

National Drought Management Authority

TURKANA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2018



A Vision 2030 Flagship Project



SEPTEMBER EW PHASE

Drought Status: NORMAL



Shughuli za kawaida

Early Warning (EW) Phase Classification

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

Drought Situation & EW Phase Classification

Biophysical Indicators

- The county did not experience any noteworthy rainfall during the month of September. Nevertheless, for the 6-month period (April 2018 to September 2018), the cumulative rainfall constitutes 160% of what is normally received for the interval.
- The condition of vegetation deteriorated as signified by the shift in VCI-3month downwards but the level of greenness was within the normal range across all areas in the county.
- Forage condition was fair throughout the width of the three livelihood zones albeit gravitating to poor in some few places.

Socio Economic Indicators (Impact Indicators)

- Generally livestock body condition for all species was fair while the household return trekking distance to water source increased slightly but was within the normal range.
- The level of production and consumption of milk decreased a bit and fell outside the normal range for the month under review.
- Although terms of trade was within the normal range, it dropped a little. Neither was there any notable migration taking place nor animal death attributed to dehydration reported in September.
- Coping strategy index remained unchanged and within the normal range. Forty one percent of households were classified as having a poor FCS and that was an increase from the twenty eight percent reported in August. Proportion of children 'at risk' of malnutrition increased marginally but was confined to the limits of the normal range for the month under analysis.

Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)	160	60-100
VCI-3 month (County)	53	>35
VCI-3 month (T.West)	40	>35
Forage Condition	Fair	Good

Production Indicators	Value	Normal Range
Livestock Migration Pattern	Normal	Normal
Livestock Body Condition	Fair	Good
Milk Production	1.6 Litres	> 2.2 Litres
Livestock deaths (attributed to drought)	No Deaths	No Deaths

Access Indicators	Value	Normal Range
Terms of Trade (ToT)	58	>36
Milk Consumption	1.5 Litres	>1.9 Litres
Return distance to water sources	4.8 km	<6.6 km
Cost of Water(Ksh/20L)	Ksh.5	Ksh.5

Utilization Indicators	Value	Normal Range
Nutrition Status, MUAC (% at risk of malnutrition)	17.6	<20.1
Food Consumption Score (FCS)	35	>35
Coping Strategy Index (CSI)	16	<17.5

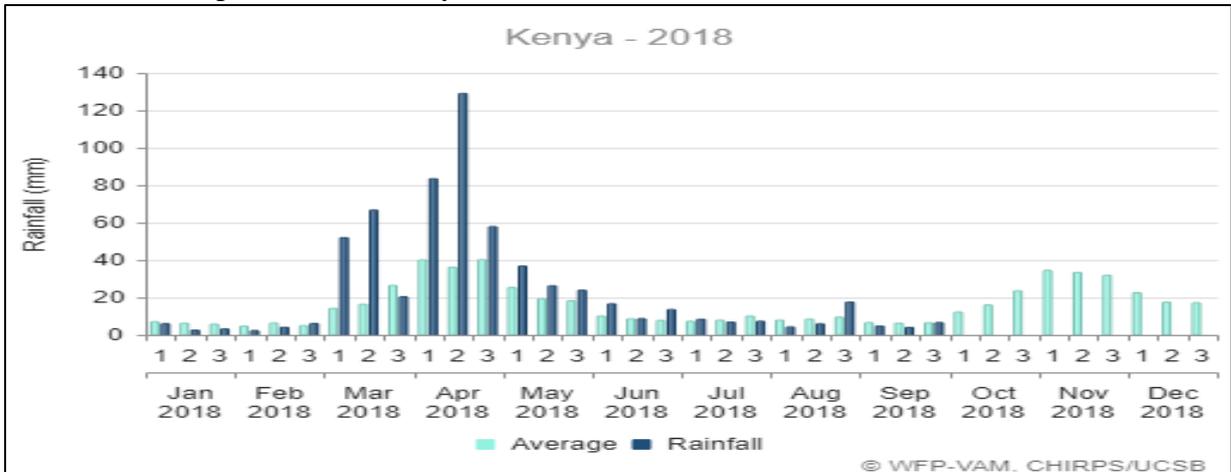
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|--|---|--|---|
| <ul style="list-style-type: none"> ▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation | <ul style="list-style-type: none"> ▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ 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 |
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

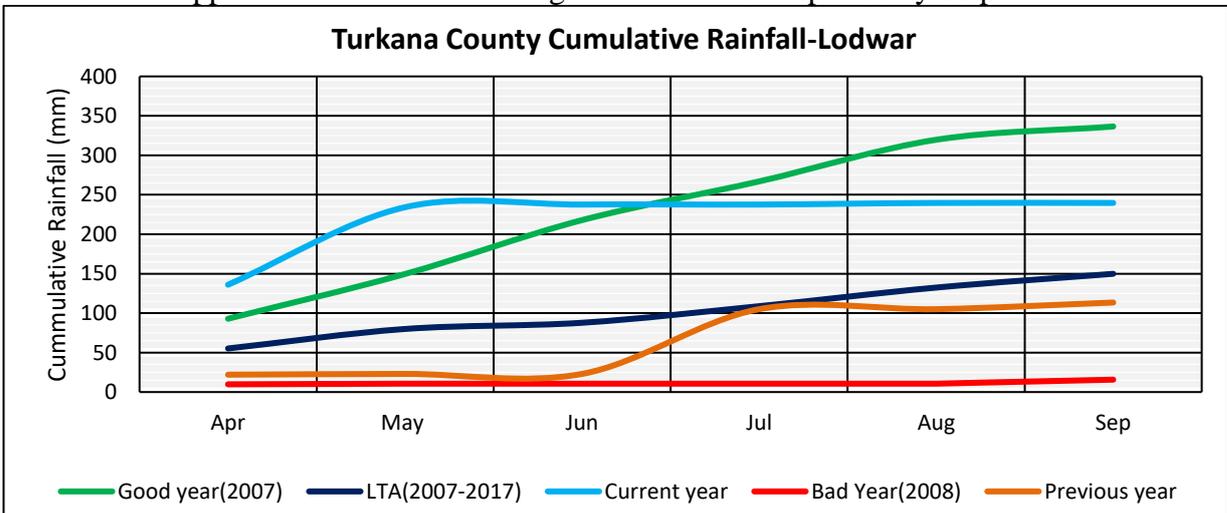
- The county did not experience any significant rainfall during the month under review and as a result decadal amounts were simply trace as illustrated below. Hot and dry weather condition dominated most parts of the county.



