

National Drought Management Authority

TURKANA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2019



A Vision 2030 Flagship Project



JANUARY EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Early Warning (EW) Phase Classification

LIVELIHOOD ZONE	PHASE	TREND
PASTORAL-ALL SPECIES	ALARM	WORSENING
AGRO-PASTORAL	ALERT	WORSENING
FISHERIES	ALERT	WORSENING
COUNTY	ALERT	WORSENING

Drought Situation & EW Phase Classification

Biophysical Indicators

- The county did not experience any notable rainfall amounts during the month under review and as a consequence, the cumulative rainfall for the 6-month period ranging from August 2018 to January 2019 accounted for only thirty six percent of the normal rainfall for that period.
- The condition of vegetation deteriorated further as evidenced by the VCI-3month value of 33 depicting moderate vegetation deficit. Turkana west sub county remained the worst affected with severe vegetation deficit.
- Continued decline in water availability was witnessed with some sites in Pastoral zone experiencing significant shortages.

Socio Economic Indicators (Impact Indicators)

- Livestock body condition was fair but tending to poor and the trekking distance to water source for households and livestock increased slightly from that reported previously.
- A negative trend in milk production and consumption was observed across all areas during the month under review.
- Terms of trade declined considerably but remained within the normal range for the period. Significant migration was witnessed but there were no livestock deaths reported.
- There was no significant shift in proportion of children 'at risk', CSI and the FCS from that reported previously. Turkana west, north and south sub counties reported the highest number of households with a poor food consumption score.

Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)	36	60-100
VCI-3 month (County)	33	>35
VCI-3 month (T.West)	16	>35
State of Water Sources	3-4	5-6

Production Indicators	Value	Normal Range
Livestock Migration Pattern	Not Normal	Normal
Livestock Body Condition	Fair	Good
Milk Production	1.3 Litres	> 2.2 Litres
Livestock deaths (attributed to drought)	No Deaths	No Deaths

Access Indicators	Value	Normal Range
Terms of Trade (ToT)	43.5	>34
Milk Consumption	1.2 Litres	>2.1 Litres
Return distance to water sources	5.2 km	<6.0 km
Cost of Water(Ksh/20L)	Ksh.10	<Ksh.10

Utilization Indicators	Value	Normal Range
Nutrition Status, MUAC (% at risk of malnutrition)	17.4	<20.6
Food Consumption Score (FCS)	32	>35
Coping Strategy Index (CSI)	16.4	<16.9

- 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

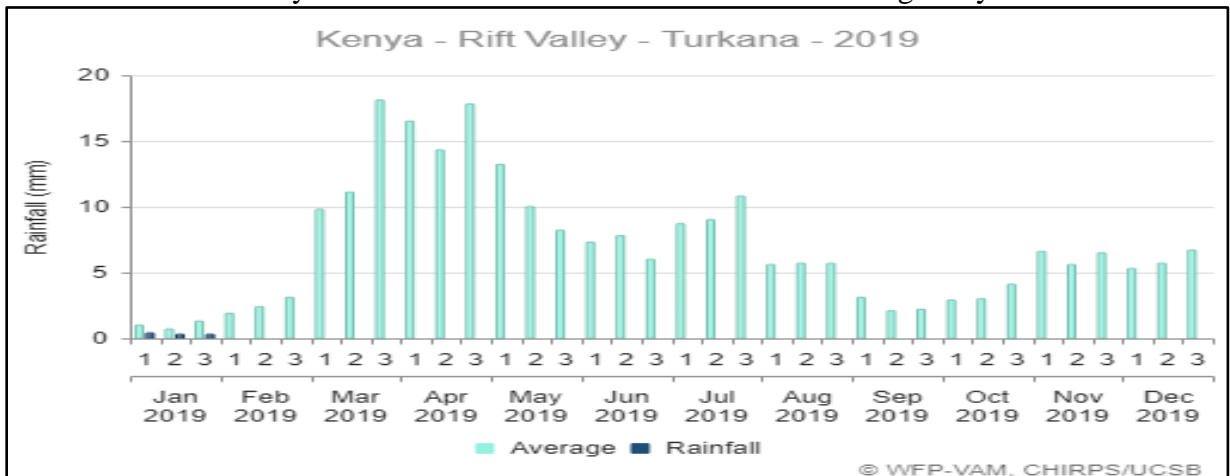
- Short rains
- Planting/weeding

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

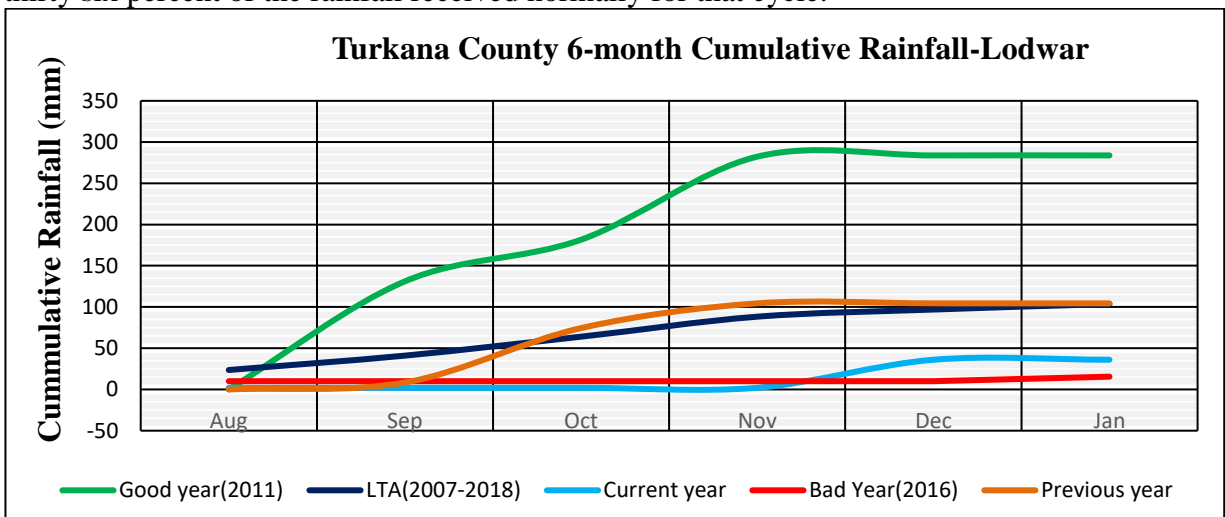
- The county did not experience any significant rainfall during the month under review, consequently, dry and hot weather conditions dominated all parts of the county. However, select areas mainly in Loima and Turkana central sub counties received depressed rainfall during the first dekad whose continuity was erratic with a distribution in time of a single day.



Source: VAM (World Food Programme)

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- During the month of January, amount of rainfall recorded at Lodwar meteorological station was only nineteen percent of what is normally recorded for the period. The distribution of rainfall in space during that period was highly uneven.
- The cumulative rainfall for the period commencing August 2018 to January 2019 was lower than the 12-year long term average cumulative rainfall for the same period by 66.3mm, translating to thirty six percent of the rainfall received normally for that cycle.



Source: Meteorological Department (Turkana County)

- Additionally, the current year’s six month cumulative rainfall totalling to 37.3mm was lower than that of the previous year for the period August 2017 to January 2018 by a margin of 67.1mm.
- The period ranging from August 2016 to January 2017 is considered to be the segmental bad year within the last twelve years as depicted above graphically.

