National Drought Management Authority
TURKANA COUNTY
DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2019

A Vision 2030 Flagship Project

FEBRUARY EW PHASE

Drought Situation & EW Phase Classification

Biophysical Indicators

- Depressed rainfall with a temporal distribution of a day was received during the third dekad with the cumulative rainfall for the 6-month period (Sep 2018 to Feb 2019) representing only fifty percent of the normal rainfall for that period.
- Overally, vegetation condition stabilized during the month under review following the light showers experienced. However, most parts of the Pastoral zone exhibited moderate to severe vegetation deficit with Turkana west sub county remaining the most affected.
- Over seventy five percent of open water sources dried up with the rate of borehole breakdown going up due to over use.

Socio Economic Indicators (Impact Indicators)

- Generally, body condition of all livestock species was fair and despite the household return distance increasing slightly, it remained within the normal range for the month of February.
- Milk production and consumption was on a decline but the terms of trade was stable and within the range for the period.
- There were no livestock deaths attributed to dehydration reported, nevertheless, significant animal migration was taking place towards the border areas of Uganda.
- Proportion of under-fives rated as being 'at risk' remained stable with the CSI and the FCS remaining relatively the same as the previous month. A number of households transitioned into the borderline and poor FCS category in February.

Early Warning (EW) Phase Classification

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

Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)	50	60-100
VCI-3 month (County)	35	>35
VCI-3 month (T.West)	15	>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	1.0 Litres	> 2.0 Litres
Livestock deaths (attributed to drought)	No Deaths	No Deaths

Access Indicators	Value	Normal Range
Terms of Trade (ToT)	40	>36.6
Milk Consumption	1.0 Litres	>1.6 Litres
Return distance to water sources	6.1 km	<7.7 km
Cost of Water(Ksh/20L)	Ksh.10	<Ksh.10

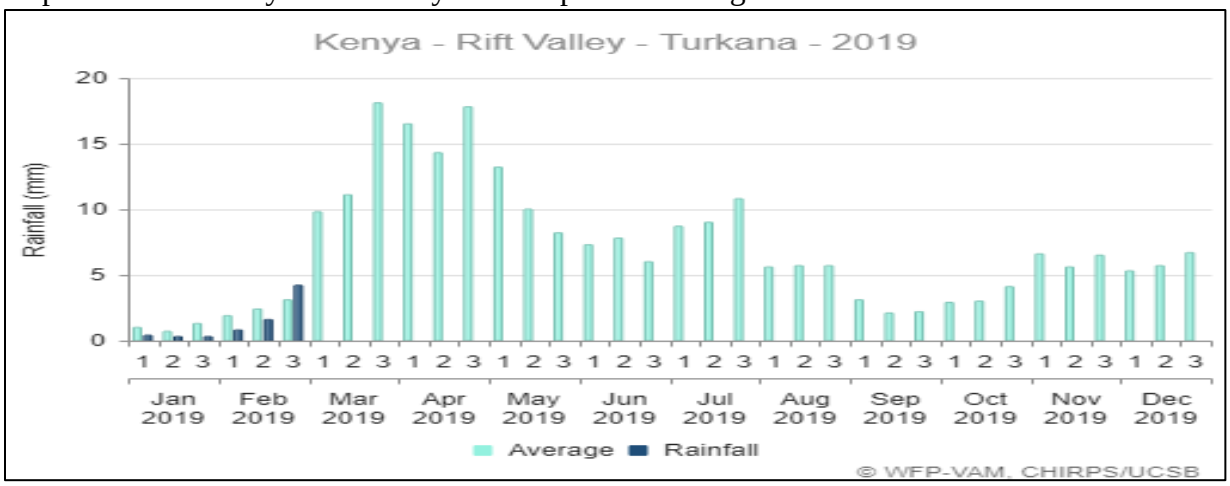
Utilization Indicators	Value	Normal Range
Nutrition Status, MUAC (% at risk of malnutrition)	18.5	<23
Food Consumption Score (FCS)	35	>35
Coping Strategy Index (CSI)	17.1	<18.3

▪ 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**

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

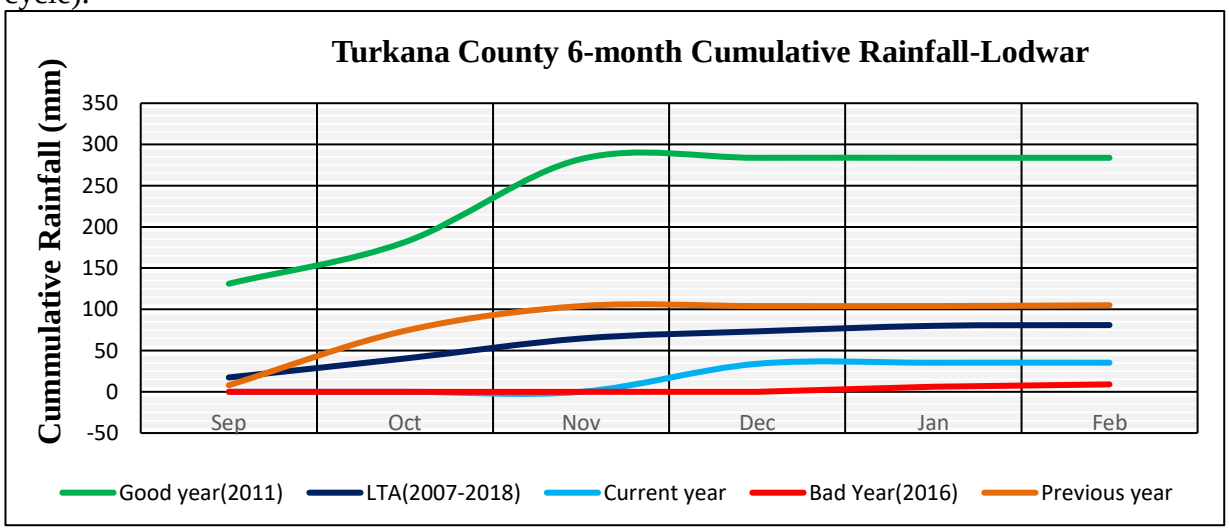
- During the period under review, some parts of the county experienced rainfall albeit depressed with a temporal distribution of one day. Nonetheless, dry and hot weather conditions dominated all parts of the county with the daytime temperature rising to 42^0 Celsius.



Source: VAM (World Food Programme)

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Lodwar meteorological station reported over two hundred percent of the normal rainfall during the month under review. However, spatially the distribution was uneven.
- On the other hand, the cumulative rainfall for the period spanning from September 2018 to February 2019 represents fifty percent of the normal (12-year long term average for the same cycle).



Source: Meteorological Department (Turkana County)

- The previous year's six month (September 2017 to February 2018) cumulative rainfall exceeds that of the current year for the same period by one hundred and fifty seven percent.
- Historically, the period between September 2016 to February 2017 is considered to be the segmental bad year within the last twelve years as illustrated above.