Source: VAM (World Food Programme)

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- During the month under review nil amount was recorded at Lodwar rainfall station against the expected 17.4mm normally with the spatial distribution being highly uneven within the pocket zones that reported trace amounts.
- For the period April 2018 to September 2018, the cumulative rainfall totalling to 239.6mm surpassed the 11-year cumulative rainfall average for the same period by 89.8mm and therefore, exceeded the upper limit of the normal range for the reference period by 60 percent.



Source: Meteorological Department (Turkana County)

- In comparison to the cumulative rainfall for the six month period during the previous year (April 2017 to September 2017), the aforementioned amount for the current year is higher by 126.2mm.
- The period (April 2008 - September 2008) represents the segmental bad year within the last 11 years.

1.3 OTHER EVENTS

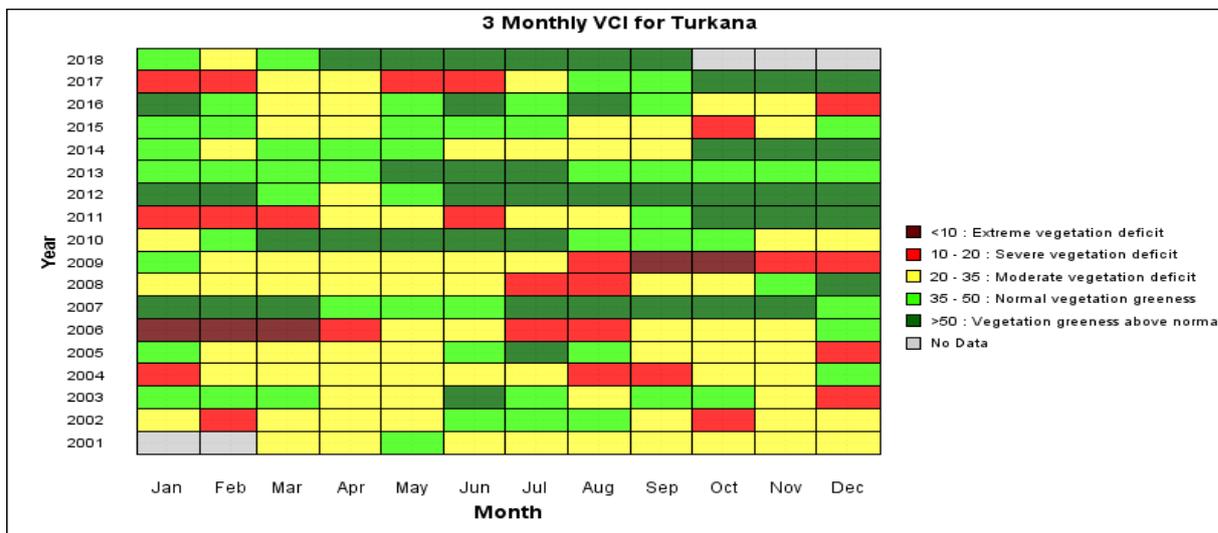
- Events such as flash floods, mud slides, lightning nor hailstorm were not reported during the period under review.

2.0 IMPACTS ON VEGETATION AND WATER

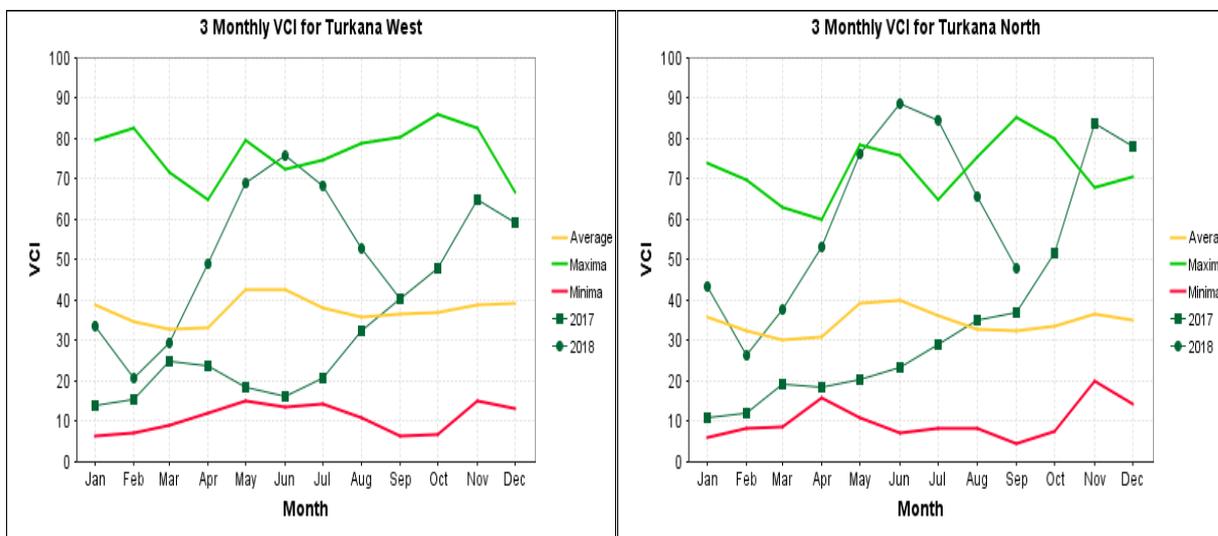
2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The matrix below depicts how months have been categorized upon conducting a retrogressive analysis of the vegetation condition.
- Comparison of the relative NDVI (Normalized Difference Vegetation Index) change with respect to the minima and maxima NDVI value recorded historically forms the basis for VCI.
- Vegetation condition deteriorated remarkably as evidenced by the drop in VCI-3month to 53 from 72 recorded in August but remains within the above normal vegetation greenness band.



- Most sub counties portrayed above normal vegetation greenness save for Turkana west and north that exhibited a negative trend as illustrated graphically below.



- Lack of rainfall integrated with the rising temperature were the factors influencing the observed negative trend in vegetation condition during the month of September.

2.1.2 Pasture

- During the period under review, the condition of pasture in the county was good to fair (in terms of quantity) and hence slightly above the threshold witnessed normally but had dried up. The current state of pasture could be attributed to rainfall deficiency coupled with high temperature.
- If the current weather condition persist, the available pasture is projected to last for a period of one month due to the high deterioration rate.

- Insecurity along the traditional conflict hotspots such as Lomelo and Kapedo in Turkana east and grassland fires in areas such as Lokichar and Nakukulas remained the major hindrance to pasture access during the period under assessment.
- Across the three livelihood zones, the quality and quantity of pasture along the Agro Pastoral livelihood zone was better compared to that witnessed in the other two livelihood zones.