1.3 OTHER EVENTS

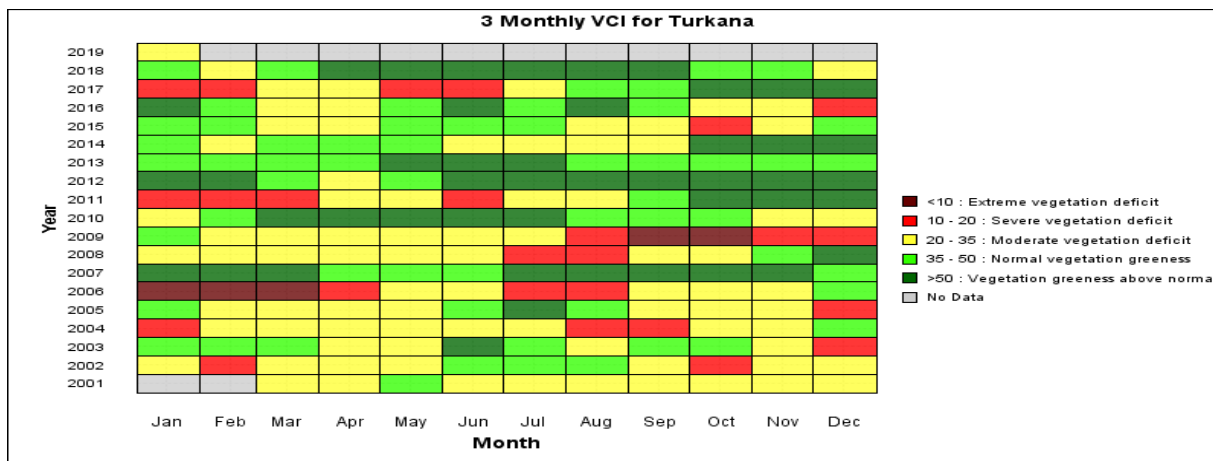
- There was no notable event such as wildfires reported during the month under review.

2.0 IMPACTS ON VEGETATION AND WATER

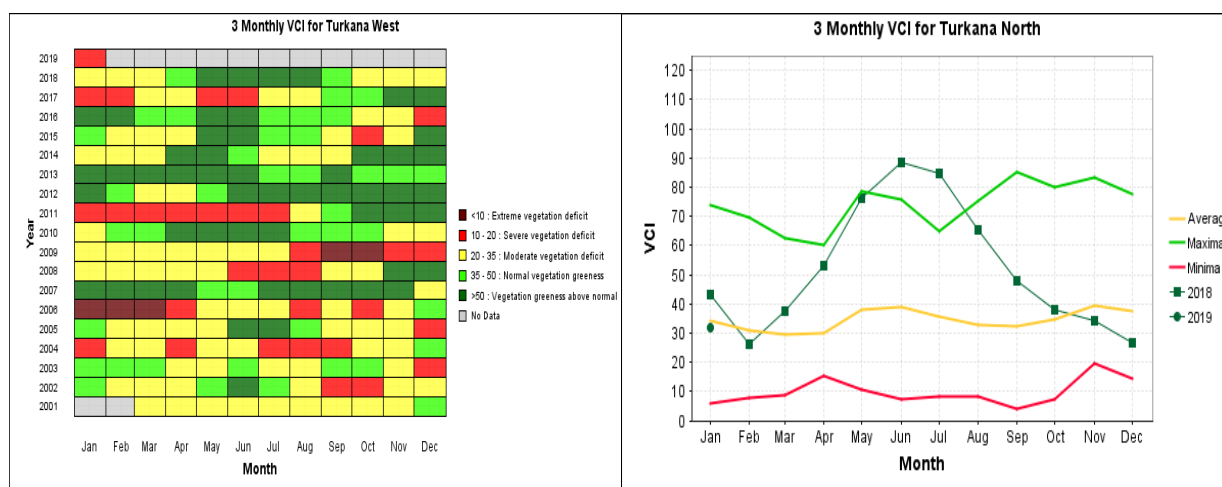
2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The county matrix below illustrates how months have been classified based on the level of vegetation deficit experienced across all the livelihood zones.
- Generally a continued decline in the vegetation condition was witnessed across all parts of the county during the period under review. Consequently, the county was experiencing a moderate vegetation deficit as evidenced by the VCI-3month value of 33.
- Vegetation greenness therefore, was outside the normal level for the month under analysis.

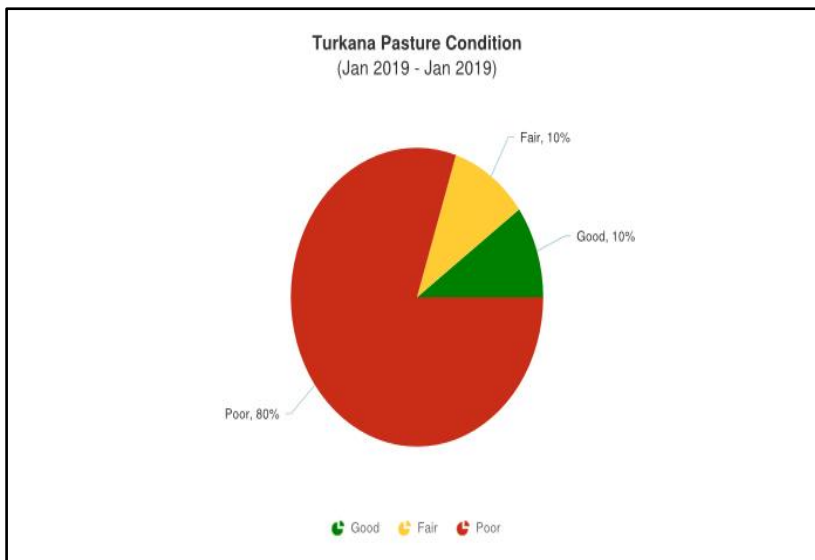


- Across all the sub counties, a negative trend in the condition of vegetation was evident as the dry and hot weather conditions persisted.
- Unlike other sub counties, Turkana west (illustrated below) was experiencing severe vegetation deficit during the month under review with Turkana north also exhibiting almost similar characteristics.
- The level of vegetation recovery in Turkana south and east sub counties following receipt of rainfall for two days during the second dekad of December was low and therefore the highest level of deterioration was witnessed in those sub counties during the month of January.
- Similarly, some wards like Kerio and Kanamkemer in Turkana central and Lorengipi/Lokiriama in Loima sub county portrayed negative characteristics in the condition of vegetation during the month under review.



- Absence of rainfall coupled with the persistent dry and hot weather conditions across the three livelihood zones were the factors accelerating the rapid deterioration in the condition of vegetation witnessed during the month under analysis.

2.1.2 Pasture



• Pasture condition across most parts in the county was generally poor and below the normal level for the period under review. The prevailing pasture condition could be attributed to absence of rainfall across all the livelihood zones during the month of January.