1.3 OTHER EVENTS

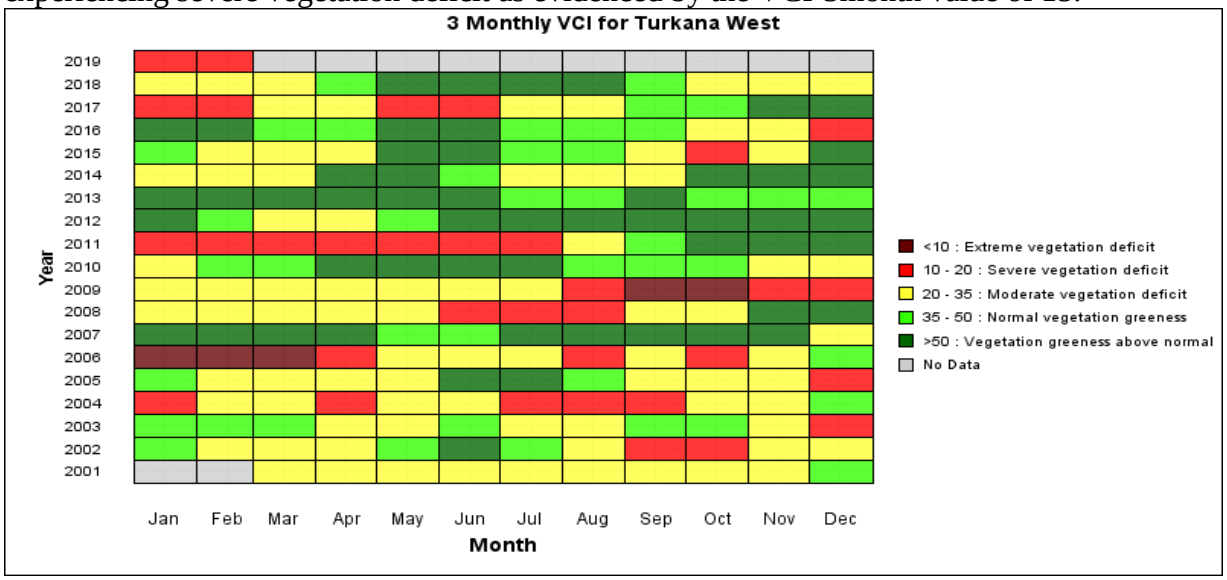
- During the month under review, there was no any other notable event reported.

2.0 IMPACTS ON VEGETATION AND WATER

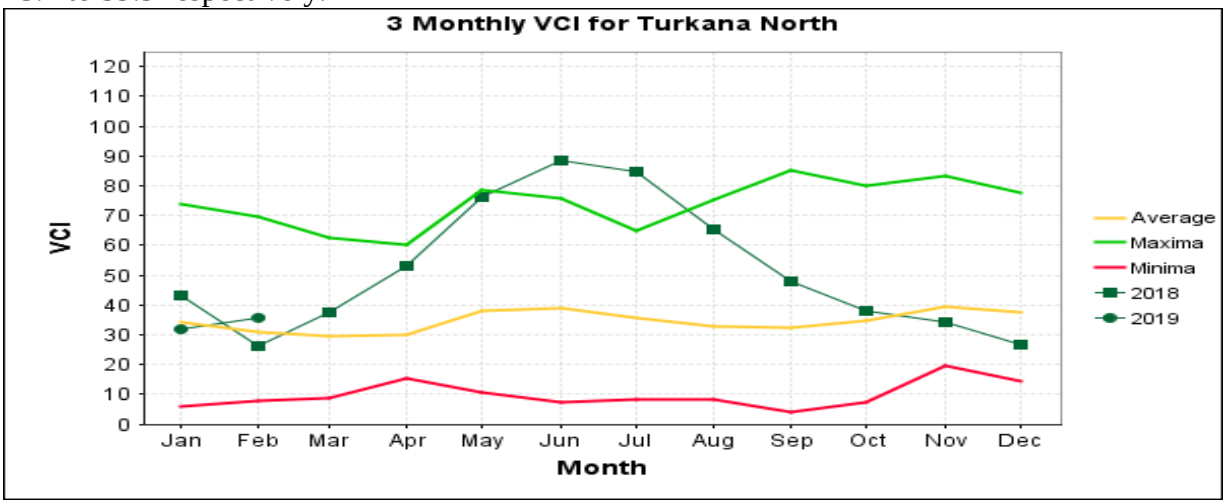
2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

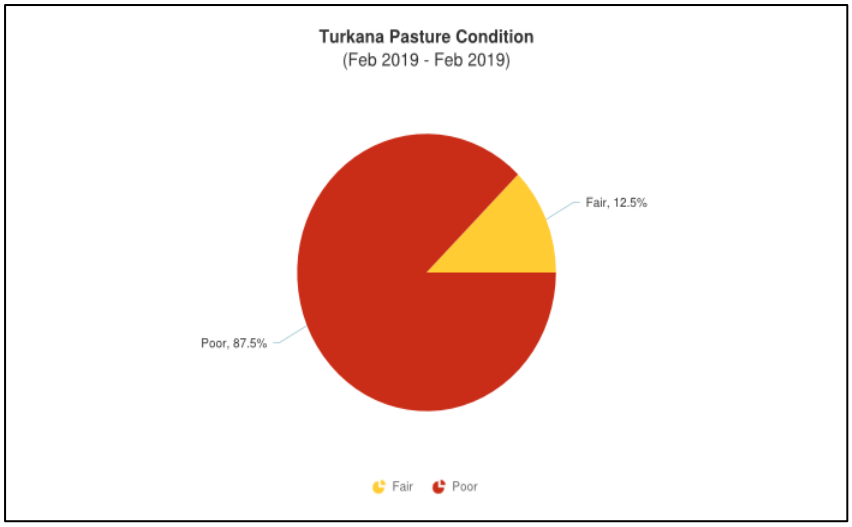
- Below is a matrix illustrating how months have been categorized based on the level of vegetation deficit.
- During the month under review, overally, most parts of the county exhibited normal to moderate vegetation greenness. However, Turkana west sub county that is dominantly Pastoral continued experiencing severe vegetation deficit as evidenced by the VCI-3month value of 15.



- A stable trend in the condition of vegetation was witnessed across all the sub counties.
- Among the areas most affected included: Nanaam, Kakuma, Kalobeyei, Songot, Kibish, Kaaleng/Kaikor, Lopur, Lokichogio, Letea and Kaputir.
- Comparatively, Turkana north and east sub counties experienced some slight deterioration in the condition of vegetation as supported by the shift in the VCI-1month value from 40.3 to 32.9 and 45.7 to 39.9 respectively.



- The stabilization in the condition of vegetation could be attributed to receipt of rainfall albeit depressed during the period under review.

