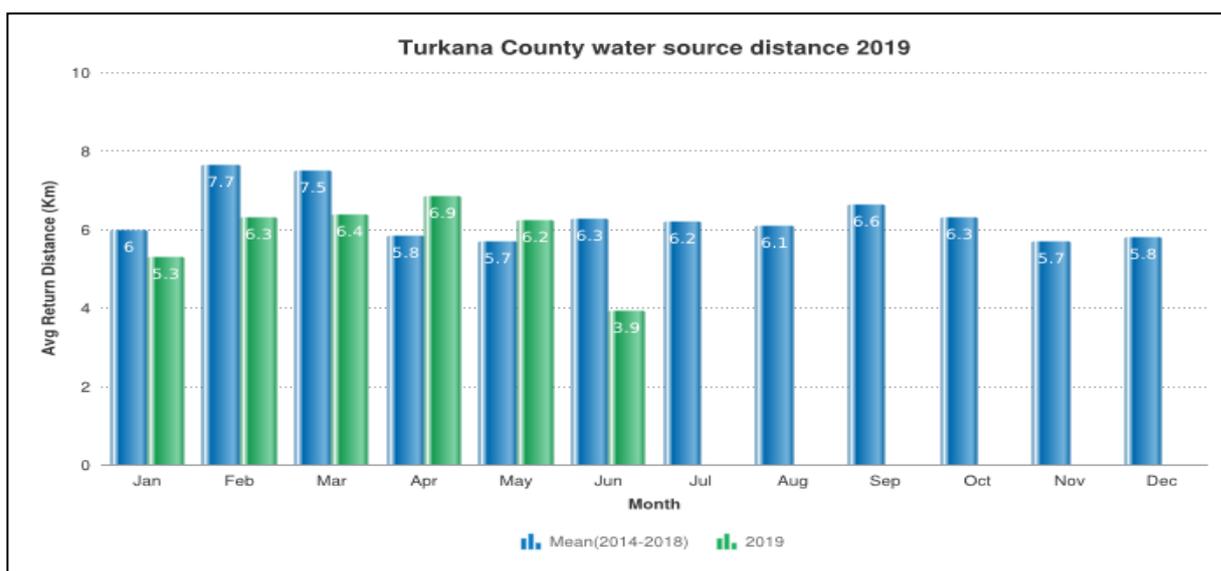
- Boreholes, shallow wells and rivers were the three major sources of water in use by the community during the month under review.
- There was a notable increase in the proportion of households drawing water from shallow wells during the period under review across the three livelihood zones and this could be attributed to the high water table along the seasonal rivers traversing most parts of the county occasioned by improved volume and regular flow of water.
- The recharge capacity in most open water sources like pans and rock catchments was at fifty percent to seventy five percent. This being at par with the level normally witnessed at such a time of the year.



- The depth of the traditional river wells reduced considerably and averaged less than one metre.
- There was no variation in the sources in use during the month under review from those normally used at such a time of the year.

2.2.2 Household access and Utilization

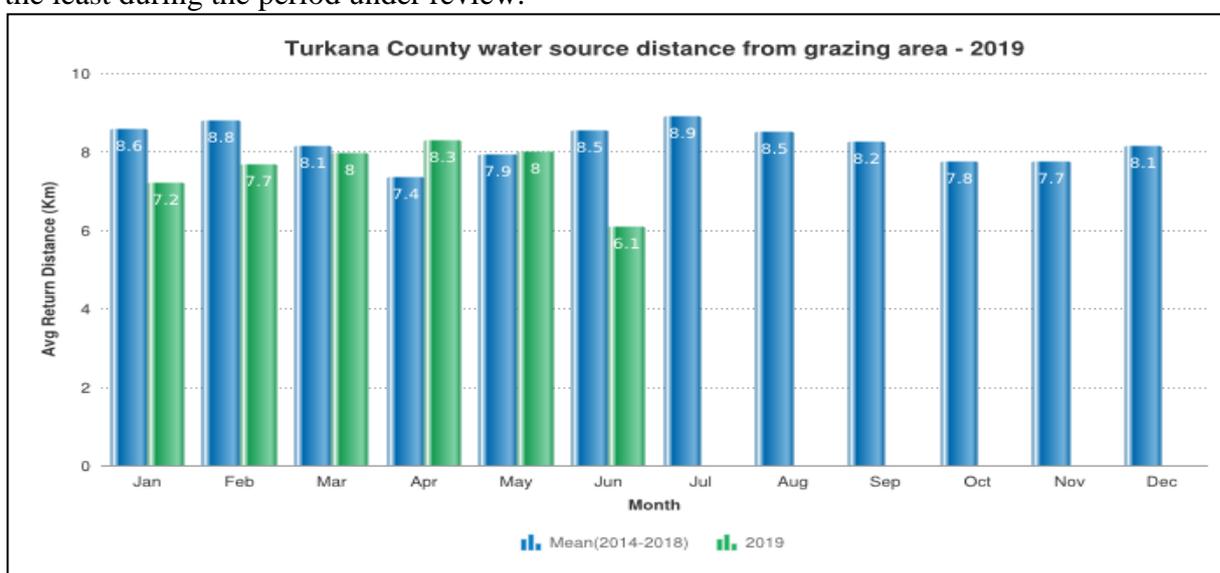
- Household return distance to water source dropped by thirty eight percent from that reported in May and was significantly below the long term average distance for the month under review by thirty nine percent.