• However, some pocket zones along river Turkwel in Loima and Turkana south sub counties (both dominantly Agro Pastoral) had pasture that could however not last for more than

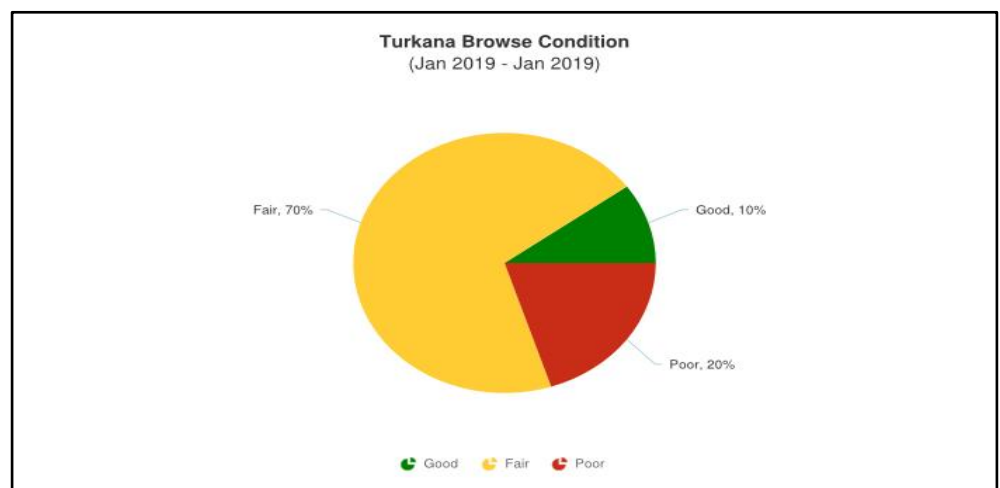
one month owing to the high concentration of livestock that had migrated there.

- Pasture was completely depleted in all wards in Turkana west, Lokori, Kalapata, Lokichar, Lake zone, Kerio, Kanamkemer and some parts of Lokirama and Lobokat wards.
- During the month under review, the main constraints to pasture access were in availability of water in areas in close proximity to dry season grazing areas, high diseases incidents in areas where livestock had converged and perennial insecurity in areas such as Kapedo/Napeitom, Lobokat (Kakong) and Todonyang where raids were reported.
- Some variation in terms of quality and quantity of pasture was observed during the month under review with the Pastoral and Fisheries livelihood zones being the most affected.

2.1.3 Browse

- The condition of browse during the month of January was fair but tending to poor and below the level normally witnessed at such a time of the year across all the parts of the county. The observed condition could be ascribed to absence of rainfall compounded by the dry and hot weather conditions that prevailed most parts of the county during the month under review.
- The available browse mainly in the Agro Pastoral livelihood zone that can be utilized by livestock is forecasted to last for the next one month as opposed to three months normally.
- During the month of January, the main impediments to browse access across the three livelihood zones were water in availability, livestock diseases and insecurity in the conflict hotspots.
- Some variation in terms of the quantity and quality of browse was observed across the three livelihood zones

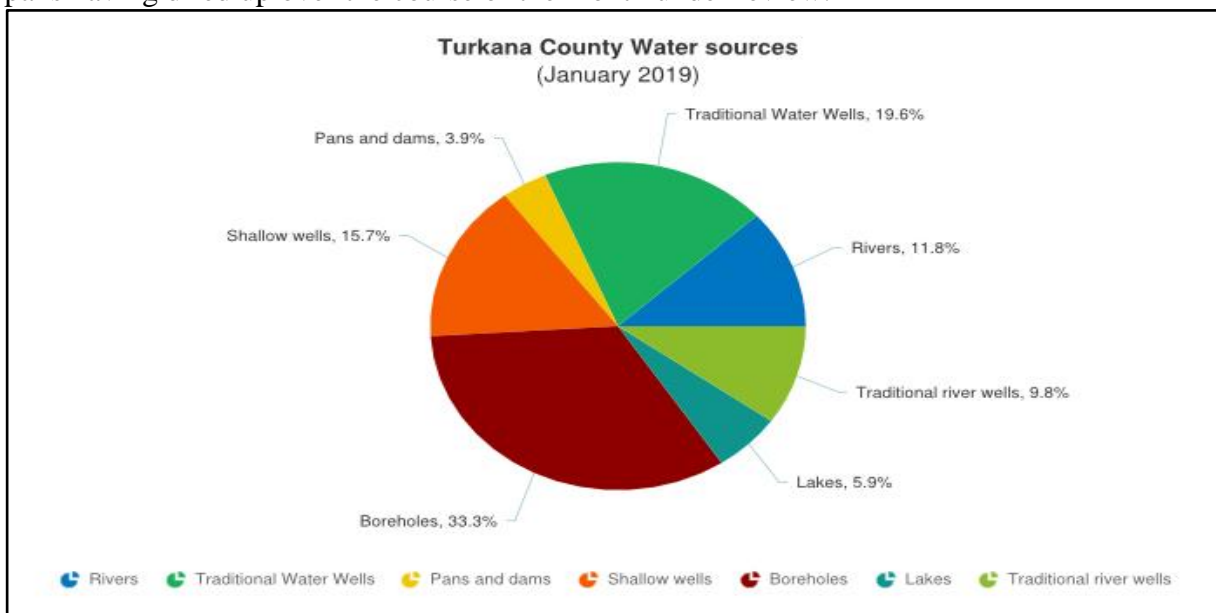
with that in the Agro Pastoral zone being fair in comparison to that in the Pastoral and Fisheries livelihood zones that was basically dry and depleted in some areas in Turkana west and north.



2.2 WATER RESOURCE

2.2.1 Sources

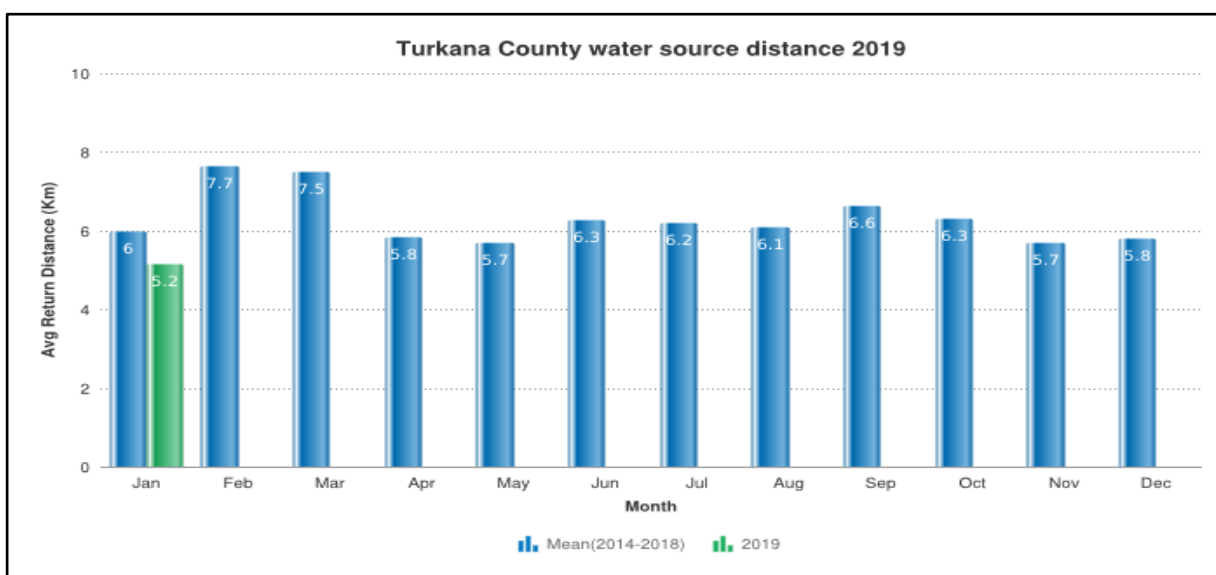
- The three major water sources in use by the community in January just like the previous month were boreholes, traditional water wells and shallow wells.
- There was a notable increase in the number of households resorting to use of traditional water wells unlike shallow wells previously with boreholes remaining the most common source of water for most of the households during the month under analysis.
- Utilization of water pans had the lowest percentage owing to over seventy five percent of water pans having dried up over the course of the month under review.