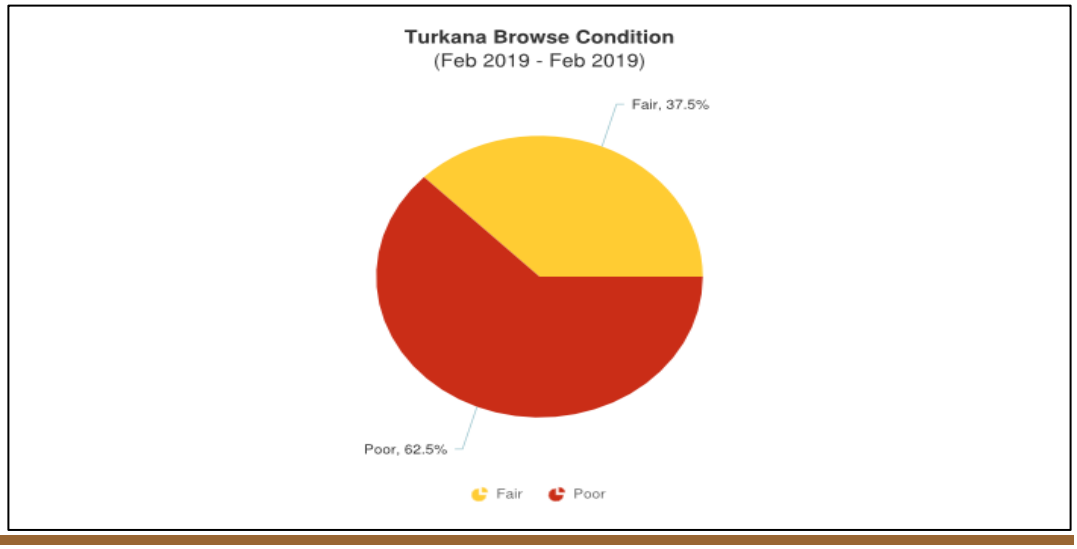


2.1.2 Pasture

- During the month under review, the condition of pasture across all areas was generally poor and slightly below the level normally witnessed for the period. However, receipt of some rainfall during the third dekad helped stabilize the situation despite the skyrocketing temperatures also influencing the condition negatively.
- Available pasture mainly along the river bank of Turkwel was in fair condition but could not last for more than one month due to overgrazing by livestock that had migrated there earlier on.
- Areas experiencing pasture depletion during the month under review included Nanaam, Kakuma, Kalobeyei, Songot, Lake Zone, Kalapata, Lopur, and Kaikor among others.
- Water inavailability in the dry season grazing areas, insecurity along the major conflict hotspots and increased risk of transmission of livestock diseases were some of the major deterrents to pasture access during the period under review.
- No significant variation in terms of the quality and quantity of pasture was observed across the three livelihood zones.

2.1.3 Browse

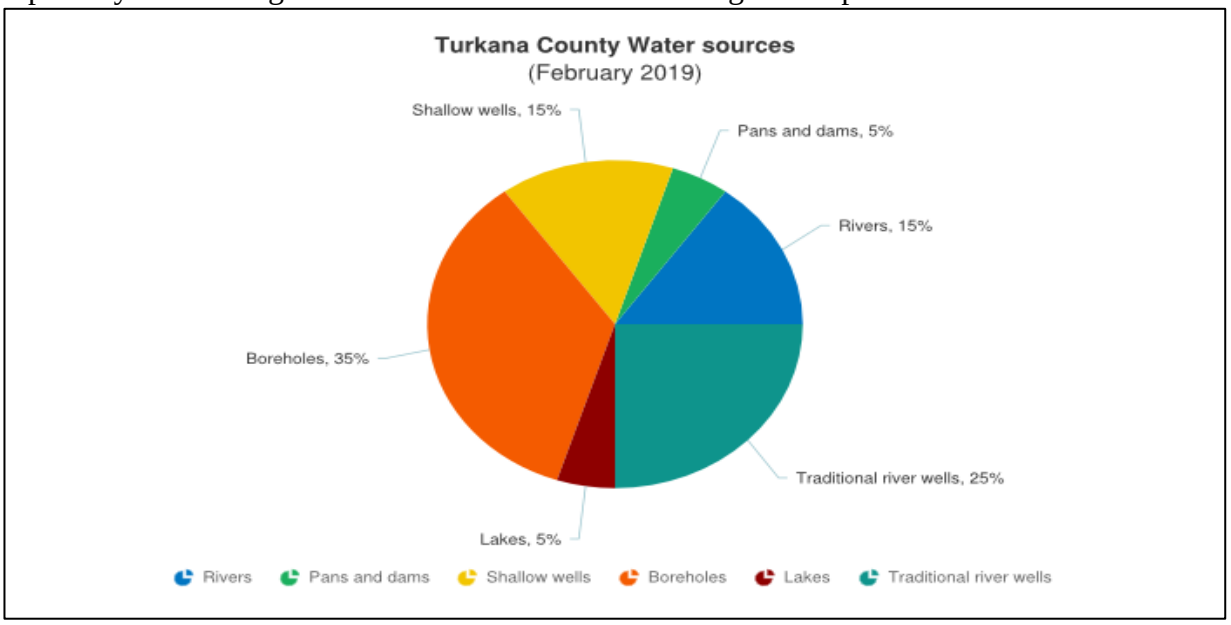
- Browse condition was fair to poor across all the livelihood zones. The observed browse during the period under review was slightly below the level normally witnessed at such a time of the year across the three livelihood zones. Further, the observed condition could be attributed to the fact that, the effect of the rainfall received during the month was negated by the dry and hot weather conditions that were dominant hence no significant regeneration was witnessed.
- The edible browse available mainly in the Agro Pastoral livelihood zone is anticipated to last for less than two months as opposed to the normal three to four months.
- The major constraints to browse access during the month under analysis were insecurity, animal diseases and water in availability in some sites with fair browse.
- Across the three livelihood zones, some slight variation in terms of the quantity and quality of browse was observed during the month under review with the Agro Pastoral livelihood zone being better in comparison to the Pastoral and Fisheries livelihood zones.



2.2 WATER RESOURCE

2.2.1 Sources

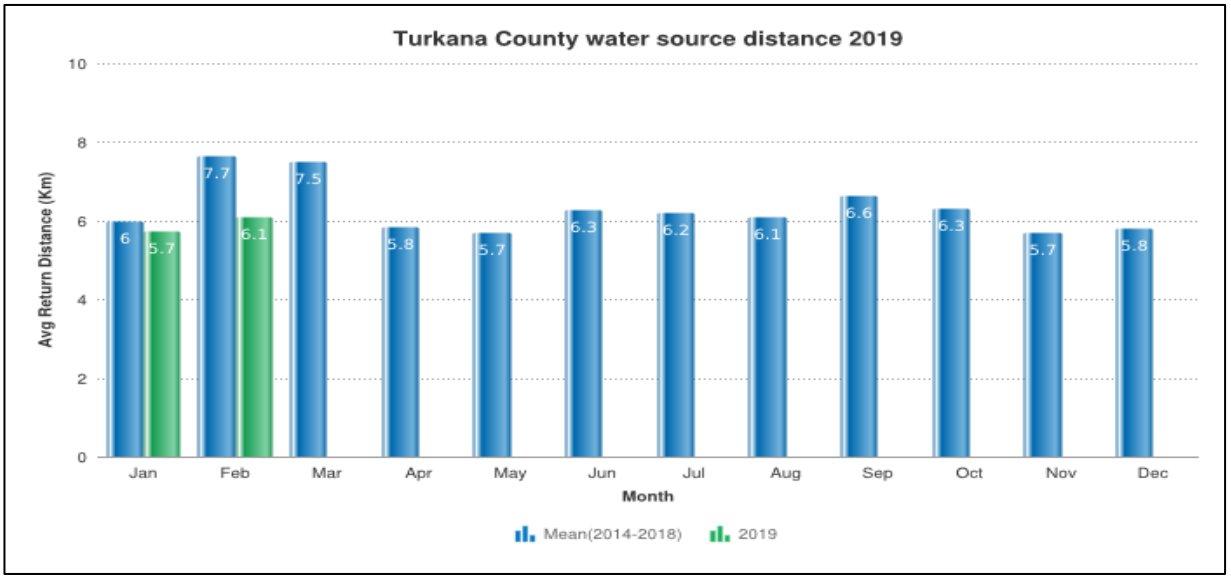
- Boreholes, traditional river wells and shallow wells were the three main water sources in use by the community during the month under review.
- There was a significant rise in the number of households resorting to use of traditional river wells as their source of water. Water pans returned the lowest percentage owing to most of them especially those along the Pastoral livelihood zone having dried up.