- The Pastoral livelihood zone reported the longest distance of 3.7km with the Fisheries livelihood zone reporting the least distance of 2.1km. The waiting time at water source dropped and averaged forty five minutes in the Pastoral zone, thirty minutes in the Agro Pastoral zone and twenty minutes in the Fisheries livelihood zone.
- Considerable improvement in the level of water consumed per person per day was recorded during the period under review. The Pastoral zone reported an average of thirty to forty litres with the Agro Pastoral and Fisheries livelihood zones reporting fifty to sixty litres.
- While the cost of water at source was free, water vendors along major urban centres were dispensing a twenty litre jerry at five shillings and the price was within the normal range.

2.2.3 Livestock access

- Similarly, the return distance to water source from grazing areas for livestock decreased by twenty five percent from the one recorded during the previous month. Additionally, the reported distance was lower than the long term average distance for the month of June by twenty nine percent.
- The Pastoral livelihood zone returned the longest distance with the Agro Pastoral zone reporting the least during the period under review.



- The decrease in trekking distance could be attributed to improved pasture/ browse availability within areas in close proximity to open water sources that had recharged considerably. Other factors contributing to the decrease in trekking distance included repair of non-functional boreholes by the rapid response teams and the improved water table that further increased the number of functional boreholes.
- The watering frequency for all livestock species across the Pastoral livelihood zone was 4-5 times per week while in the Agro Pastoral and Fisheries livelihood zones it averaged six times per week. The low watering frequency in some sites was partly due to Pastoralists limiting their livestock from accessing water but not as a result of water in adequacy.
- Improved water availability owing to receipt of rainfall over the three months of April, May and June across all sites was the major factor influencing the average to above average watering frequency during the period under review.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

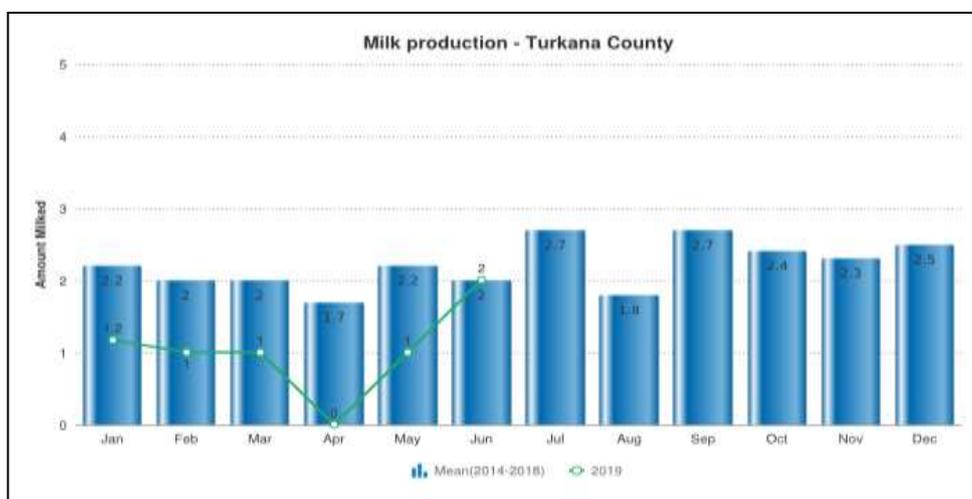
- During the month under analysis, livestock body condition for goat and camel was fair to good while that of sheep and cattle was fair across the three livelihood zones. The shoulder blade in goat was not visible while the loin was moderately developed in some with the backbone slightly visible. Cattle across all sites had a fair fat cover with the hump in camels well developed.
- The body condition of all livestock is projected to improve further over the next one month as the animals continue to recover owing to availability of adequate forage and water over that period across all livelihood zones.
- Reduced trekking distance occasioned by pasture and browse availability was the major factor influencing the observed livestock body condition during the month under review.

3.1.2 Livestock Diseases

- Incidents of Contagious Caprine Pleuropneumonia (CCPP) and Pest Petis Ruminantes were reported in Letea and Kaeris wards with all sites reporting increased worm load.

3.1.3 Milk Production

- A negligible number of the sampled households mainly within the plains reported to have milked during the period under analysis. From those that reported, the average production per day



per household was two litres and thus an improvement from that recorded during the preceding month of May.