- The depth of traditional river wells increased from the 1-2 metres reported in December to an average of 3-4 metres during the month of January indicative of a deteriorating water situation. Reduced water volume along Kerio and Turkwel rivers was observed with no flow being witnessed along all the seasonal rivers such as Natira and Kospir.
- Some variation from normality in the pattern of water sources was evident given that at such a time of the year, rivers and water pans act as an alternative source of water besides boreholes.

2.2.2 Household access and Utilization

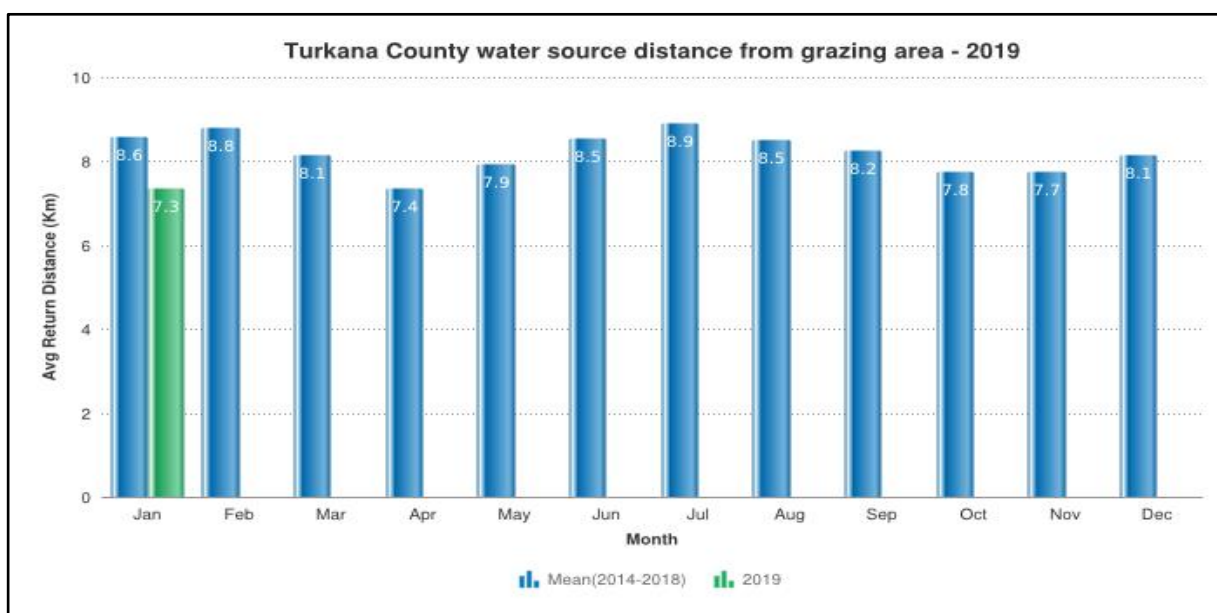
- During the month under review, the return distance to water source for households increased slightly from that reported in December but was within the normal range for January.



- Households resident in the Pastoral livelihood zone trekked for longer distances in search of water compared to those along the Agro Pastoral and Fisheries livelihood zones.
- During the month under review, the average waiting time at water source for households in the Fisheries, Agro Pastoral and Pastoral livelihood zones was 30minutes, 45minutes and 60 minutes in that order.
- Across the Fisheries, Agro Pastoral and Pastoral livelihood zones, the household water consumption per person per day averaged 20-25 litres, 15-20 litres and 10-15 litres respectively and thus the water situation deteriorated slightly in relation to the previous month.
- Water at source was cost free but most water kiosks in major urban centres dispensed a 20 litre jerry can at ten shillings. The price was within the normal range for the month of January.

2.2.3 Livestock access

- During the period under review, the return trekking distance to water source from grazing areas increased by 1.2km from the one recorded previously. However, the distance was lower than the long term average distance for the month of January by fifteen percent.
- The longest distance was recorded along the Pastoral livelihood zone with the least being reported in the Fisheries livelihood zone.



- Breakdown of some boreholes, drying up of water pans and seasonal rivers in close proximity to dry season grazing areas occasioned by absence of rainfall during the month under review was the major factor influencing the increase in trekking distance.
- Across the three livelihood zones, the watering frequency for cattle and shoats was four times per week while that of camels was three times per week during the month under review.
- Reduced watering frequency of livestock in relation to the month of December could be attributed to reduced water availability owing to the high breakdown rate of strategic boreholes along migratory routes especially in the Pastoral livelihood zone and increased depth of traditional river wells where pastoralists normally draw water from within the grazing zones.
- The trekking distance in search for water in the Pastoral livelihood zone doubled during the period under review.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

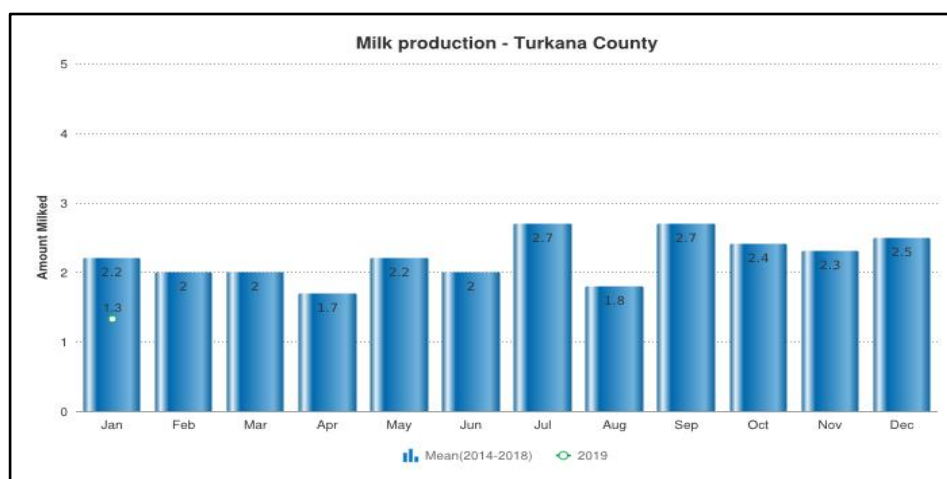
- Livestock body condition for all species during the period under review was fair but tending to poor across all parts of the county. The 12th and 13th ribs were clearly visible in cattle with thin fore ribs also visible in sheep along the Pastoral livelihood zone. Camels and goats across the three livelihood zones exhibited a moderate (neither fat nor thin) body condition with the fore-ribs not visible. However, in select zones like Nanam and Kalobeyei sheep were very thin with no fat.
- The body condition of all livestock species is forecasted to deteriorate further significantly across February owing to the rapid deterioration of the rangeland conditions necessitating animals to trek for longer distances in search of forage and water.
- Currently, the body condition of livestock lies outside the normal range for the period under review and this could be majorly attributed to pasture depletion across most sites in the Pastoral livelihood zone occasioned by poor recovery and absence of rainfall during the month of January.

3.1.2 Livestock Diseases

- Incidents of Pest Petis Ruminantes (PPR) and Contagious Caprine Pleuropneumonia (CCPP) were reported by a number of households in Lokori, Letea and Nachukui during the reporting period.

3.1.3 Milk Production

- Amount of milk produced mainly by goats and camel declined from that reported previously across the three livelihood zones.
- Consequently, the production level during the month of January was considerably below



the normal production level for the month under review by a significant margin of forty percent.