- No flow was witnessed along seasonal rivers with the water situation continuing deteriorating as evidenced by the increased depth of traditional river wells from three metres to five metres.
- Notably though, there was no significant variation from normality in terms of the water sources in use save for rivers whose use had dropped slightly.

2.2.2 Household access and Utilization

- Household return distance to water source during the month under review adjusted upwards slightly but remained within the normal range for February.

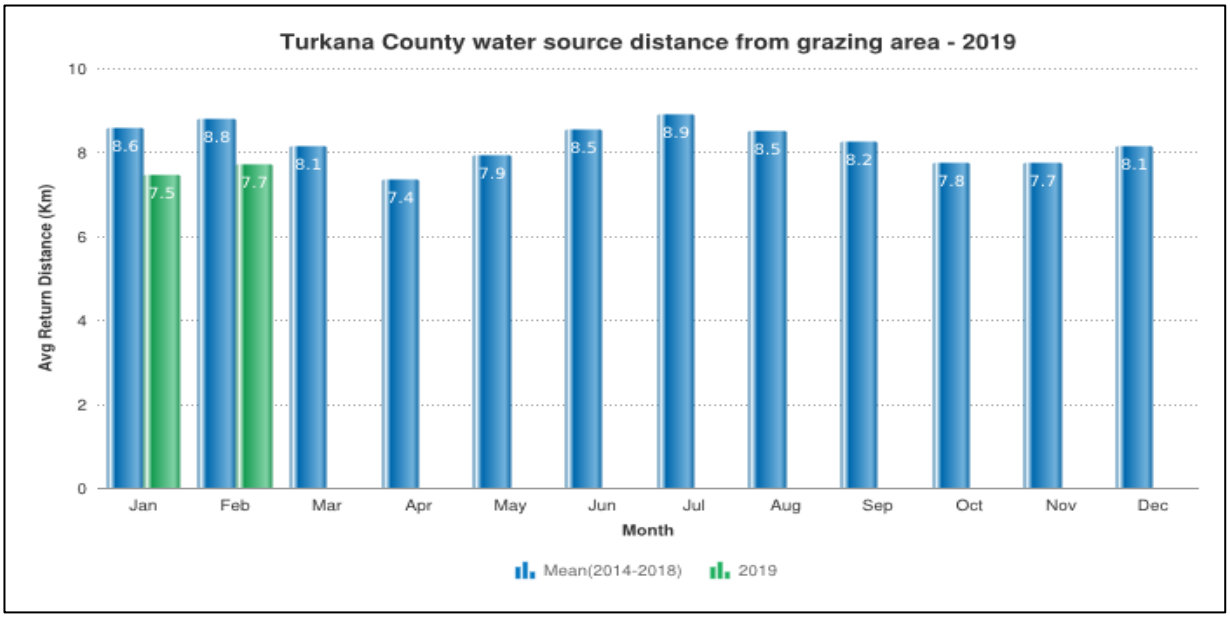


- The Pastoral livelihood zone reported the longest trekking distance followed by that along the Agro Pastoral livelihood zone with the Fisheries livelihood zone reporting the least.

- Average waiting time at water source during the month under review was thirty minutes for both the Agro Pastoral and Fisheries livelihood zones and sixty minutes for the Pastoral livelihood zone.
- Household water consumption per person per day declined during the period under review. For instance, the consumption in the Pastoral zone was less than fifteen litres while that of the Fisheries and Agro Pastoral livelihood zones averaged fifteen to twenty litres.
- Water at source was cost free but most water kiosks in major urban centres along the Fisheries zone dispensed a 20 litre jerry can at ten shillings while those in the Agro Pastoral and Pastoral livelihood zone at five shillings. The price was within the normal range for the period under analysis.

2.2.3 Livestock access

- The return trekking distance to water source from grazing area for livestock remained stable in relation to that recorded during the previous month. Additionally, the reported distance was lower than the long term average distance for the month under review by twelve percent.
- The Pastoral livelihood zone returned the longest trekking distance at 9.3km with the Fisheries reporting the least.



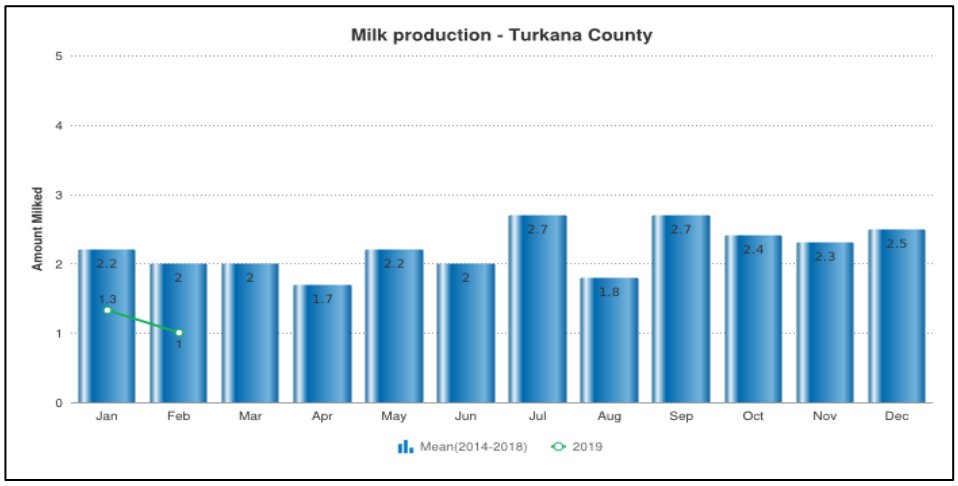
- The return distance to watering points across the three livelihood zones was longer than average due to the increased number of borehole breakdowns (due to over pumping, drop of water level beyond the reach of submersible pumps and non-replacement of serviceable parts) and drying up of open water sources adjacent to dry season grazing sites.
- The watering frequency for cattle and shoats in the Pastoral livelihood zone was three times per week while for camels it was twice per week. On the other hand, cattle and shoats in the Agro Pastoral and Fisheries livelihood zones accessed water sources four times per week during the month under review.
- Increased depth of traditional hand dug wells along seasonal rivers coupled with non-functionality of strategic boreholes in areas with a high influx of livestock were the key drivers influencing the reduced animal watering frequency during the month of February.

3.0 PRODUCTION INDICATORS
3.1 LIVESTOCK PRODUCTION
3.1.1 Livestock Body Condition

- The body condition of all livestock species was generally fair with isolated incidents especially in the Pastoral livelihood zone (Turkana west) where sheep and cattle had a poor body condition. Shoats in the Fisheries and Agro Pastoral livelihood zones exhibited a moderate body condition with the fore-ribs not visible.
- It is anticipated that the livestock body condition will most likely deteriorate further over the next one month before the onset of the long rains owing to increased trekking distance triggered by the fair to poor forage condition and search for water.
- The body condition of livestock during the period under review fell outside the normal range for the month of February due to depletion of pasture across a number of sites along the Pastoral livelihood zone with the depressed rainfall received during the month not sufficing in precipitating regeneration.

3.1.2 Livestock Diseases

- Cases of Contagious Caprine Pleuropneumonia (CCPP) were reported in Lokichar, Loima and Kaputir with most households in the Pastoral livelihood zone reporting incidents of Pest des Petis Ruminants (PPR).Haemorrhagic Septicaemia in camels was typically high in the Agro Pastoral and Pastoral livelihood zones.