- Goat was the major milk producer during the reporting period across all the livelihood zones.
- Amount of milk produced during the month under review was at par with that produced normally during the month of June.
- Availability of pasture/browse, the calving taking place coupled with improved access to water within reduced trekking distances were the major drivers of the increased production level during the month of June.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

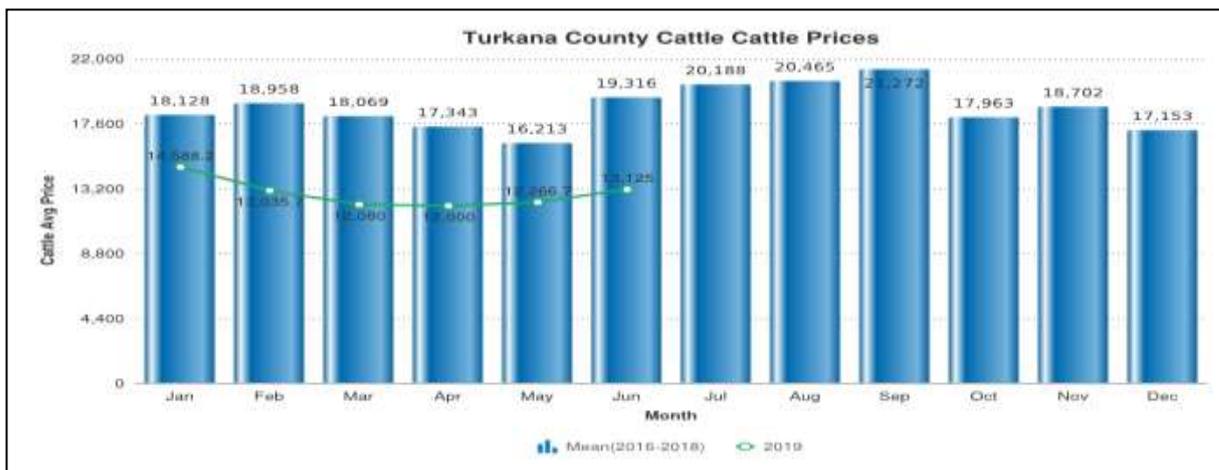
- Sorghum, cowpeas and maize are the main food crops cultivated by most farmers practising rain fed agriculture during the long rains season along the Agro Pastoral livelihood zone.
- Production is projected to be significantly low owing to the late onset of the long rains that hindered majority of the farmers from planting on the farms they had already prepared with the situation likely to be worsened by the losses that occurred as a result of the floods that destroyed a number of farms where late planting took place.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

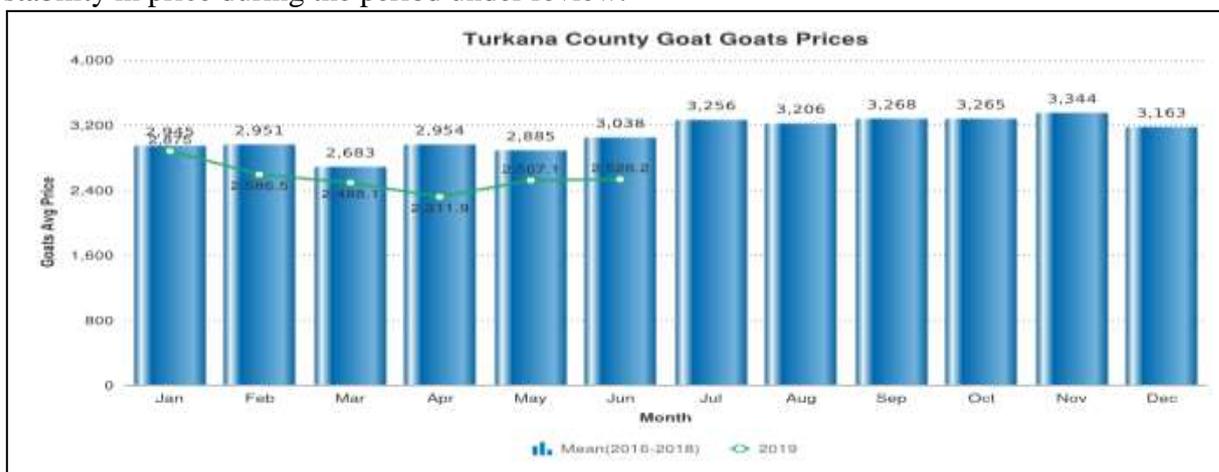
- During the period under review, the price of a 4-year old medium sized bull increased slightly by seven percent from the one reported in May.



- The appreciation in price could be attributed to the improved cattle body condition relative to the previous month occasioned by availability of pasture and water within shorter trekking distances.
- Cattle sales were reported only in the Pastoral and Agro Pastoral livelihood zones with the former zone returning the lowest price of Ksh.12,950 while the latter reported the highest price of Ksh. 13,420.
- Despite the recorded improvement in cattle price during the period under review, the prevailing price was lower than the three year average price of cattle for the month of June by a significant percentage of thirty two.