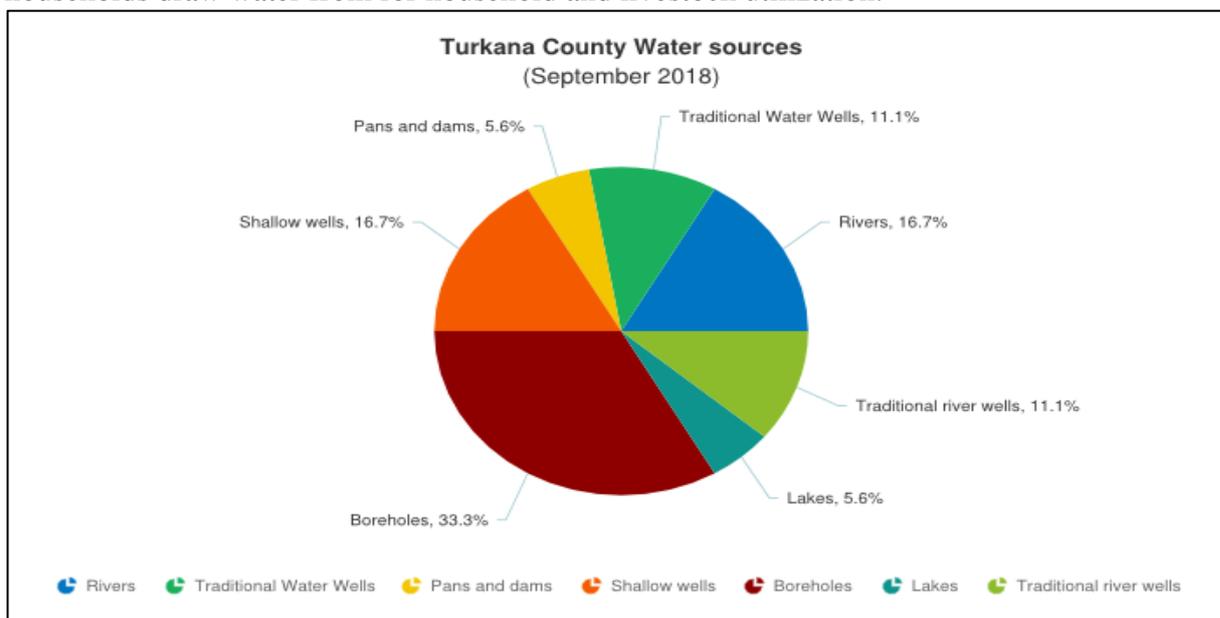
2.1.3 Browse

- The condition of browse in September was good to fair in quantity albeit dry and within the normal range witnessed normally at such a time of the year across the county. The observed condition could be attributed to absence of rainfall compounded by the skyrocketing temperature.
- Available browse across most sites in the county is anticipated to last for a period of 1-2 months if the current dry and hot weather condition persist.
- Locust infestation in all sites across the county was the greatest impediment to browse access.
- There was no notable variation in terms of browse quality and quantity across the three livelihood zones during the month under review.

2.2 WATER RESOURCE

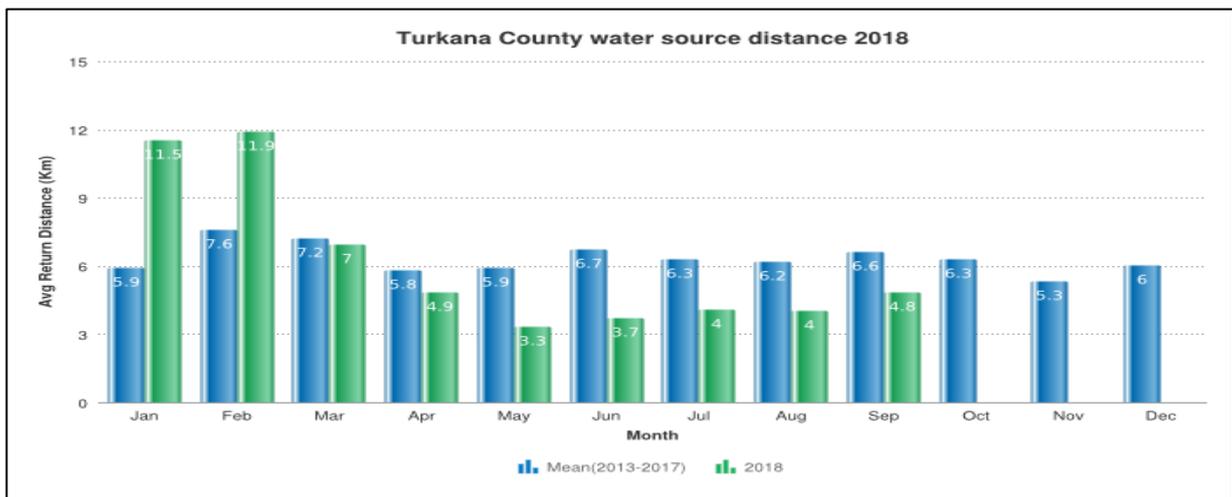
2.2.1 Sources

- Boreholes, rivers and shallow wells were the main sources of water in use by majority of the households during the month under review.
- The water situation deteriorated further with select strategic water pans being 25% full unlike the previous month when most were at 50% capacity.
- At such a time of the year, the aforementioned water points are normally the main sources where households draw water from for household and livestock utilization.



2.2.2 Household access and Utilization

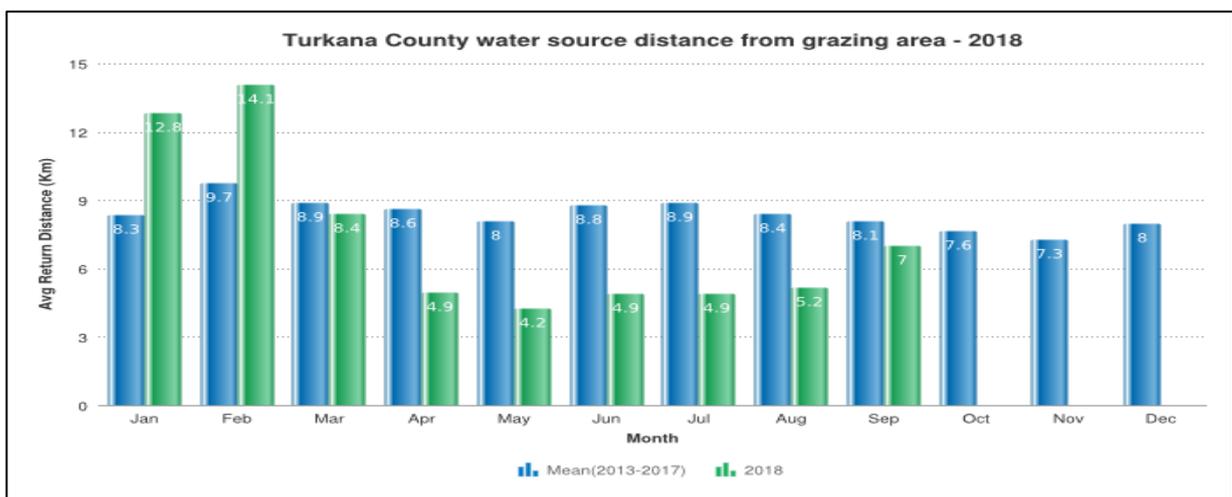
- The return distance for households to water source adjusted upwards somewhat during the month of September. However, the distance was lower than the long term average distance for the month by twenty seven percent.
- The Agro Pastoral livelihood zone reported the longest distance with the least being recorded along the Fisheries livelihood zone.