- The observed negative trend above could mainly be attributed to the elongated trekking distance covered by animals in search of pasture and water, reduced milking herd size occasioned by out migration coupled with the low calving rate especially along the Pastoral livelihood zone.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

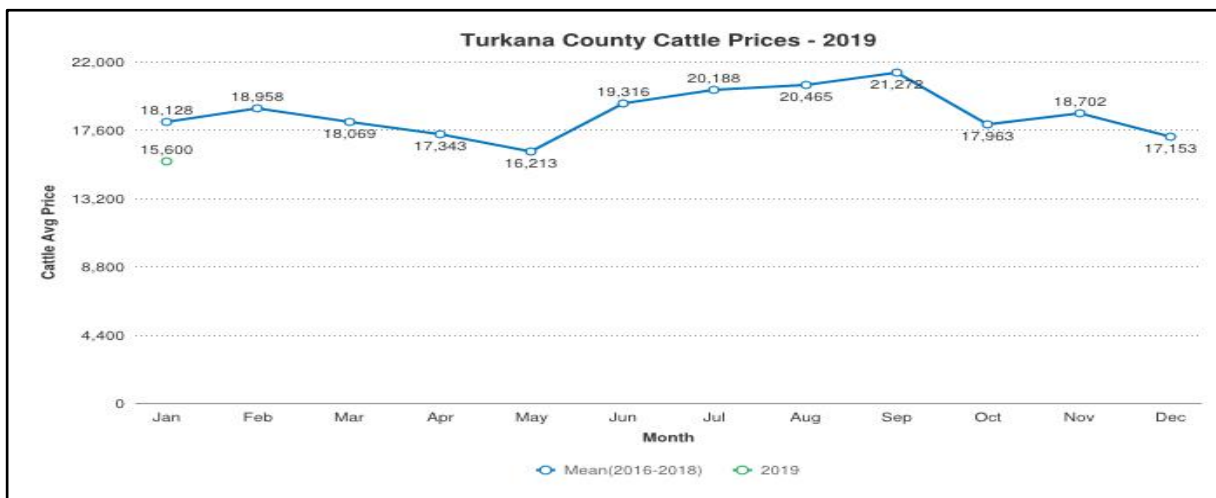
- Maize, Cowpeas and Sorghum are the main crops cultivated by some farmers along the Agro Pastoral livelihood zone during the short rains season.
- Notably though, during the October, November and December (OND) season no planting took place across all the agricultural sites in the county following the below average performance of the short rains and as a consequence, a significant deficit in production is highly anticipated.
- During the month under review, there was no rain fed agricultural production activity that was taking place apart from harvesting of horticultural products such as Mangoes.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

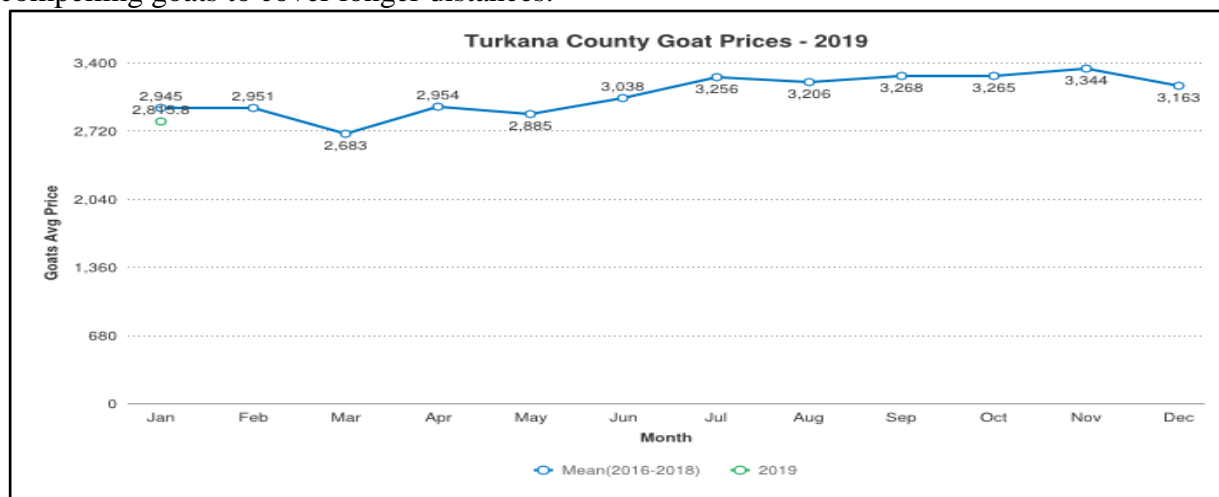
- The market price of a 4-year old medium sized bull fell slightly although insignificant from the one reported during the previous month.



- The decrease in price from that reported in December could mainly be attributed to the deteriorating body condition of cattle coupled with the increased sale rate.
- During the month under review, the Pastoral livelihood zone reported the lowest price with the Agro Pastoral livelihood zone reporting the highest trading price of cattle.
- When compared with the short term average price of cattle for the month under review, the prevailing market price was lower by fourteen percent.

4.1.1 Small Ruminants Prices (Goat price)

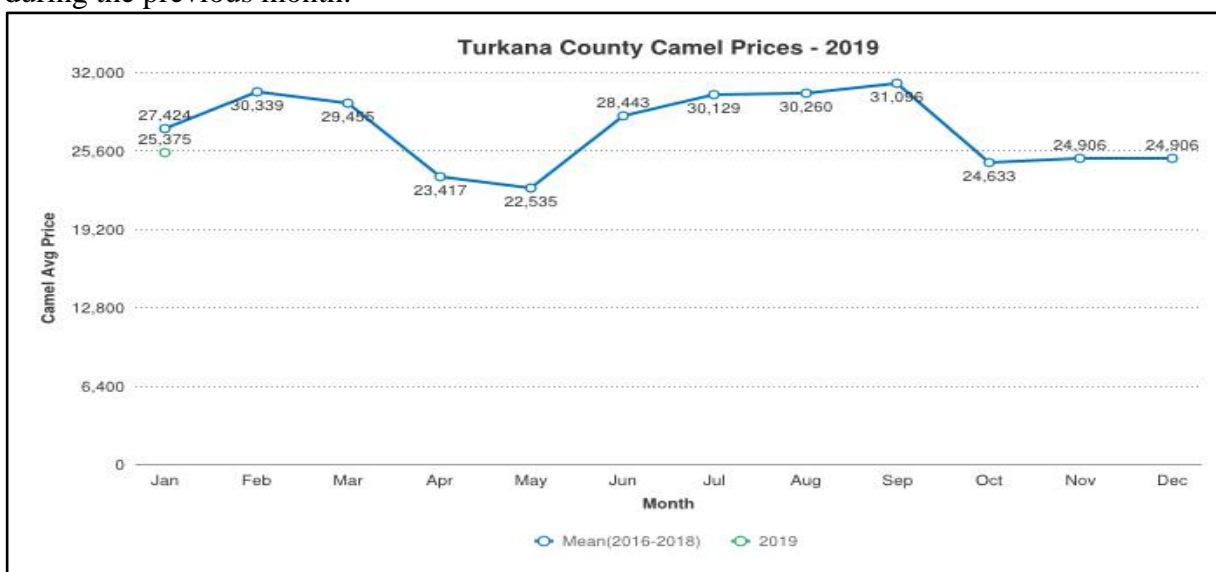
- The trading price of a 2-year old medium sized goat during the month under review adjusted downwards slightly to average at Ksh. 2,815 from the Ksh. 2,950 reported in December.
- The above trend could be attributed to the deteriorating body condition of goat during the reporting period occasioned by scarcity of quality browse in areas in close proximity to households therefore compelling goats to cover longer distances.



- The highest market price of Ksh. 2,960 for a goat was reported along the Pastoral livelihood zone, followed by Ksh. 2,870 at the Agro Pastoral livelihood zone with the Fisheries livelihood zone returning the least price of Ksh.2, 500.
- The three year average price of goat for the period under analysis is slightly higher than the current price by five percent.