4.1.1 Small Ruminants Prices (Goat price)

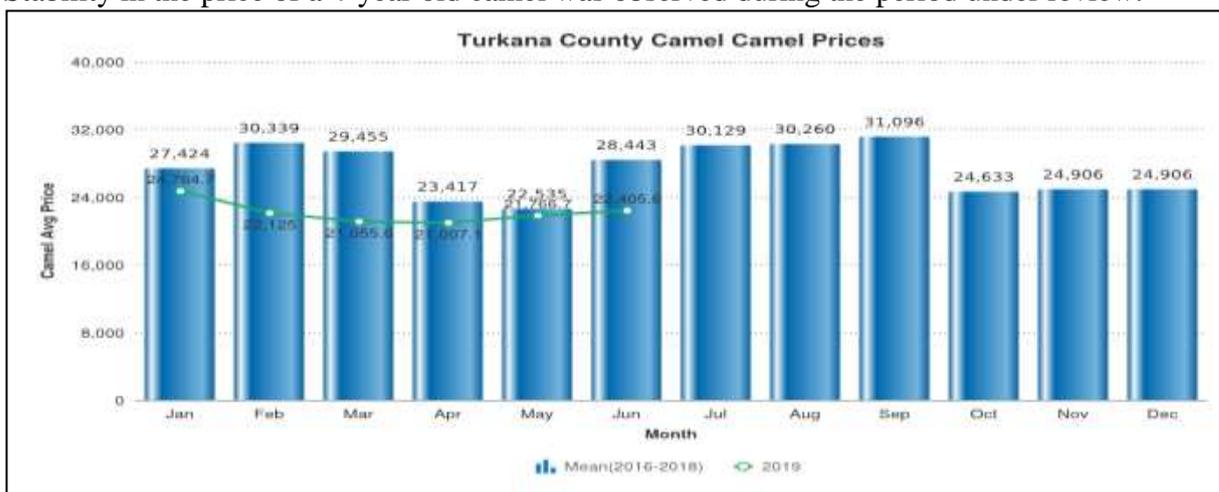
- A 2-year old medium sized goat generally traded at an average price of Ksh. 2,526 during the period under review hence no significant change from the price recorded previously.
- Browse conditions remained relatively the same as the previous month albeit improving slightly but that did not have a considerable impact on the body condition of the goat thus the observed stability in price during the period under review.



- There was no variation in the price recorded across all the livelihood zones with the Agro Pastoral and Pastoral zones reporting an average price of Ksh.2,530 while the Fisheries livelihood zone returned an average price of Ksh.2, 500.
- The short time average price of goat for the month of June was higher than the price recorded during the period under review by seventeen percent.

4.1.4 Camel Prices

- Stability in the price of a 4-year old camel was observed during the period under review.

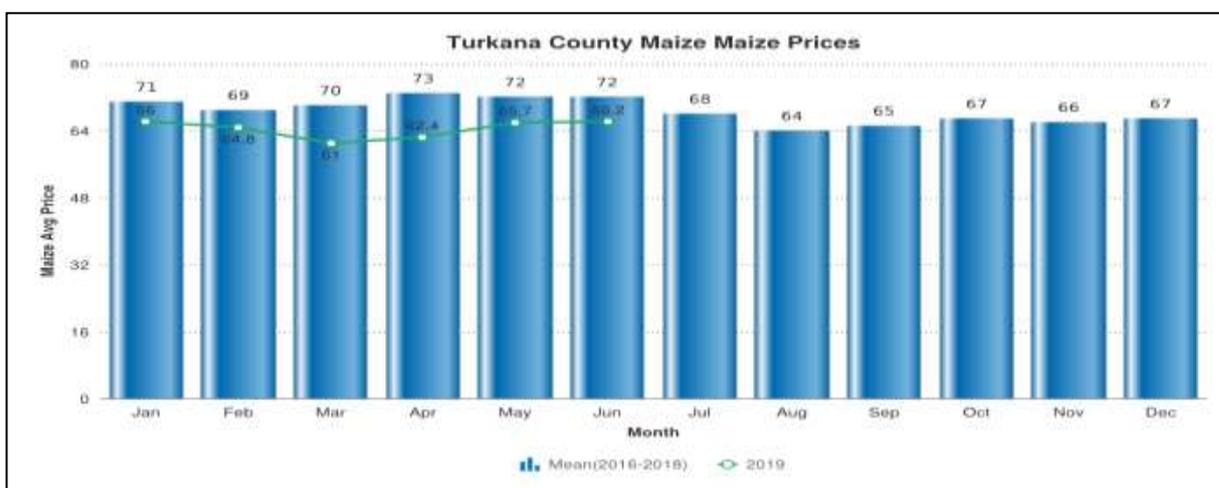


- The body condition of the camel did not improve significantly despite the browse condition improving hence the observed stability in the market value.
- Sales were recorded only in the Pastoral and Agro Pastoral livelihood zones, the former zone returned the highest value of Ksh. 23,580 while that recorded in the latter zone was Ksh. 20,050.
- The three year average price of camel for June was higher than the reported price during the month under analysis by twenty one percent.