3.1.3 Milk Production

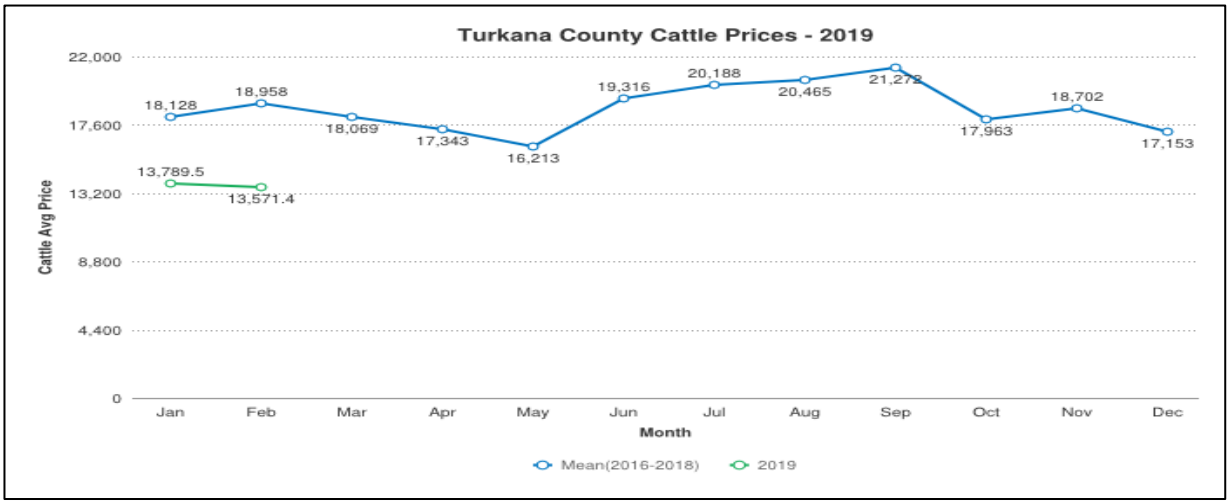
- Quantity of milk produced mainly by camels continued declining across all the livelihood zones from that reported during the previous month.
- The production level during the period under review was fifty percent below the normal production for the period.
- There were no sales reported due to all milk produced being consumed at household level.
- Increased trekking distance in search of water and pasture, low calving rate among goats (that are normally the main milk producers) and reduced milking herd within households owing to outmigration were some of the factors driving the observed negative trend.

3.2 RAIN-FED CROP PRODUCTION
3.2.1 Stage and Condition of Food Crops

- Majority of the farmers within the Agro Pastoral livelihood zone practice Maize, Cowpeas and Sorghum production mainly during the long rains season.
- Most farmers in areas like Kalemngorok, Turkwel, Kaitese, and Katilu during the period under review were engaged in land preparation in anticipation of the long rains for planting.
- Markets were well positioned with horticultural products such as mangoes and watermelon produced locally and imported from the neighbouring Uganda and West Pokot county.

4.0 MARKET PERFORMANCE
4.1 LIVESTOCK MARKETING
4.1.1 Cattle Prices

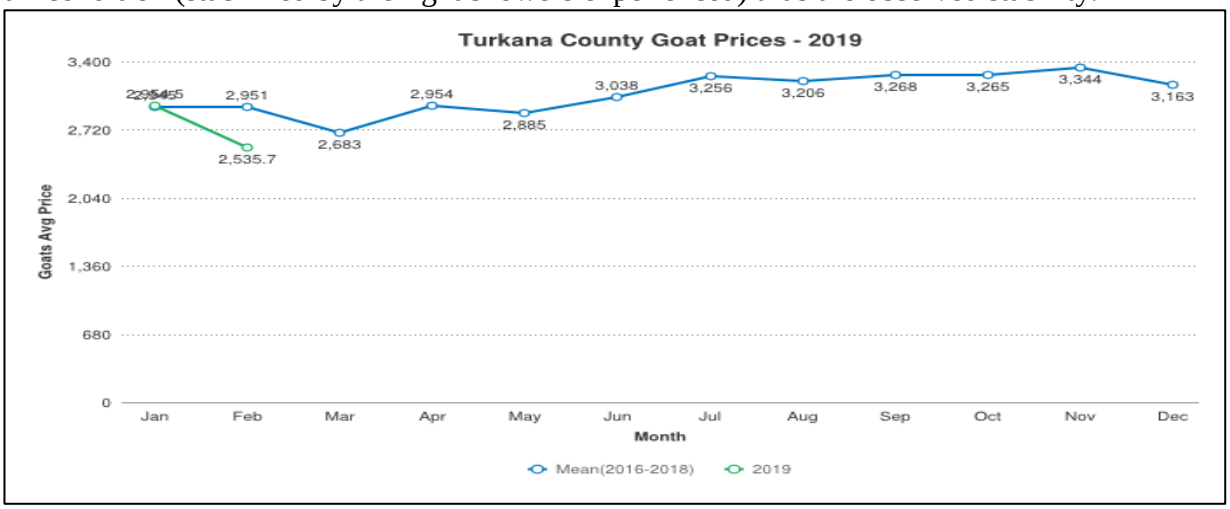
- Stability in the market price of a 4-year old medium sized bull was witnessed during the month under review, no significant change was recorded from the previous month.



- Cattle body condition remained unchanged from the previous month owing to stabilization of the pasture situation by the light showers received during the month hence the observed stability in market price.
- The highest price of Ksh. 14,170 was recorded along the Agro Pastoral livelihood zone with the Pastoral livelihood zone reporting the least price of Ksh. 11,000.
- The prevailing market price of cattle was significantly lower than the short term average price of cattle for the period under analysis by twenty eight percent.

4.1.1 Small Ruminants Prices (Goat price)

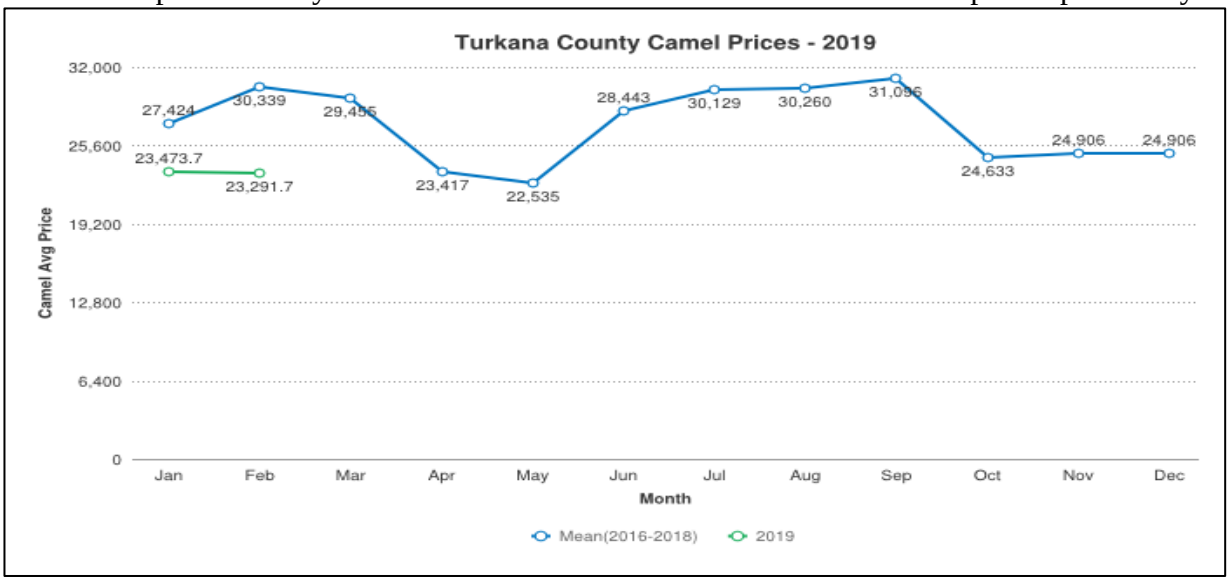
- The price of a 2-year old medium sized goat remained relatively stable in relation to the one reported during the month of January.
- The body condition of goat did not change significantly owing to availability of browse albeit in fair condition (stabilized by the light showers experienced) thus the observed stability.