4.1.4 Camel Prices

- During the period under review, the price of a 4-year old camel dropped slightly from that reported during the previous month.

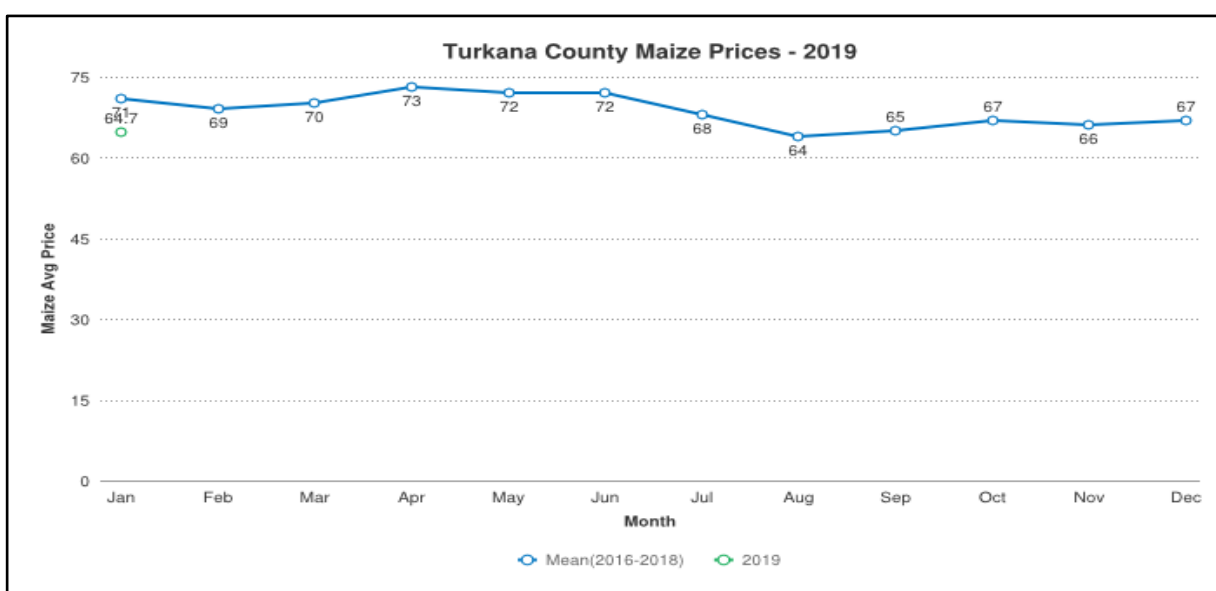


- Deteriorating browse condition across all the sites within the county coupled with the elongated distance covered by the camel in search of water were the drivers behind the observed trend.
- The Agro Pastoral livelihood zone reported the highest price of Ksh. 27,500 with the Pastoral livelihood zone reporting the least price of Ksh.24,730 during the period under review.
- The current price of camel is lower than the short term average price for the month under review by eight percent.

4.2 CROP PRICES

4.2.1 Maize

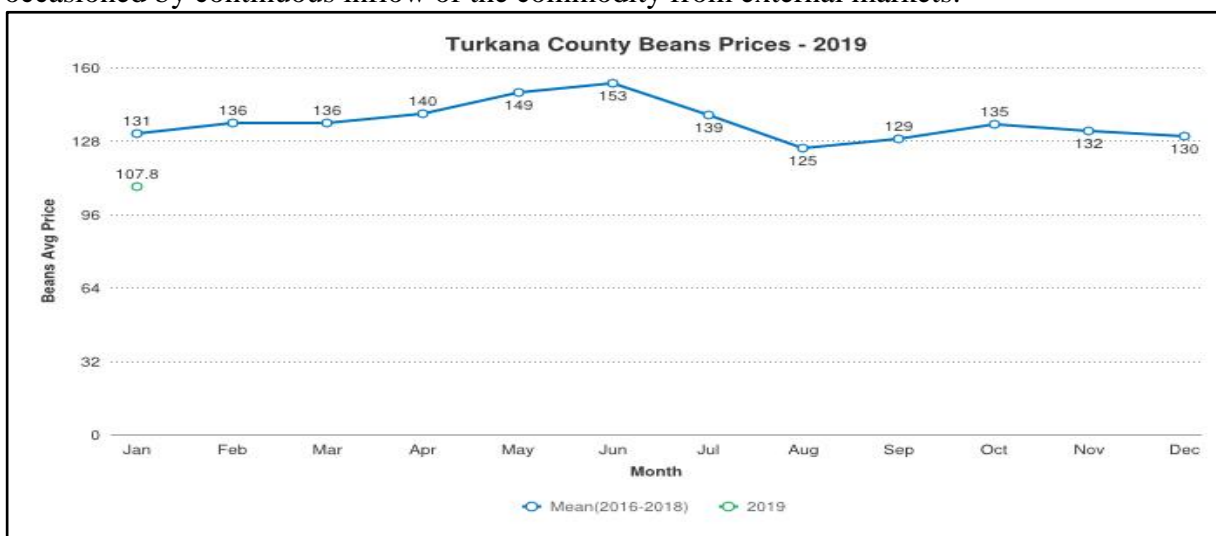
- During the month under review, stability in the price of maize in relation to December was observed, the price was lower than the three year average price for January by nine percent.



- The highest price of Ksh. 68 was recorded along the Pastoral zone followed by that in the Fisheries zone (Ksh. 60) with the Agro Pastoral zone reporting the least price of Ksh. 55.
- The observed price stability could be ascribed to maize availability within the major markets supplied mainly from external markets such as Kitale and Moroto.

4.2.2 Beans

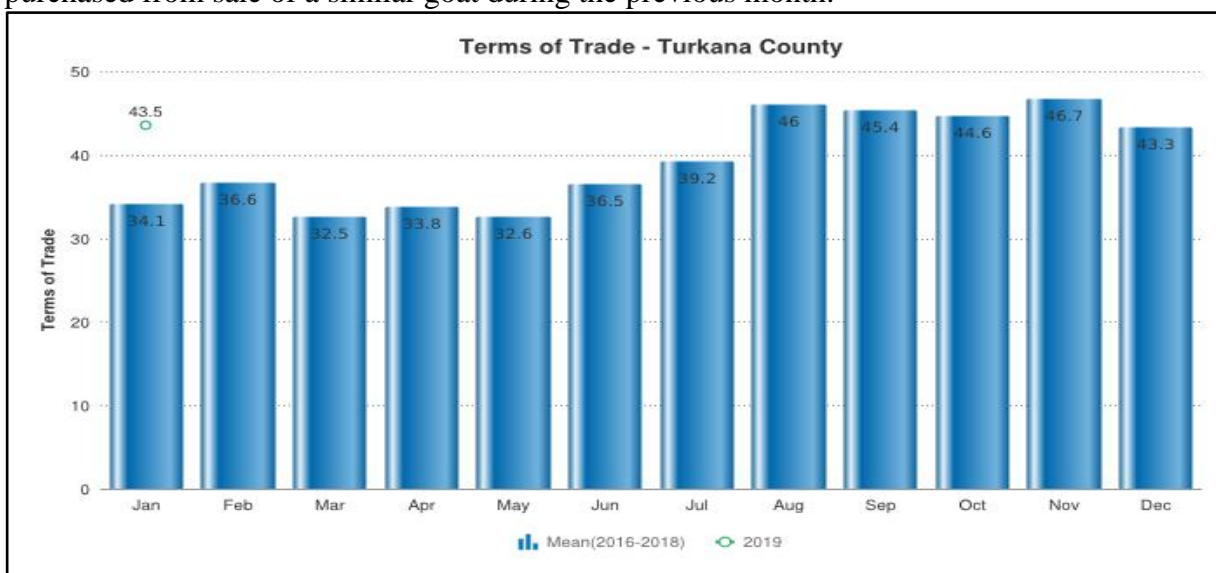
- The price of beans per kilogram during the month under review remained stable in relation to the preceding month and that could be attributed to improved availability within major markets occasioned by continuous inflow of the commodity from external markets.