4.2 CROP PRICES

4.2.1 Maize

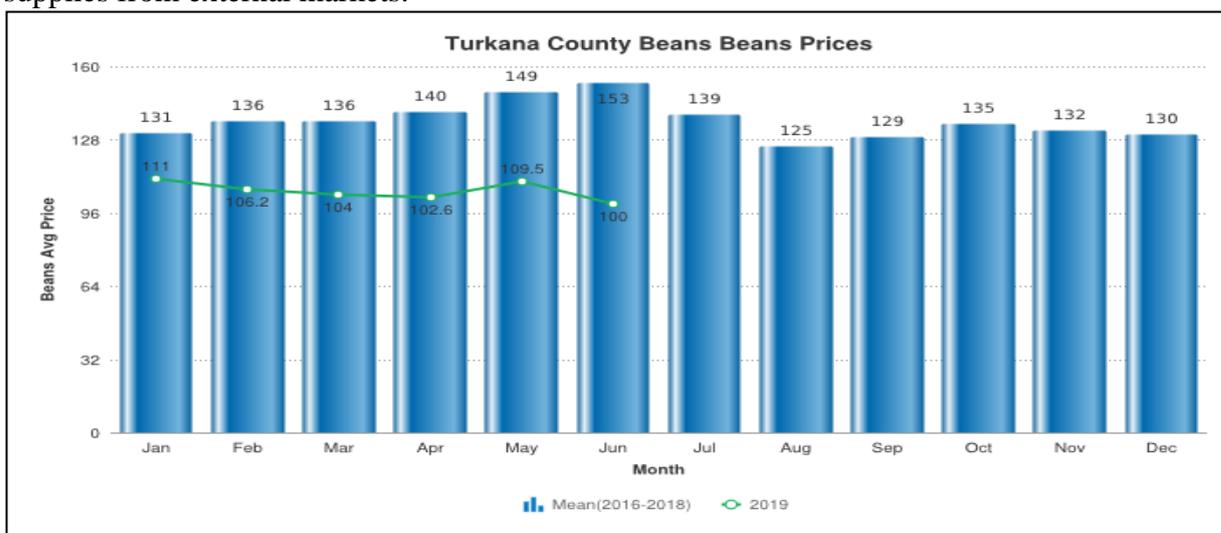
- The reported price of maize per kilogram during the period under review did not change from that recorded in May.



- The Pastoral livelihood zone recorded the highest price of Ksh. 70 with the Agro Pastoral zone reporting the least price of Ksh.60, along the Fisheries livelihood zone, a kilogram of maize was trading at Ksh 63 during the month of June.
- Some of the markets posting an outlier value of Ksh. 100 per kilogram of maize were mainly in Turkana north sub county and these included Kaeris, Lokitaung and Kaaleng among others.
- Intensified supply of maize from the external markets in Kitale and Kapenguria coupled with the imports from Uganda enhanced availability within the internal markets across all the livelihood zones thus the observed stability.

4.2.2 Beans

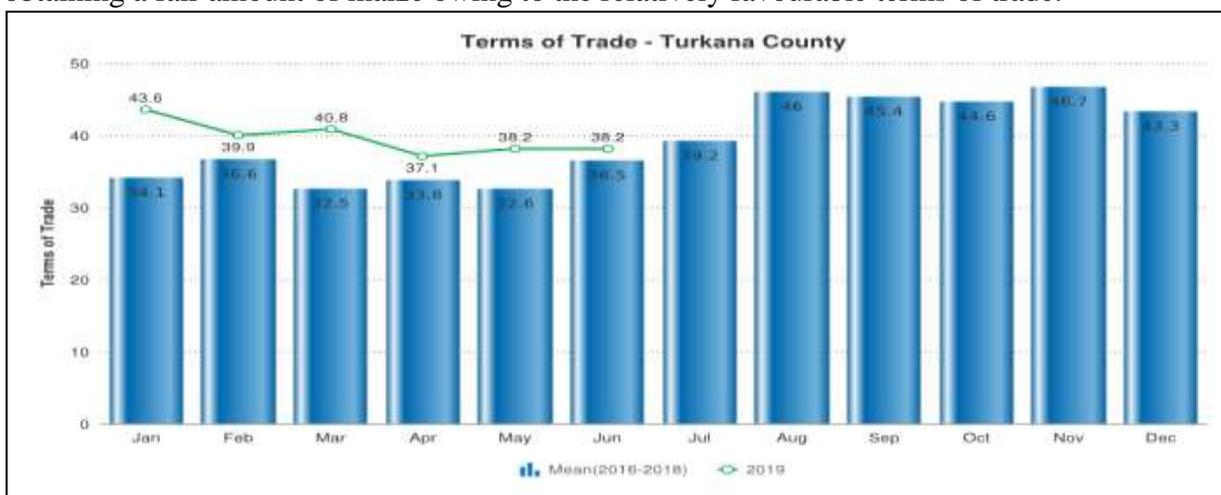
- A slight dip in the price of beans per kilogram was recorded during the month under review. The observed trend could be attributed to improved availability mainly driven by imports and supplies from external markets.



- All the livelihood zones recorded a uniform price of Ksh. 100 during the month under analysis.
- The short term average price of beans for the month under review was higher than the prevailing market price by thirty five percent.

4.3 Livestock Price Ratio/Terms of Trade

- There was no fluctuation in the terms of trade recorded in June from the one reported in May. Therefore, the amount of maize purchased from sale of a goat remained the same as that obtained during the preceding month following sale of a similar goat.
- The three year average terms of trade for the period was at par with the one reported during the month under review.
- Nevertheless, Pastoral households normally dependent on the market for their supplies continued obtaining a fair amount of maize owing to the relatively favourable terms of trade.