- The Agro Pastoral livelihood zone reported the highest market price of Ksh. 2,780 followed by the Pastoral zone at Ksh.2, 580 with the Fisheries zone returning Ksh.2, 530.
- The current price of goat is lower than the three year average price of goat for the period under review fourteen percent.

4.1.4 Camel Prices

- The market price of a 4-year old camel remained stable in relation to that reported previously.

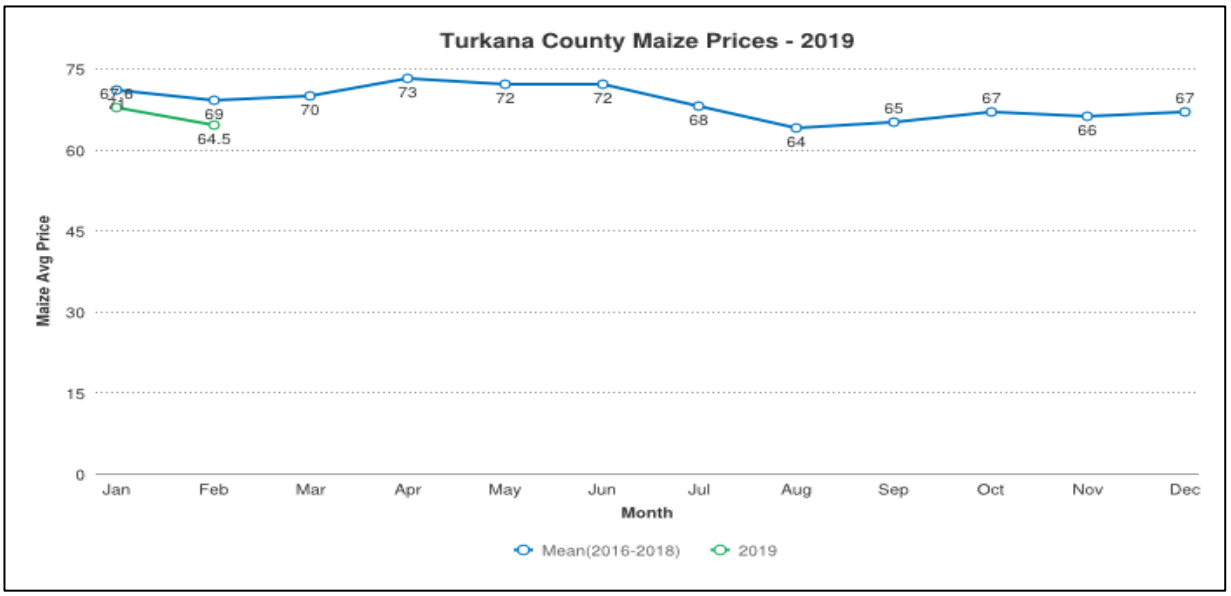


- Stabilization of the body condition owing to browse availability albeit in fair condition (stabilized by the rainfall received during the third dekad) was the major factor driving the observed trend.
- The highest price of Ksh. 24,170 was recorded along the Agro Pastoral livelihood zone with the Pastoral livelihood zone reporting the least price of Ksh. 20,360 during the period under review.
- The short term average price for the month of February is higher than the current price of camel twenty four percent.

4.2 CROP PRICES

4.2.1 Maize

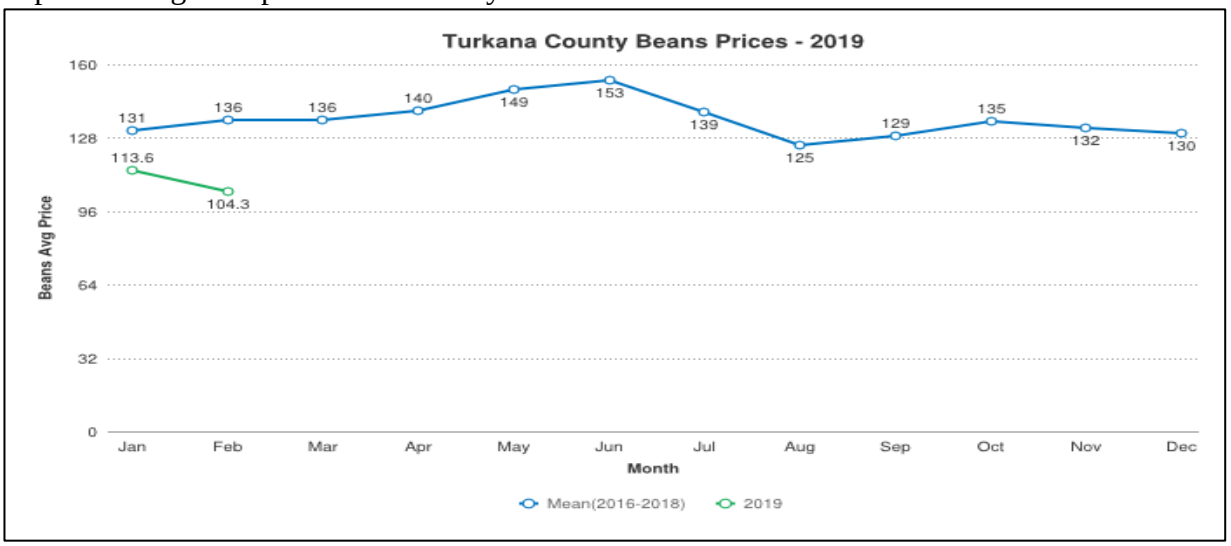
- The price of maize remained stable in relation to the previous month with a kilogram retailing at Ksh.65 during the month under review.



- The Pastoral livelihood recorded the highest price of Ksh. 73 with the Fisheries livelihood zone reporting Ksh. 68 and the Agro Pastoral returning Ksh. 60 per kilogram.
- Supply of maize from the external market in Kitale and imports from the cross border market of Moroto were the two major factors that contributed to the stabilization in maize price.