- The average waiting time at water source across the three livelihood zones was 15-30 minutes.
- Household water consumption per person per day averaged 20 litres, 30 litres and 40 litres across the Pastoral, Agro Pastoral and Fisheries livelihood zones respectively and thus deteriorated slightly in comparison to the month of August.
- Generally water was cost free at source, however, most water vendors in major urban centres were dispensing a 20 litre jerry can at five shillings. The price was within the normal range for the month of September.

2.2.3 Livestock access

- Livestock return trekking distance from grazing areas to water points increased by 1.8km in relation to that reported in August. The distance was lower than the long term average trekking distance for the month under review by 14 percent.
- The least trekking distance was recorded along the Fisheries livelihood zone with the longest being reported in the Agro Pastoral livelihood zone.



- Dwindling of pasture level in areas in close proximity to water sources was the major factor behind the elongation in trekking distance.
- Across all the livelihood zones, the watering frequency for all animal species was 4-5 times per week during the month under review and this was partly due to some water pans drying up and the yield in some boreholes dropping substantially.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

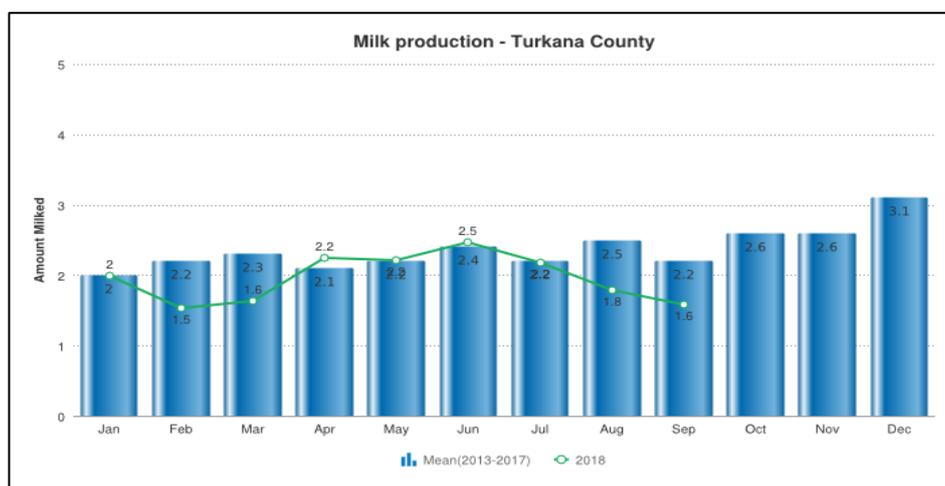
- The body condition for all livestock species across the three livelihood zones was good to fair during the period under review. The loin of the camel was fairly well developed up to the shoulder region whereas fat deposit on tail head was evident in sheep. On the other hand, cattle was fairly covered in flesh with most ribs not visible.
- Livestock body condition is expected to deteriorate over the next 1-2 months owing to dwindling pasture across most sites in the county translating to increased trekking distance.
- Notably though, the current body condition of livestock rates above normal in comparison to that witnessed during alike periods over the previous years. This could mainly be attributed to forage availability owing to receipt of good long rains that equally implied a reduced trekking distance to water source as most open sources recharged well.

3.1.2 Livestock Diseases

- A number of households in Lokichar reported cases of Contagious Caprine Pleuropneumonia (CCPP) in goats with some in Lokwii and Kaeris reporting presence of Lumpy Skin Disease (LSD) in goats during the month under review.

3.1.3 Milk Production

- Amount of milk produced was on a downward trend during the month under review. Goat was the leading producer of milk in the county.
- The current production level is below the normal production level for the period by nineteen percent.
- The observed negative trend could be attributed to diminishing pasture, increased trekking distance and reduced size of milking herd during the month under analysis.



3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

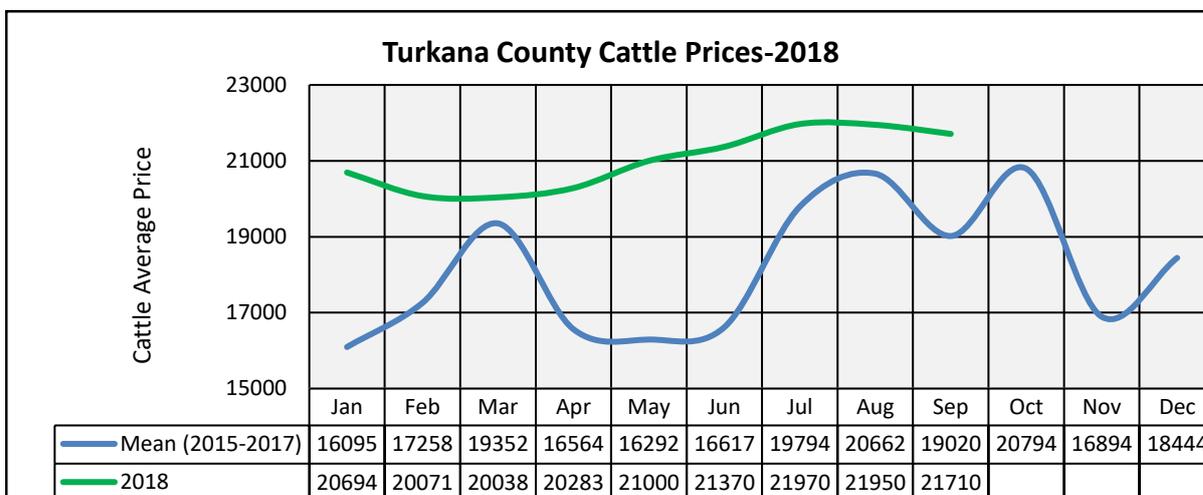
- Majority of the farmers mainly along the Agro Pastoral livelihood zone cultivate Maize, Sorghum and Cowpeas during the long rains season.
- Land preparation was the major agricultural activity taking place across some farms in areas such as Kalemgorok, Kaitese and Kalemunyang during the month under review.
- Low yields were reported by most farmers, this was mainly due to destruction of crops by locusts that had invaded several farms in the county and the floods witnessed during the March, April and May (MAM) season.
- Sorghum in some farms mainly in Turkana west such as Morungole and Awarnaparan was at harvesting stage and horticultural production encompassing Water melons, Kales and Mangoes was somewhat booming in areas like Turkwel and Katilu.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