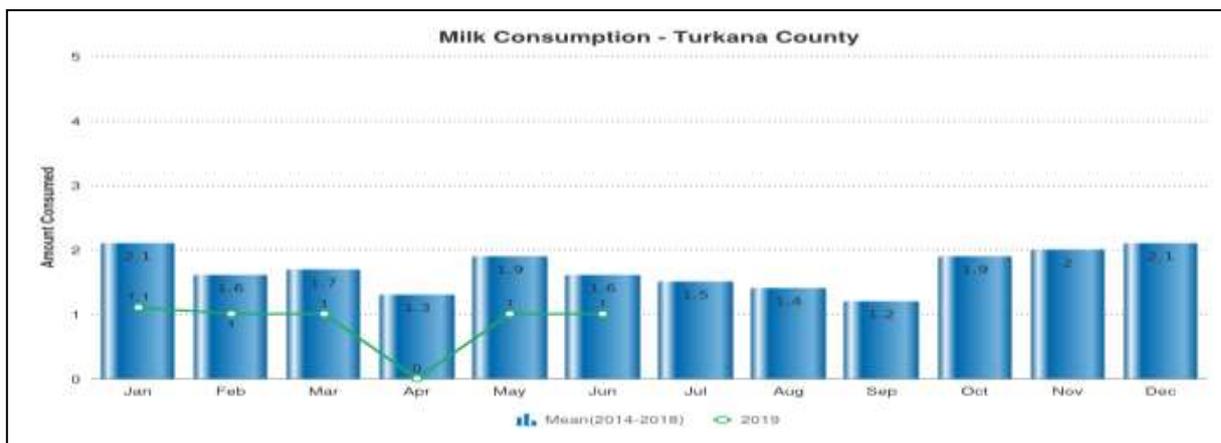


- The price of goat and maize remained unchanged from the one reported during the previous month hence the observed stability in the terms of trade.
- Notable though was the fact that Turkana north, largely pastoral, returned below average terms of trade relative to the overall terms of trade for the county.
- Improvement in the terms of trade is expected although not significantly across the month of July and later stabilize owing to the existing better rangeland conditions that are likely to translate to a better body condition for goat thus attracting a slightly higher price at the market in comparison to the month under review.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

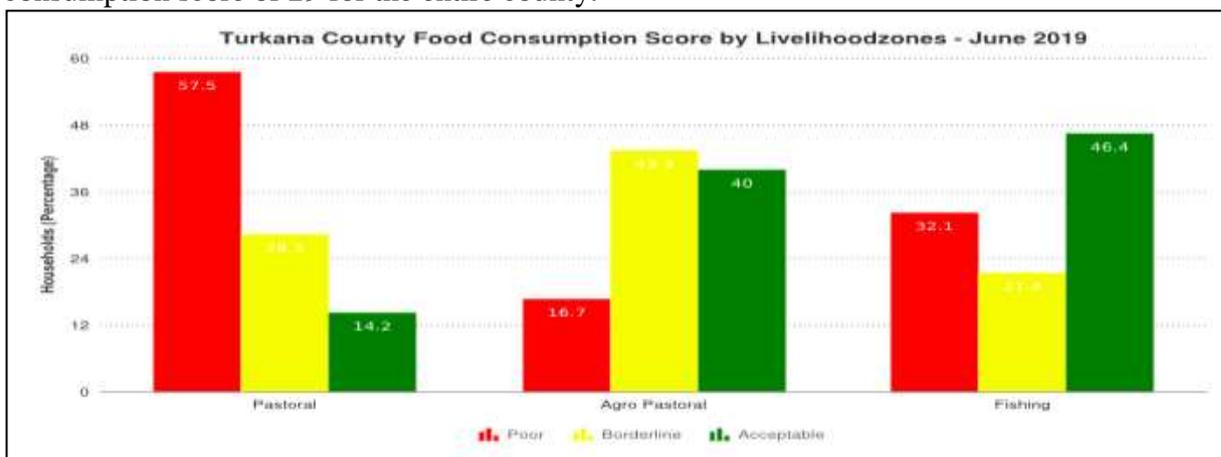
- Some few households out of the sampled two hundred and six reported to have consumed milk during the period under analysis. However, the consumption level among these households remained stable in relation to the previous month.



- Despite production improving slightly, consumption did not assume a similar trend since part of the milk was sold hence the observed stability.
- During the month under review, the level of milk consumed was lower than the normal consumption level for the period by thirty eight percent.

5.2 FOOD CONSUMPTION SCORE (FCS)

- Out of the sampled two hundred and six households in June, proportion of households falling within the acceptable, borderline and poor food consumption score categories was twenty five percent, thirty three percent and forty two percent respectively.
- Compared to the previous month, there was significant variation in the proportion of households falling within those aforementioned categories.
- Stability in the food consumption pattern was observed as evidenced by the unchanged food consumption score of 29 for the entire county.

