



A Vision 2030 Flagship Project



National Drought Management Authority TURKANA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2020

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	ALERT	WORSENING
COUNTY	NORMAL	WORSENING

Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)	242	90-110
VCI-3 month (County)	91	>35
Forecast (VCI3)- County	54	>35
Forecast SPI3 (OND)	-0.09 to -0.98	>Nil
Forecast Soil Moisture (October)	0.8 to 1	≤0.6

Production Indicators	Value	Normal Range
Livestock Migration Pattern	Not Normal	Normal
Livestock Body Condition	Fair	Good
Milk Production	1.5Litres	> 2.5 Litres
Livestock deaths (attributed to drought)	No Deaths	No Deaths

Access Indicators	Value	Normal Range
Terms of Trade (ToT)	45	>39
Milk Consumption	1.6Litres	>1.7 Litres
Return distance to water sources	5.6 km	< 6.7 km
Cost of Water(KSh/20L)	KSh. 0-5	<KSh .5

Utilization Indicators	Value	Normal Range
Nutrition Status, (% with MUAC < 125mm)	2.6	<8.1
Food Consumption Score Proportions(%)	33 Poor: 28 Borderline: 40	>35 Poor< 31 Borderline: <44
Reduced Coping Strategy Index (rCSI)	16.6	<17.1

Drought Situation & EW Phase Classification

Biophysical Indicators

- Depressed rainfall with a temporal distribution of 1-2 days was experienced in some sections of Turkana West and South in September. Cumulative rainfall received during the 6-month period (April to September 2020) represents 242 percent of the total rainfall normally received for the period. However, the forecast points to a more than average chance of below normal rainfall as evidenced by the SPI3 for the short rains season.
- Save for the Fisheries zone, vegetation condition remained stable with above normal greenness as depicted by the unchanged VCI-3month value of 91 but the forecast indicates a deteriorating trend driven by the enhanced probability of below normal soil moisture across the outlook period.

Socio Economic Indicators (Impact Indicators)

- Body condition for all livestock species was fair but on a deteriorating trend while household access distance to water source increased but remained within the seasonal range.
- Milk production and hence consumption level declined further falling outside the normal range but cost of water was normal.
- Despite the terms of trade falling above the normal range, a drop was recorded in September and no livestock death attributed to starvation was reported but migration resumed.
- Majority of households were consuming staples and vegetables every day, accompanied by oil and pulses a few times in a week albeit with a minimally adequate diet. Proportion of under-fives who were moderately and severely malnourished remained stable and within the seasonal range.

<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 High Calving Rate Milk Yields Increase
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Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- Rainfall received in some sections of the county including Turkana West and South was highly depressed with a distribution in time of 1-2 days; all the other areas did not experience rainfall and were generally dominated with dry and hot weather conditions throughout the month under review.
- The continuity of rainfall from the previous month and across the dekads in September for the sites that experienced rainfall was remarkably poor.

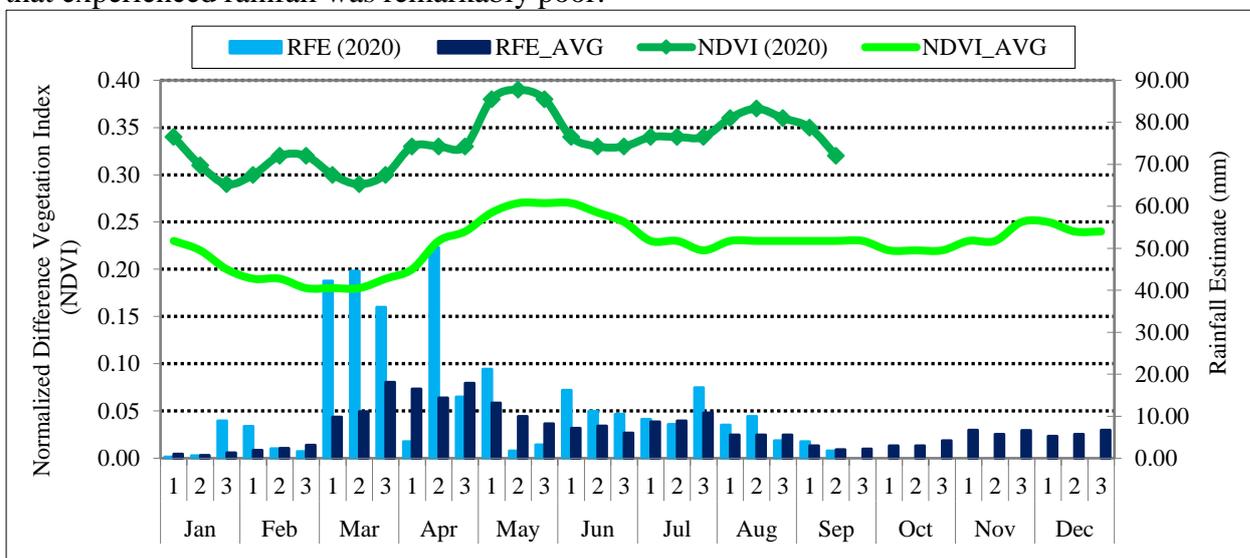


Figure 1: Dekadal Rainfall (mm) and NDVI Values Compared to the Long Term Average
 Source: VAM-World Food Programme, CHIRPS/MODIS