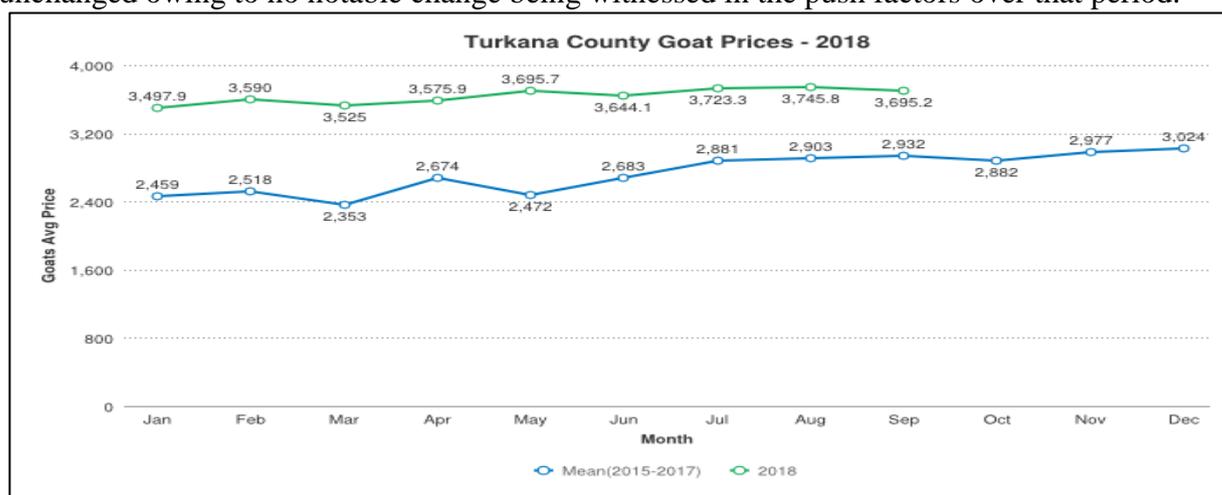
- During the month under review, a 4-year old medium sized bull traded at Ksh. 21,710 and hence the price did not fluctuate significantly from that recorded in August.



- The observed stability could be attributed to the good to fair cattle body condition over the past two months influenced by pasture availability hence better return value at market.
- The highest price of Ksh.21,930 was reported along the Agro Pastoral livelihood zone with the Pastoral livelihood zone reporting the least at Ksh.21,170.
- The current market price of cattle exceeds the three year average price for the month under review by fourteen percent and falls within the normal range accordingly.

4.1.1 Small Ruminants Prices (Goat price)

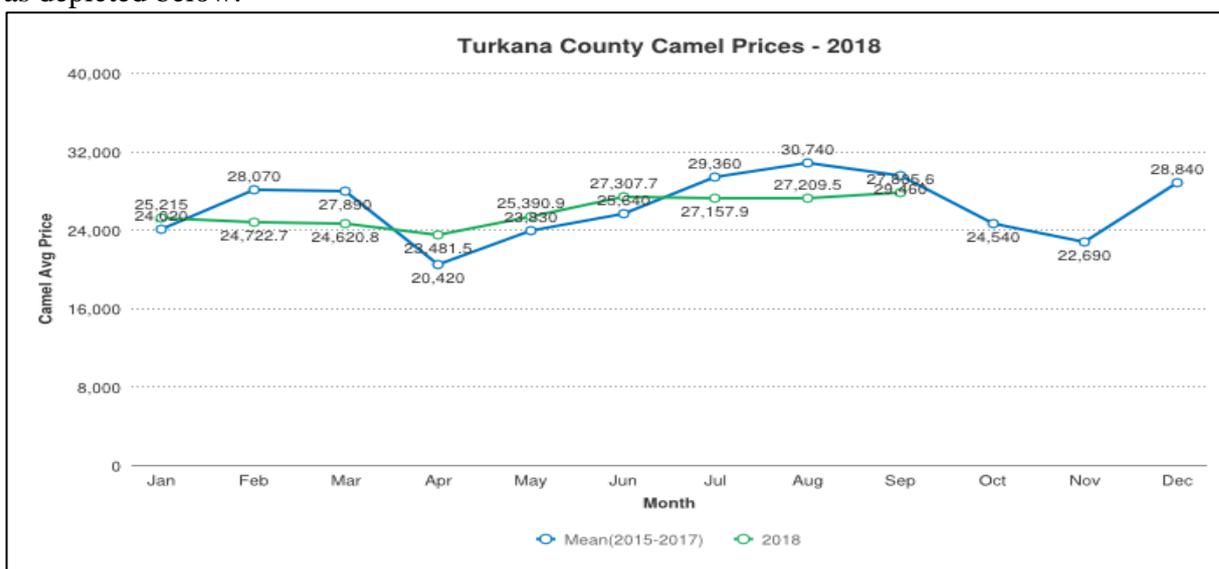
- As illustrated below, the price of a 2-year old medium sized goat during the month of September did not shift significantly from that reported previously.
- The stability in price could be attributed to the fact that the body condition of goat remained unchanged owing to no notable change being witnessed in the push factors over that period.



- The least price of Ksh. 3,280 was reported along the Agro Pastoral livelihood zone with the Pastoral livelihood zone posting the highest of Ksh. 4,000. The Fisheries livelihood zone had a return price of Ksh. 3,770 during that period.
- The current price of goat surpasses the short term average price for the month under review by twenty six percent.

4.1.4 Camel Prices

- Stability was observed in the market value of a 4-year old camel during the month under review as depicted below.