4.2.2 Beans

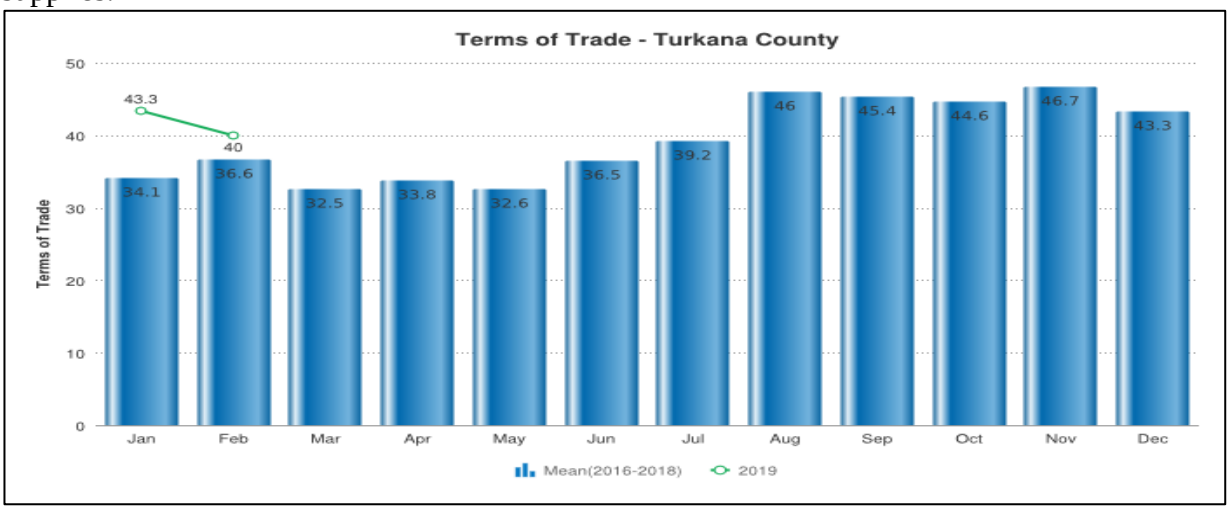
- During the period under review, the price of beans per kilogram decreased by twelve percent from that reported during the month of January. Increased importation from the cross-border market of Moroto and the external market in Kitale was the major factor influencing the decline in price owing to improved availability.



- The highest price of Ksh. 120 was reported along the Pastoral livelihood zone with the least price of Ksh. 100 being recorded in the Fisheries zone.
- The short term average price for the month under review is higher than the current price of beans by twenty four percent.

4.3 Livestock Price Ratio/Terms of Trade

- Currently, proceeds from sale of a goat can purchase forty kilograms of maize hence no significant shift from the amount of kilograms purchased from sale of a similar goat during the month of January.
- The prevailing terms of trade is slightly higher than the three year average terms of trade for the period under analysis by just eleven percent.
- The ToT therefore remained favourable to pastoral households dependent on the market for their supplies.

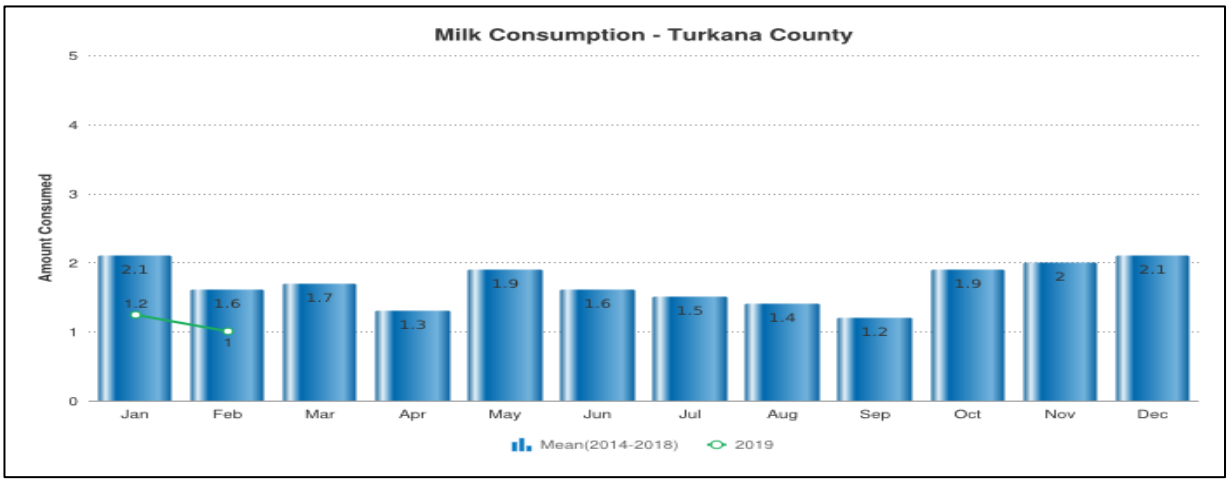


- The observed stability in the terms of trade could be attributed to the fact that the drop in the price of goat was matched by an almost similar drop in the price of maize.
- The terms of trade is anticipated to remain stable at least for a period of one month before it can assume an upward trajectory as the rangeland conditions start improving during the long rains season.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

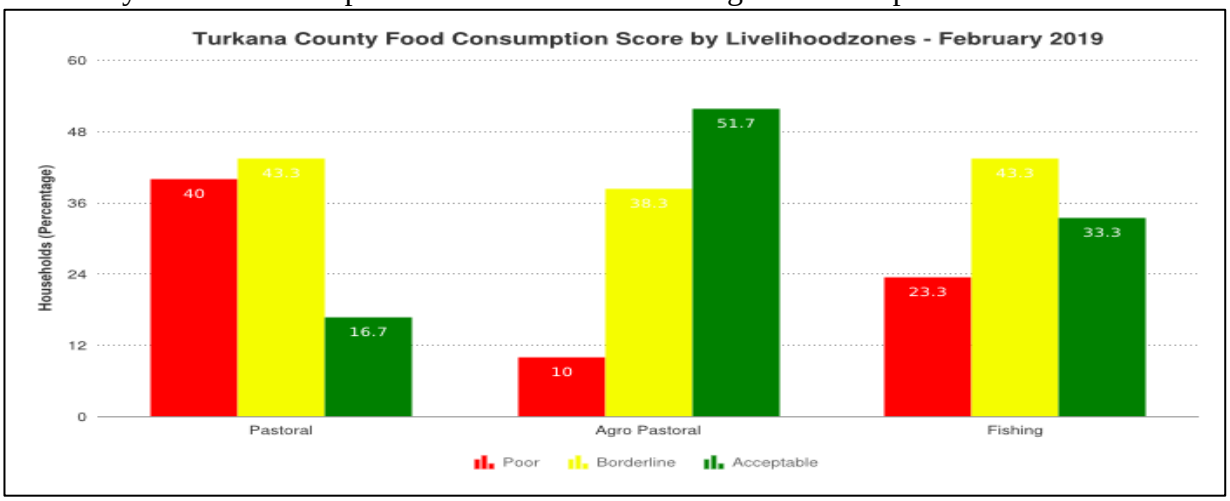
- Fourteen percent of the sampled two hundred and ten households reported to have consumed milk during the period under analysis hence no significant change from the previous month.
- Amount of milk consumed during the month under review dropped slightly.



- Reduced milk production at household level occasioned by decreased milking herd had a negative impact on the consumption level during the period under review.
- The current level of milk consumed is lower than the long term average thirty eight percent.

5.2 FOOD CONSUMPTION SCORE (FCS)

- During the month under review, out of the sampled two hundred and ten households, the proportion of households having poor, borderline and acceptable food consumption score was twenty nine percent, forty two percent and twenty nine percent respectively.
- More households transitioned from the acceptable band into the poor and borderline categories. However, overally the FCS remained unchanged at 35 from that reported previously thus pointing to stability in food consumption at household level during the review period.