- The Agro Pastoral livelihood zone recorded the highest price of Ksh110 followed by the Pastoral zone at Ksh. 108 with the Fisheries zone reporting the least price of Ksh100 during the month under analysis.
- The current price of beans is lower than the short term average price for the month of January by eighteen percent.

4.3 Livestock Price Ratio/Terms of Trade

- Despite the terms of trade being favourable to pastoralists heavily reliant on the market for supplies, a drop of twelve percent was recorded during the month under review.
- The current terms of trade is higher than the short term average terms of trade for the month under review by twenty eight percent.
- Therefore, from sale of a goat in January pastoralists obtained five kilograms less than those purchased from sale of a similar goat during the previous month.

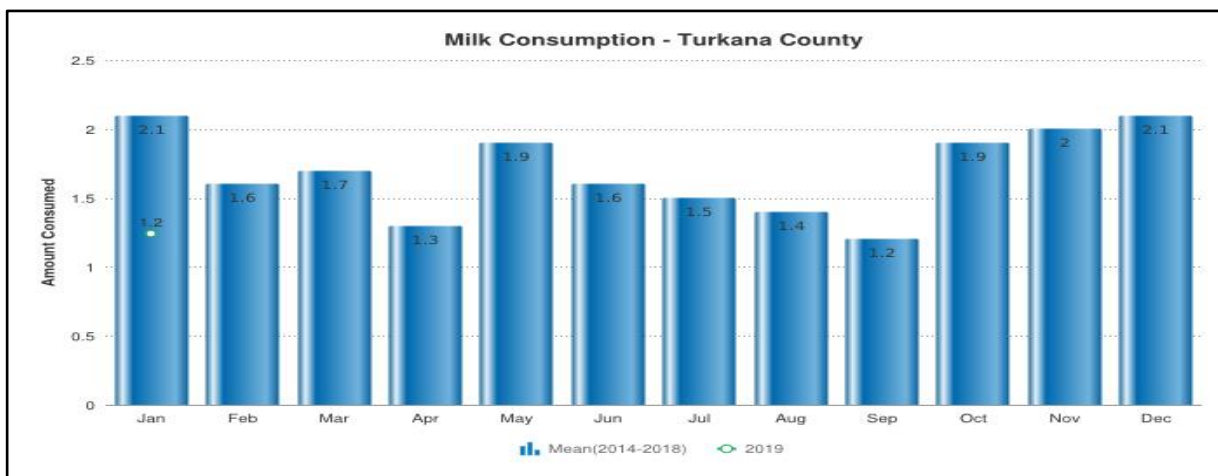


- The observed decline in the terms of trade could be attributed to the drop in the price of goat during the month under review that coincided with that of maize adjusting upwards slightly.
- The terms of trade is anticipated to reduce further over the next two months owing to the probability of the price of goat dropping further while that of maize rising gradually remaining high over the aforementioned span of time.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

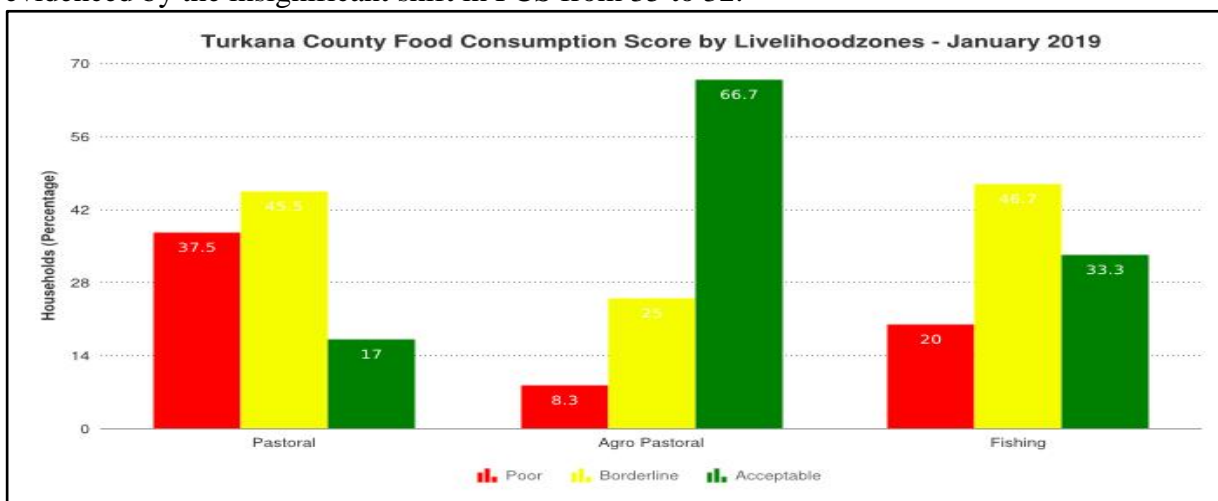
- During the month of January, only fourteen percent of the sampled one hundred and seventy eight households reported to have consumed milk and thus there was no significant change from the number reported during the previous month.
- However, the level of milk consumed dropped slightly from the one reported in December.



- Reduced consumption level could be attributed to low production level occasioned by reduced milking herd size resulting from out migration in search of pasture and water.
- The long term average milk consumption level is higher than the current one by forty three percent.

5.2 FOOD CONSUMPTION SCORE (FCS)

- Twenty five percent of the sampled one hundred and seventy eight households during the month of January were categorized as having a poor food consumption score with thirty eight percent of them falling within the borderline class while the remaining constituting thirty six percent were classified under the acceptable food consumption score band.
- Food consumption at household level did not vary considerably from the previous month as evidenced by the insignificant shift in FCS from 35 to 32.

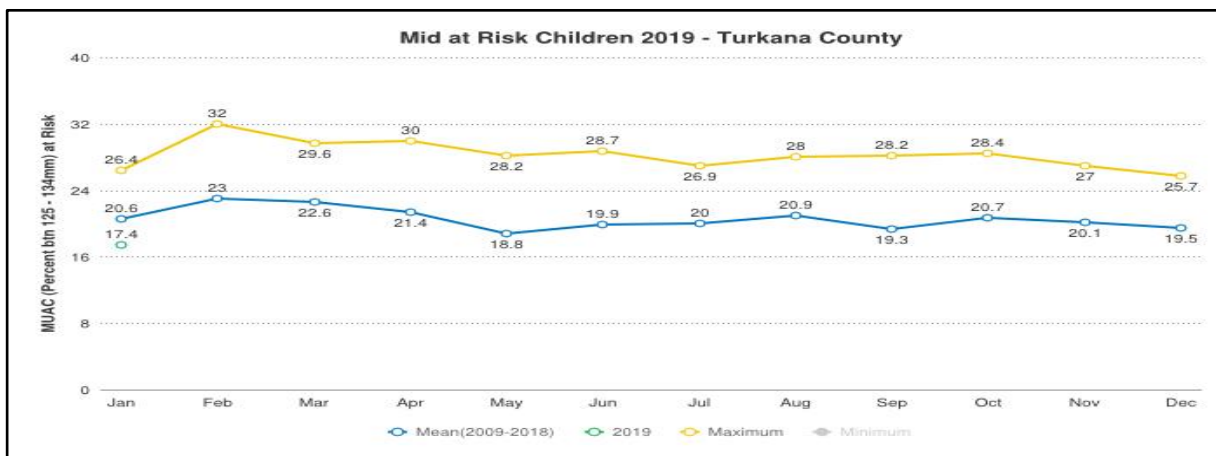


- The Pastoral livelihood zone returned the highest number of households with a poor FCS with the Agro Pastoral zone having a significant number within the acceptable FCS band. The highest transition was witnessed towards the borderline category across the three livelihood zones.
- Turkana north, south, and west sub counties had the highest number of households categorized under the poor FCS class at twenty seven percent, twenty eight percent and thirty six percent in that order during the month of January.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- During the month of January, thirty five percent of the sampled children whose mid upper arm circumference measurements were taken constituted females while sixty five percent were males.
- Proportion of children rated as being ‘at risk’ of malnutrition did not shift significantly from that reported during the preceding month.