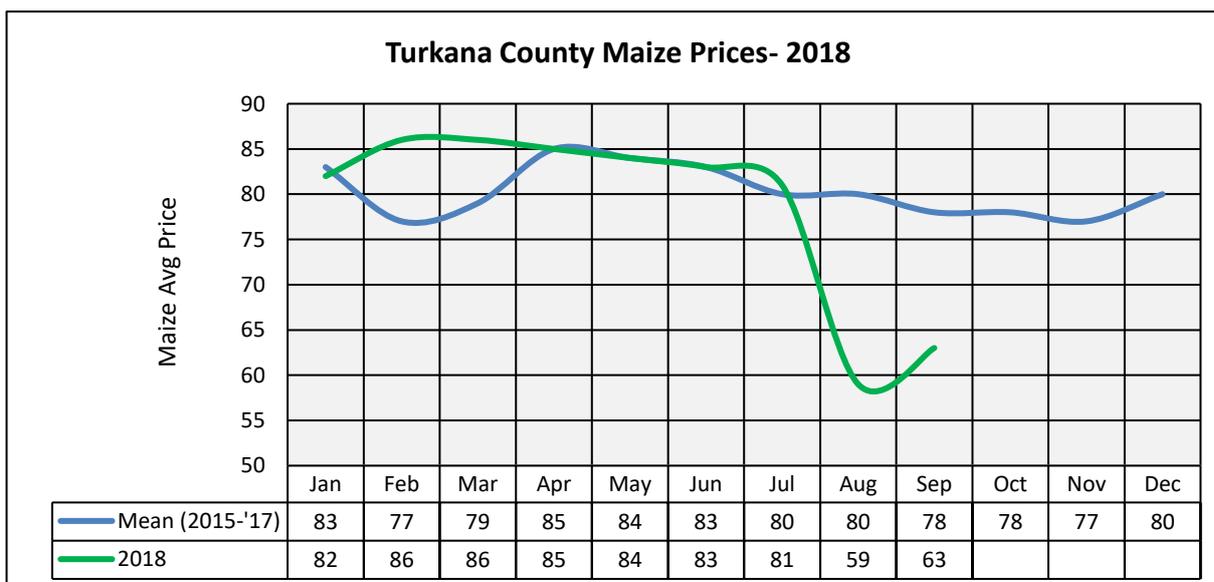


- Existence of fairly similar rangeland conditions during the month of September to those in August was the major factor behind the observed stability owing to the body condition of camel remaining stable over that period.
- The highest price of Ksh. 29,000 was fetched along the Pastoral livelihood zone with the least of Ksh. 27,670 being obtained in the Agro Pastoral livelihood zone.
- The price of camel during the month under review was lower than the short term average price for the month by a paltry six percent.

4.2 CROP PRICES

4.2.1 Maize

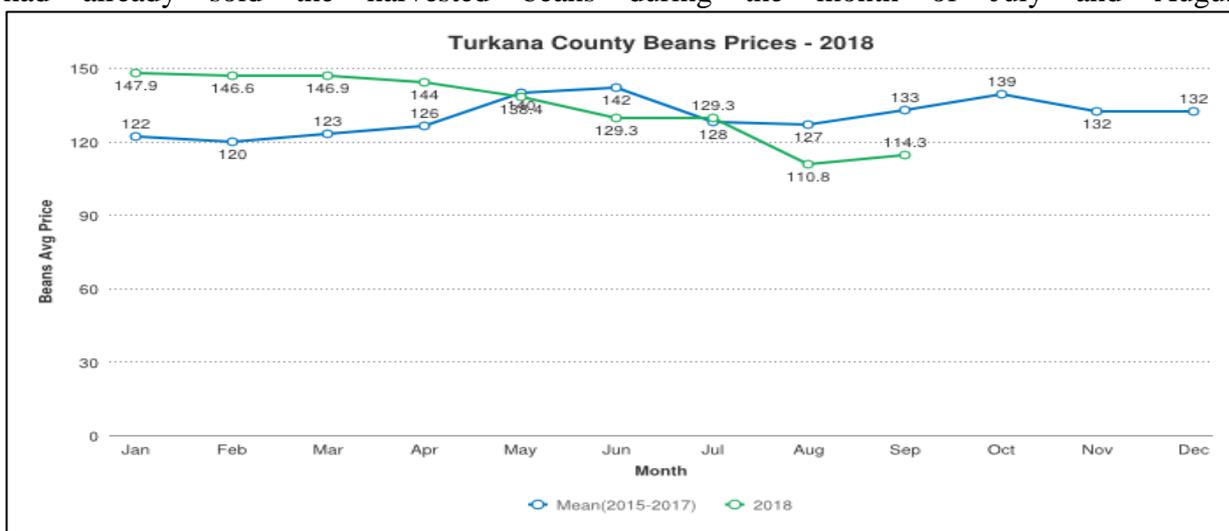
- A slight increase in the price of Maize was recorded during the month under review as shown below. The price was lower than the short term average price for the month by nineteen percent.



- The highest price of Ksh. 73 was reported along the Pastoral livelihood zone with both the Agro Pastoral and Fisheries livelihood zones reporting the least price of Ksh. 60. Unlike the previous month when the stocks were adequate following the harvest, during the month under review, the stocks had started shrinking hence the slight upsurge in price observed.

4.2.2 Beans

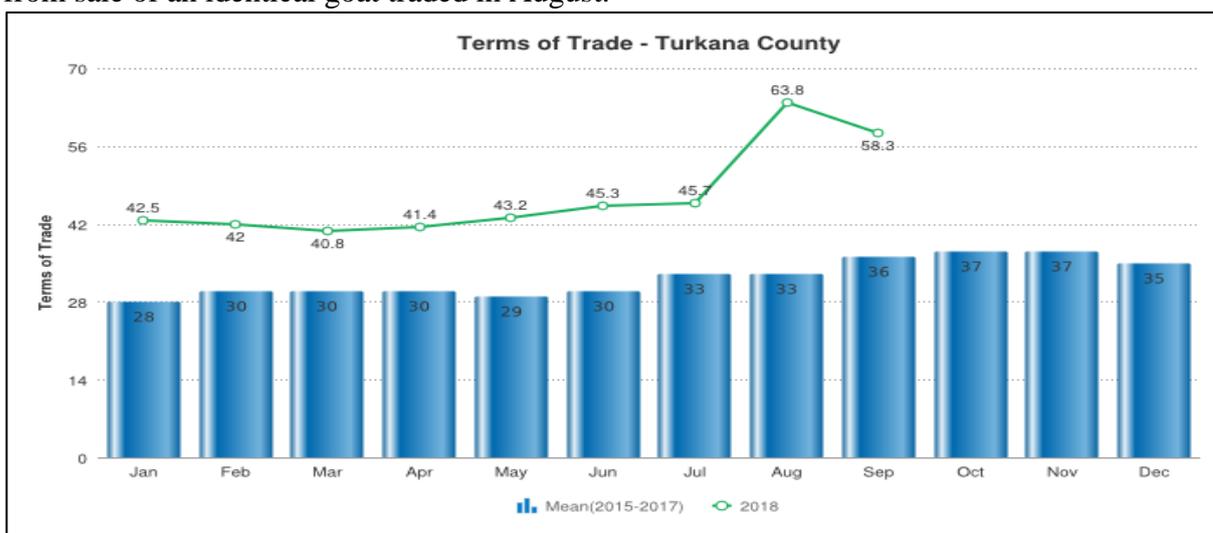
- The price of beans per kilogram adjusted slightly upwards to Ksh.114. The increase could be ascribed to the reduced stocks especially along the Agro Pastoral livelihood zone where farmers had already sold the harvested beans during the month of July and August.