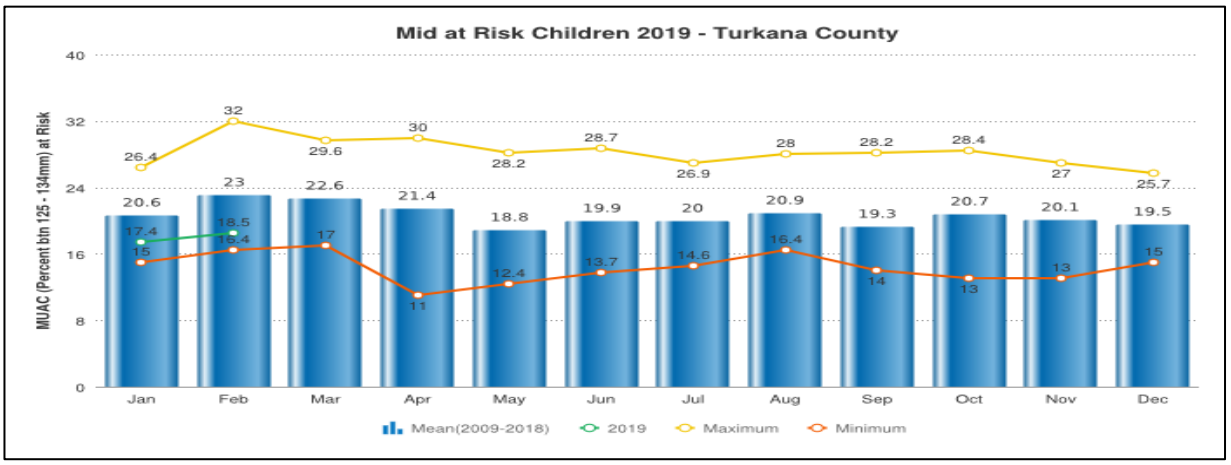


- The highest number of households with a poor FCS was reported in the Pastoral and Fisheries livelihood zones. On the other hand, majority of households in the Agro Pastoral livelihood zone fell within the acceptable FCS category.
- Seventy three percent of households in Turkana west fell within the borderline class with Turkana north and south depicting a negative trend in terms of the rising number of households falling within the poor FCS band during the month under review.
- The Pastoral livelihood zone had the lowest FCS of 26 followed by the Fisheries zone at 34.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- Sixty percent of the total children sampled during the period under review for purposes of taking the mid upper arm circumference measurements were males with forty percent being females.
- There was no significant shift in the proportion of children rated as being 'at risk' of malnutrition from that reported during the previous month.



- The current proportion of children rated as being 'at risk' is lower than the long term average proportion of children normally rated as being 'at risk' of malnutrition for the period under review.
- Existence of some integrated outreaches albeit in select few sites and concerted efforts by nutrition actors in the county in terms of supplying essential nutrition supplements targeting the hotspots was the major factor influencing the observed stability.

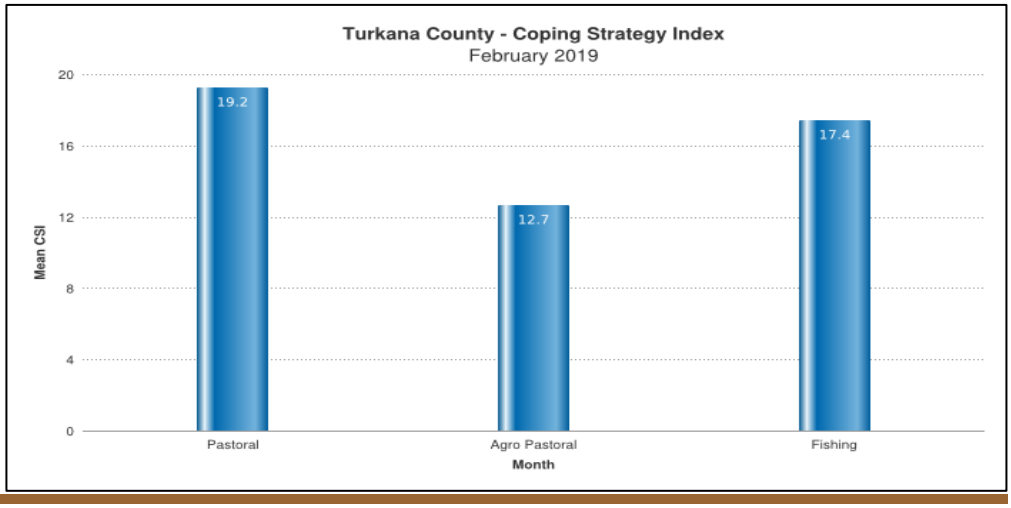
5.3.2 Health

- Fever with chills like malaria was the prevalent ailment among the sampled under-fives during the month of February.

5.4 COPING STRATEGY

5.4.1 Coping Strategy Index (CSI)

- The mean coping strategy index in February was 17.1 and was comparable to the one reported previously hence indicative of application of similar strategies across the two months.
- Households in the Pastoral and Fisheries livelihood zones were more constrained in accessing food or money to buy food compared to those resident in the Agro Pastoral zone during the period under review as illustrated.
- The most commonly applied food consumption related strategies were reduced portion size and reliance on less preferred/less expensive food across all livelihood zones.



6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD

- During the period under review, no relief food distribution was conducted.

6.2 NON-FOOD

Intervention	Sub-County/Ward/Location	No. of Beneficiaries	Implementer/ Organization
Safe shelter construction	Turkana west Turkana east Turkana central Turkana south Loima	80 HHs 32 HHs 161 HHs 80 HHs 15 HHs	Kenya red cross society

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- There were no serious cases of insecurity reported during the month under review.

7.2 MIGRATION

- Migration of livestock continued during the period under review, a high concentration of livestock was witnessed in Lopuke, Nawountos, Loteteleit, Lorionotom, Loriu ranges, Loruth, Lotikipi plains among other areas that had pasture of fair quality and quantity.
- More than fifty percent of cattle from all livelihood zones had migrated from their normal grazing areas during the month of February.

7.3 FOOD SECURITY PROGNOSIS

- Based on the following assumptions: that the MAM rains are seventy five percent more likely to be average to above average and timely (according to GHACOF) and that temperatures are expected to be 0.5^0celcius above average between February and March (as per NOAA-CPC NMME), the following food security outcomes are highly likely.
- Livestock productivity is anticipated to decline across March as the body condition deteriorates owing to depletion of forage and dwindling of water sources. As a consequence, incidents of resource based conflict will most likely shoot up as migration to dry season areas continue.
- Staple food prices will most likely stabilize over the long rains season as stocks from the external markets and cross border imports flock the markets. On the contrary, the possibility of milk availability declining gradually over the next one month shall remain high.
- It's highly probable that the household purchasing power will decline slightly before stabilizing after the next one month owing to the goat-to-maize price ratio remaining above average.
- Food consumption gaps are expected to remain high especially among the poor households across the three livelihood zones. Consequently, 'stressed' phase of food insecurity outcomes are likely to persist with the number of households transitioning into the 'crisis' phase anticipated to increase.

8.0 RECOMMENDATIONS

- **Food and Safety Net:** Provision of relief food to over 42,325 households that are currently food insecure and upscaling cash transfer targeting Turkana west sub county.
- **Peace and Security:** Mitigate against escalation of resource based conflicts through intensified community awareness sessions targeting areas where animals have migrated to along the Uganda Ethiopia and South Sudan border at the same time conducting peace dialogue meetings in areas bordering Baringo and West Pokot counties.
- **Water**: Activation of rapid response teams to attend to borehole breakages targeting the Pastoral livelihood zone and other select areas across the other zones while upscaling water trucking to cover the increasing number of hotspots.
- **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 and some pocket zones in Turkana south.
- **Health and Nutrition:** Upscale 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 along the Pastoral and Fisheries livelihood zones.