Sample size, n=866

- The long term average proportion of children normally rated as being ‘at risk’ for the period under review is higher than the current proportion by sixteen percent.
- The observed stability could be attributed to ease of access to supplementary feeds especially within the areas where integrated medical outreaches were being conducted during the month.

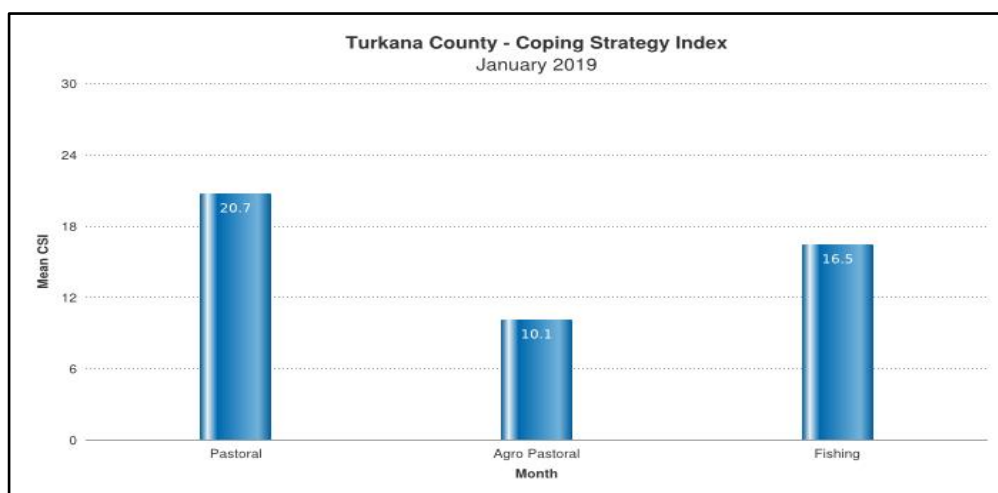
5.3.2 Health

- The prevalent ailment reported among the sampled children during the reporting period was fever with chills like malaria and some cases of diarrhoea.

5.4 COPING STRATEGY

5.4.1 Coping Strategy Index (CSI)

- Households employed relatively similar coping strategies to those in place during the month of December as evidenced by insignificant shift in the CSI for the month that was 16.4.
- The ease of access to food or money to buy food just like the previous month favoured households resident in the Agro Pastoral livelihood zone as opposed to those in the Pastoral and Fisheries livelihood zones as depicted below.
- Prevalent coping mechanisms during the month under review included reliance on less preferred/less expensive food and reduced portion size of meals across all livelihood zones.



6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD

- There was no relief food distributed during the month under review.

6.2 NON-FOOD

Intervention	Sub-County/Ward/Location	No. of Beneficiaries	Implementer/ Organization
Supervision / Monitoring of farmers training on agronomy in irrigation schemes	Loima (Napeikar, Moruese, Kangalita, Koolyoro, Nanyee, Kalemnyang), Turkana West (Kalobeyei refugee camp, Nasinyono, Lokangae, Lomidat, Nakururum and Nanam), Turkana South (Katilu) and Turkana East (Lokubae & Morulem)	10069	VSF Germany & Turkana County Government – Agriculture department.
Supervision / Monitoring of farmers training on Nutrition	Turkana West - Kalobeyei refugee settlement and host community (Kalobeyei, Natira and Songot)	420	VSF Germany & Turkana County Government – Agriculture department.
Nadapal borehole rehabilitation	Loima/Turkwel	4500	Catholic Relief Services

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- Some incidents of insecurity involving raids mainly in Turkana east (Napeitom and Lokori wards) and south (Lobokat ward) were reported during the period under review.

7.2 MIGRATION

- Livestock migration from areas experiencing pasture depletion towards the Kenya-Uganda border in search of pasture and water was witnessed in January. Approximately fifty percent of the herd had moved out from their normal grazing areas. High concentration of livestock was also witnessed along the river banks of Turkwel and Kerio.

7.3 FOOD SECURITY PROGNOSIS

- Following the onset of the dry season coupled with the below average performance of the short rains, below are the most likely outcomes across February, March and April.
- Food stocks mainly from the previous long rains season harvest for Agro Pastoral households will most likely deplete necessitating majority of them to rely heavily on markets.
- The probability of livestock productivity experiencing significant shocks as the rangeland conditions deteriorate further shall remain high over the aforementioned span of time.
- Consequently, it's highly probable that a negative trend in household nutrition status especially for the under-fives shall be witnessed as the purchasing power gets eroded significantly with the highly expected diminishing terms of trade.
- The possibility of more households transitioning into the 'crisis' phase of food insecurity shall be high with some pocket zones being in 'emergency' phase if an early rainfall onset is not realised.
- As a result, intensive market activity will most likely be witnessed as households seek to fill the existing food gaps and therefore, adequate security along major conflict hotspots will be key in facilitating access.

8.0 RECOMMENDATIONS

- **Water:** Support vulnerable households to access clean and safe drinking water by repairing and maintaining strategic water supplies that have broken down and conducting water trucking targeting sites worst affected in Turkana west (Nanam, Letea, Kalobeyei, Kakuma), north (Lake zone, Kaaleng/Kaikor), south (Kalapata, Lokichar) and east (Lokori/Kochodin) with a special focus on education institutions in order to enhance retention.
- **Livestock:** Intensify awareness creation on commercial livestock offtake through consultative forums with livestock traders and pastoralists while providing supplementary feed such as range cubes to the core breeding, lactating stocks and calves within households in Turkana west and north sub counties.
- **Peace and Security:** Protect lives and livelihoods by intensifying community awareness through facilitation of dialogue peace meetings, activation of peace committees and alternative dispute resolution mechanisms targeting all conflict hotspots including: Kibish, Kapedo, Oropoi, Lokipoto, Juluk, Loteteleit, Lomelo, Kokuro, Nadome, Lokirama, Urum, Mogila and Lorogon among others.
- **Health and Nutrition:** Reduce the risk of mortality by upscaling the integrated medical outreaches incorporating screening for malnutrition and minor ailments, nutritional supplementation, hygiene practices promotion, distribution of water treatment chemicals like Aqua tabs, treatment and management of cases targeting areas reporting high malnutrition and morbidity rates such as Songot, Nakalale, Lakezone, Kaikor, Kalokol, Lobei, Lobokat, Kaputir, Katilu, Lokichar and Turkwel.
- **Food and Safety Net:** Cushion the over 38,208 households that are currently food insecure through provision of relief food/cash transfer targeting the all the affected wards.