- The least price of Ksh. 110 was recorded along the Agro Pastoral and Fisheries livelihood zones with the Pastoral livelihood zone reporting the highest price of Ksh.130 during the month of September.
- Notably, the recorded price during the month under review was lower than the three year average price for beans by fourteen percent.

4.3 Livestock Price Ratio/Terms of Trade

- A marginal drop in the terms of trade was recorded during the period under analysis, nonetheless, they remained favourable to pastoral households.
- The terms of trade was above the short term average ToT for the month under review by a remarkable margin of thirty nine percent.
- Therefore, pastoralists obtained less kilograms of Maize in September compared to those obtained from sale of an identical goat traded in August.

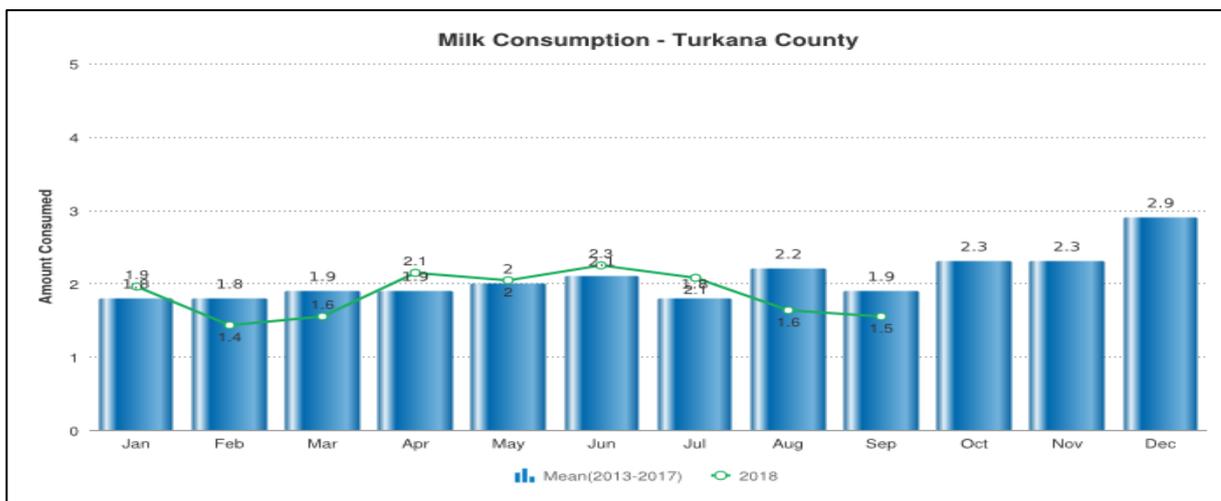


- The rise in ToT could majorly be credited to the increase in Maize price during the month under review since the price of goat remained comparatively stable.
- Following the anticipated fall in the return value of goat at market influenced by the deteriorating rangeland conditions coupled with the rising price of Maize owing to diminishing stocks, the ToT is forecasted to continue being on a downward trajectory over the next one month.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

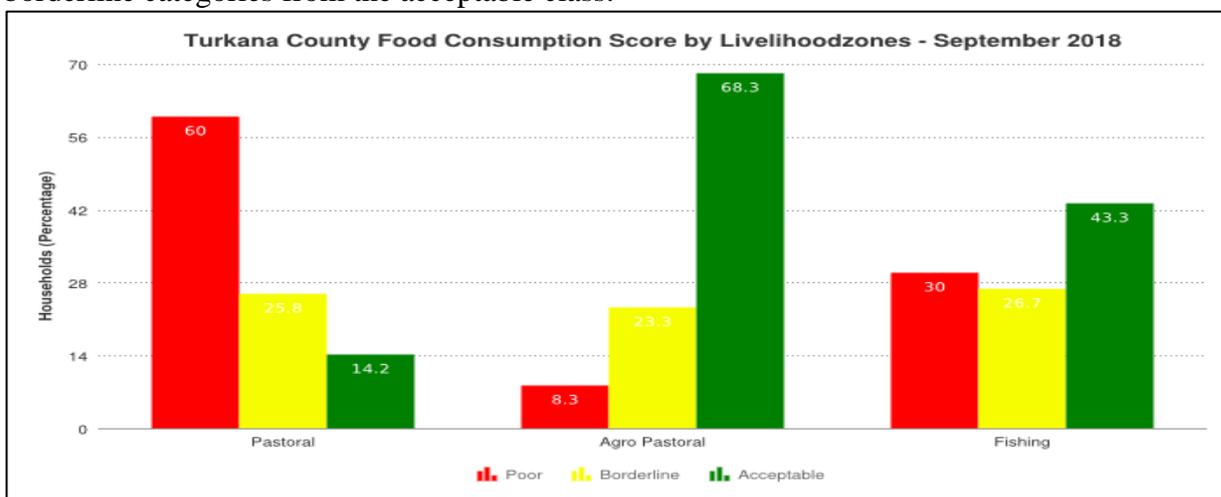
- Milk consumption in September was stable in relation to the consumption level during the previous month of August and that was deduced based on the fifty seven households that reported on the indicator.



- Reduced size of milking herd combined with a slightly elongated trekking distance for livestock were the major pull factors impacting on consumption negatively due to a low yield per animal.
- The current consumption is lower than the normal consumption at such a time of the year by twenty one percent.