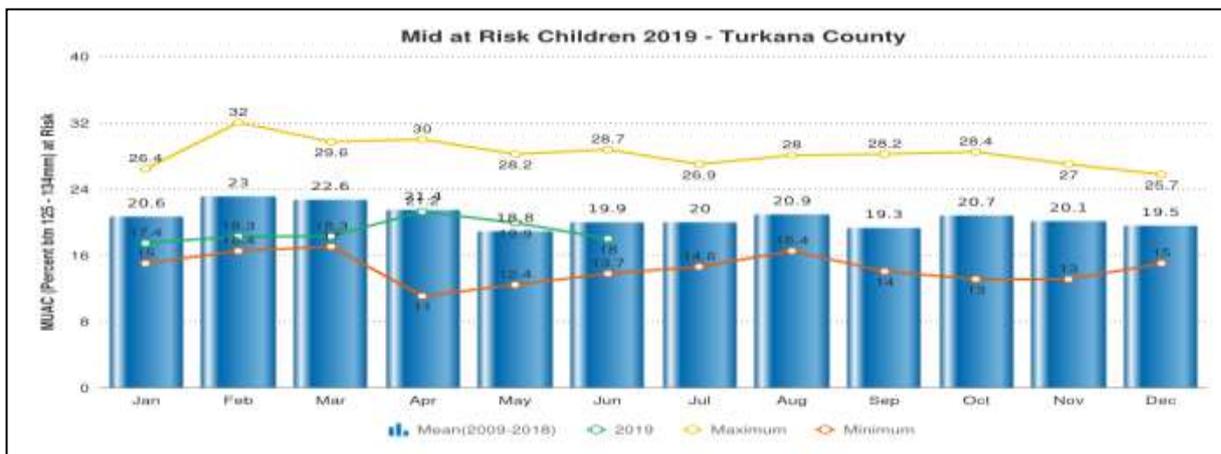


- Majority of the households resident in the Pastoral livelihood zone had a poor FCS unlike in the Agro Pastoral and Fisheries livelihood zones where they fell within the borderline and acceptable bands respectively.
- Among the sub counties returning the highest number of households within the poor FCS class during the month under review were Turkana north, south and Loima.
- The lowest FCS of 23 was reported in the Pastoral livelihood zone with the highest of 33 being recorded in the Fisheries zone, the Agro Pastoral livelihood zone returned an FCS of 30.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- Out of the sampled nine hundred and ten under fives during the period under analysis whose mid upper arm circumference measurement was taken, forty five percent consisted females while fifty five percent were males.
- Proportion of children in the county rated as being ‘at risk’ of malnutrition decreased further from the one reported during the preceding month.



- Consequently, the aforementioned proportion was lower than the proportion of children normally rated as being ‘at risk’ of malnutrition for the period under review by ten percent.
- The observed trend could be attributed partly to milk availability albeit in select households coupled with the impact of interventions implemented by various agencies including distribution of relief food, nutrition commodities and cash transfers targeting affected households within malnutrition hotspots.

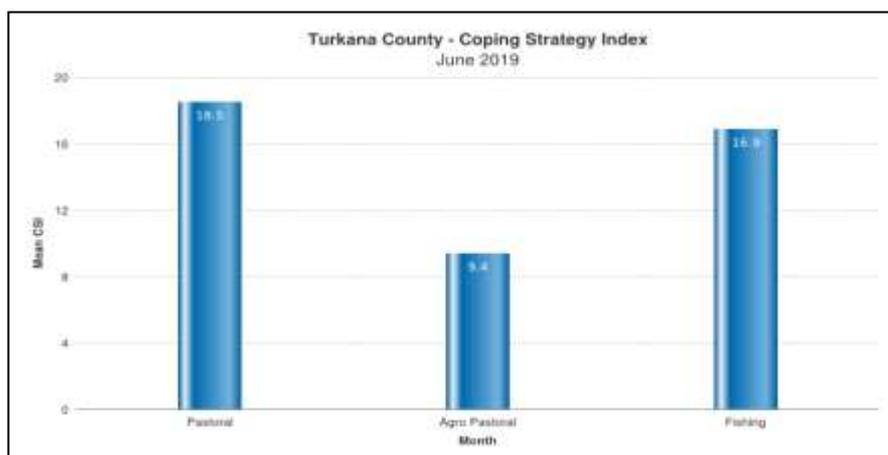
5.3.2 Health

- Prevalent ailment reported among the sampled under fives during the month of June was fever with chills like malaria and diarrhoea across all the three livelihood zones.

5.4 COPING STRATEGY

5.4.1 Coping Strategy Index (CSI)

- Reduced coping strategy index for the period under review was 15.6 and hence it did not vary from the one reported during the previous month. Therefore, coping strategies applied by households remained relatively the same across the two months.
- Constraints to food accessibility/ money to buy food was pronounced for households’ within the Pastoral and Agro Pastoral livelihood zones compared to those resident in the Fisheries livelihood zone.
- Reduced portion size and reliance on less preferred food/less expensive food were the predominant coping mechanisms during the month under review.