5.2 FOOD CONSUMPTION SCORE (FCS)

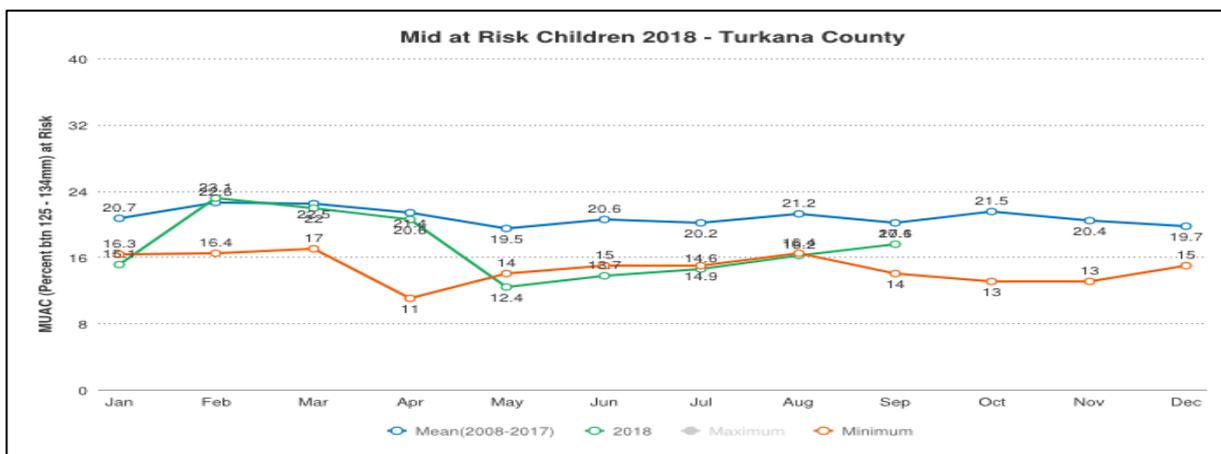
- Forty one percent of the 210 households sampled during the month under review were classified as having a poor food consumption score with twenty five percent falling under the borderline band while the rest constituting thirty four percent were categorized as having an acceptable food consumption score.
- Food consumption experienced a shock as evidenced by the shift in FCS from 45 recorded in August to 35 for the entire county during the month under review.
- Across the three livelihood zones, remarkable variability was observed. For instance, majority of households in the Agro Pastoral livelihood zone were categorized as having an acceptable FCS unlike along the Pastoral livelihood zone where most fell under the poor FCS band. Notably, the Fisheries livelihood zone had the highest number of households shifting into the poor and borderline categories from the acceptable class.



5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- Fifty eight percent of the children whose mid upper arm circumference was measured constituted males with the rest being females
- Proportion of children rated as being ‘at risk’ of malnutrition rose slightly from that reported during the month of August.



Sample size, n=1101

- In comparison to the long term average proportion of children rated as being ‘at risk’, the current proportion is lower by twelve percent.
- Reduced milk consumption and limited access to essential nutrition supplements were some of the factors that were influencing the increase in number of under-fives falling within the category of children rated as being ‘at risk’ of malnutrition.

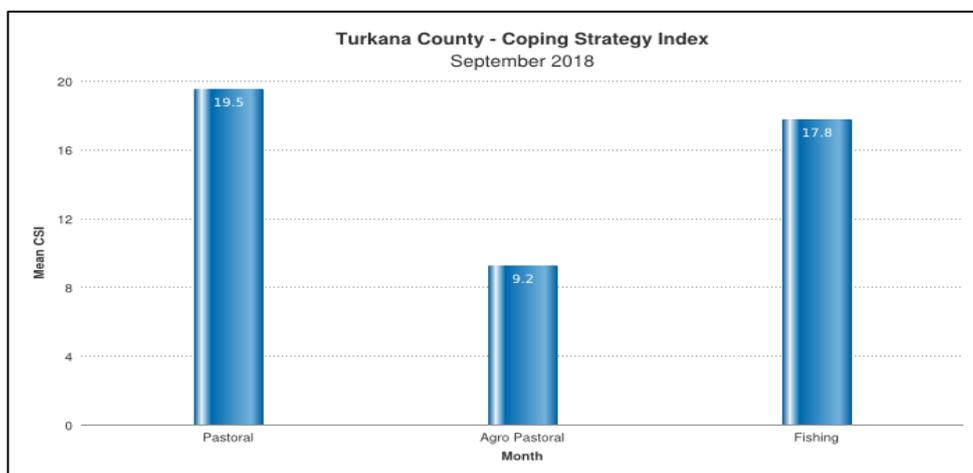
5.3.2 Health

- Among the sampled children during the month under review, Fever with chills like malaria was the prevalent ailment reported with some few cases of Diarrhoea.

5.4 COPING STRATEGY

5.4.1 Coping Strategy Index (CSI)

- The coping strategy index was 16 and thus remained unchanged from that reported in August implying that most households employed relatively alike coping strategies across the two months.
- Households along the Agro Pastoral livelihood zone applied less severe and fewer coping mechanisms as opposed to those resident in the Pastoral livelihood zone.
- Reliance on less preferred/ less expensive food and reduced portion size were the prevalent coping mechanisms in application across most households during the month under review.



6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD

Intervention	Sub-County/Ward/Location	No. of Beneficiaries	Implementers/Organization
Cash Transfer Program for young women and school going children	Turkana west Turkana south Turkana central	9000 Girls	Kenya red cross society –Global Funds. Support World vision and AICHM

6.2 NON-FOOD

Intervention	Sub-County/Ward/Location	No. of Beneficiaries	Implementers/Organization
Construction of safe shelter	Turkana east. Turkana west Turkana central Turkana south Loima	32 House Holds 80 house holds 160 house holds 80 house holds 15 house holds	Kenya red cross society
Livestock treatment / Vaccination	Kibish Sub-County	39,813 Livestock treated / vaccinated benefiting 1,117 households (128 male and 28 female)	VSF Germany
Supervision / Monitoring of farmers training on agronomy	Kalobeyei Kang'alita Moruese Nanyee Lokubae Morulem Katilu	3943 Males 5693 Females	VSF Germany

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- No major incidents of insecurity were reported during the month under review.

7.2 MIGRATION

- During the period under review, no significant out-migration was taking place but some households had started moving towards the border of the county and Uganda.

7.3 FOOD SECURITY PROGNOSIS

- The body condition of livestock is anticipated to continue deteriorating over the next one month as pasture starts to deplete in some sites. Consequently, livestock production will most likely be impacted negatively.
- There is a distinct possibility that the purchasing power will start eroding over the next one month as the terms of trade assume a negative trend and thus meeting elementary food needs at household level shall be constrained.
- The level of malnutrition is forecasted to go up marginally owing to limited access to nutritious foods. Therefore, proper market functionality will be key in bridging any food gaps over that period.
- It's thus highly probable that most households more so those resident along the Pastoral livelihood zone will be 'stressed' with the likelihood of some few households being in 'crisis'.

8.0 RECOMMENDATIONS

- **Peace and Security:** Enhance efforts towards maintaining peace and protecting livelihoods through community sensitization barazas while activating peace committees and conducting regular patrols especially along the Lodwar- Kainuk highway and other conflict hotspots.
- **Water:** Enhance water availability and improved access for schools and health facilities through installation of water harvesting and storage structures such as tanks while strengthening the capacity of the rapid response teams as a preparedness measure.
- **Livestock:** Conduct a market assessment aimed at evaluating the capacity of the livestock marketing councils and traders at the same time upscaling efforts towards rehabilitating markets structures that might have been destroyed by the MAM floods or wind as a means of repositioning.
- **Health and Nutrition:** Conduct community sensitization on hygiene practices and awareness creation on nutrition while screening under-fives and pregnant and lactating women in all the hotspots.