6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD

- Distribution of relief food was conducted in June by various agencies as shown below:

| Intervention(s) | Sub-County/Ward/Location | No. of Beneficiaries | Implementers |
|--|--------------------------|---|---------------------------|
| Distribution of relief Food: 36196 (50kg) bags of maize, 7240 (50kg) bags of beans and 6787 (20litre jerry cans) of vegetable oil | All the six sub counties | 609167 persons | Turkana County Government |
| Turkana SFSP Project under WFP and Turkana County Government. Distributed 1,314.25 MT of Cereals, 262.7 MT of Pulses and 87.26 MT of Vegetable Oil. Total Tonnage of 1664.406 MT | All the six sub counties | 12,167 Households=73,000 beneficiaries. | World Vision Kenya |

6.2 NON-FOOD

| Intervention | Sub-County/Ward/Location | No. of Beneficiaries | Implementer/Organization |
|--|--|-------------------------|---|
| Pipeline extension from Naoyaregae to Kapelibok | Turkana South Sub-county, Kaputir Ward, Nakwamoru Location | Approx. 2000 | World Vision |
| Training four (4) Women and Youth Business Groups on Village Saving and Loaning Association (VSLA) concept and Distribution of VSLA Kits | Turkana North (Kopotea) Kibish (Nakinomet, Koyasa and Karebur) | 111 | VSF Germany |
| Training of 30 Community Disease Reporters (CDRs) on Livestock Participatory Disease Search (PDS) | Turkana North Sub-county - (Jerumani, Kaaleng, Losajait, Nakerio, Manalongoria, Kibish Sub-County- (Lobulono, Napak, Koyasa, Lokomarinyang and Kibish) | 30 | VSF Germany & Turkana County Government – Department of Veterinary Services |
| Cash-Transfer | Turkana east: kochodin ward- Karuko, Lokwamosing Lopii, Katamanak, Losmekori Lotiman, Ngilomokemer Kakulit, Lochakula, Ngiminaye Turkana south: Kalapata ward- Nakalei, Katir Chokchok, Kakalel | 1529 HHs 671 HHs | Kenya Red Cross Society |
| Borehole Rehabilitation | Lokiriama, Kaekoroakwaan, Urum, Lokwatuba, Nagis | 2444 HHs | APAD with support from Brooke East Africa |
| Hay Distribution | Nanaam, Lomil | 337HHs | |
| HSNP Cash transfer | All the six sub counties | 39,589HHs | NDMA |

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- During the period under review, cases of insecurity were reported in Turkana south: Lobokat and Kaputir wards, Turkana east: Lokori/Kochodin ward and Kapedo/Napeitom ward.
- Following the floods witnessed during the month under review, a number of households exceeding one hundred were displaced in Turkana west in areas of Letea and Lokangae.

7.2 MIGRATION

- Movement of livestock from the border of West Pokot into Turkana south, Uganda into Turkana west and Loima sub counties was witnessed during the period under review.
- These were animals that had migrated outside the county during the drought period with the movement being triggered by pasture/browse availability within the county.

7.3 FOOD SECURITY PROGNOSIS

- The average seasonal cumulative rainfall was below the long term average despite performance picking up during the first dekad of the month under review. In addition, cessation was witnessed during the third dekad of June across most sites and consequently below are the projected most likely food security outcomes over July, August and September.
- Its highly probable food stocks especially for Agro Pastoral households shall deplete over the aforementioned period owing to a poor agricultural season occasioned by the late onset of the long rains coupled with the effects of flooding witnessed across most farms.
- Livestock body condition is expected to improve further owing to the better rangeland conditions/ water availability with a distinct possibility of enhanced milk production and slightly attractive market return value in July and thereafter start stabilizing during subsequent months.
- Malnutrition rates will most likely remain within the seasonal norm with the pastoral households purchasing power not likely to decrease significantly owing to the terms of trade projected to stabilize over the three months period.
- However, proper/normal market functionality coupled with improved security along access roads shall remain key in promoting access to food more so along the conflict corridors.
- Overallly, majority of the households will most likely remain 'stressed' with some experiencing 'crisis' food security outcomes in select areas within the Pastoral livelihood zone.

8.0 RECOMMENDATIONS

- **Health and Nutrition:** Enhance screening and referral for malnutrition in all the hotspots with continued active case finding while prioritizing integrated health outreaches for the sites exhibiting significantly high rates of malnutrition and morbidity cases.
- **Water:** Scale up the repair of non- functional water structures and installation of water harvesting structures at key strategic locations as a preparedness measure.
- **Veterinary:** Intensify disease surveillance targeting migratory routes used by livestock trickling back into the county at the same time conducting strategic vaccination against CCPP, PPR and mass de-worming.
- **Food and Safety Net:** Sustain distribution of relief food targeting vulnerable households across all the sub counties while initiating/strengthening cash transfer as a form of resilience building.
- **Peace and Security:** Intensify peace building and conflict mitigation efforts targeting conflict hotspots along the county borders by conducting regular inter-county and cross-border dialogue meetings.