- The highest amount of rainfall was recorded in dekad one with the actual surpassing the corresponding long term dekad average by 33 percent (Figure 1).
- Vegetation condition (overhead shrubs/species) in over 50 percent of the county as evidenced by the Normalized Difference Vegetation Index (NDVI) was good but on a deteriorating trend as a consequence of the cumulative effect of the off season showers experienced during the previous months of June, July and August (JJA season).

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Cumulative rainfall received during the period April to September 2020 accounted for 242 percent of the rainfall normally received during that period (Figure 2).

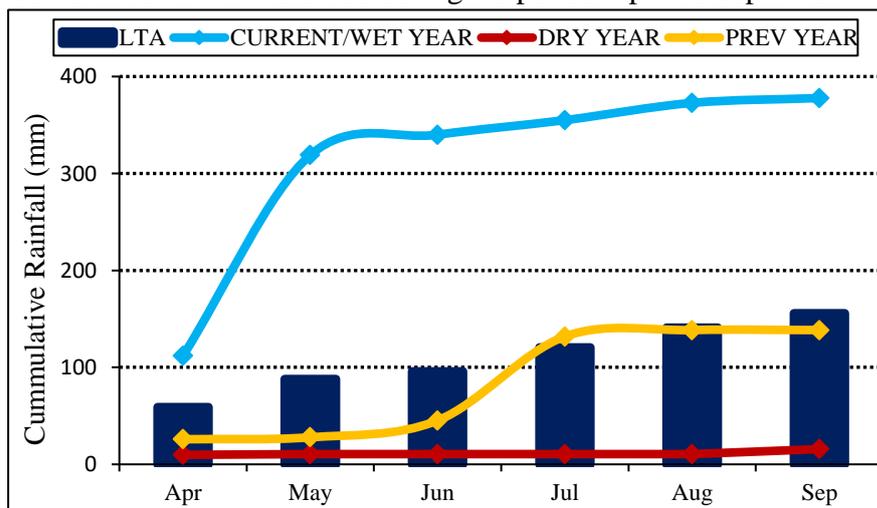


Figure 2: Six-Month Cumulative Rainfall Trend (April to September 2020)
 Source: Kenya Meteorological Department (KMD)-Turkana County

of the rainfall normally received during that period (Figure 2). Similarly, amount of rainfall recorded at Lodwar meteorological station during the month of September represented 34 percent of the normal rainfall for the month under analysis.

All sections/livelihood zones of the county were dominated with long sunny intervals with the minimum temperature during the month of September

- Spatial distribution of the rainfall in the county including those select parts of Turkana West and South that experienced light showers was highly uneven. The Fisheries livelihood zone (Kerio, Kalokol, Kang’atotha and Lakezone wards) remained the worst affected.

- Comparatively, the aforementioned six-month cumulative rainfall for the current year exceeded the one reported for the same period during the previous year by an absolute value of 239.3 mm of rainfall or 173 percent and hence the year was considered relatively wetter.
- The period between April to September 2009 is rated as the bad year historically (based on a 13-year time frame historical data) having recorded only 15.7mm of rainfall while the current year (April to September 2020) is considered the wettest having reported 377.8mm of rainfall.
- The October-November-December (OND) short lead seasonal forecast probability for the standardized precipitation index (SPI3) is skewed towards a more than average chance of ‘Alert’ conditions and consequently most of the socio economic indicators including livestock body condition hence milk production and terms of trade are expected to decline leading to a negative shock on household food security across the outlook period (*Source: MET office, Hadley centre*).
- Some of the sites in the county experiencing significantly dry and hot weather conditions as a consequence of not receiving rainfall for a long period that has led to deterioration in the condition of vegetation are as illustrated in table 1.

Table 1: Sites Experiencing Drier than Normal Conditions

Turkana Central	Turkana North	Turkana West	Turkana East	Turkana South	Loima
Kalokol Kerio Kanamkemer	Lakezone Kaeris Kaaleng Nakalale	Kakuma (Lokore)	Katamanak Lokori Kangitit Lopii Lokoriokot Lokwomosing	Kalapata Lokichar Nakabothan Kangirega Nagetei Kaekunyuk	Nadapal Kaitese Koolioro Nakamane Lorugum Lolupe

1.3 OTHER EVENTS

1.3.1 COVID-19 Pandemic

- The county had recorded a total of 267 (166 males and 101 females) COVID-19 positive cases as at 29th September 2020 out of the 3891 samples tested with a positivity rate of 6.9 percent.
- Nevertheless, 225 recoveries had been reported with the active 42 cases in Turkana West and Central being mainly asymptomatic, 10 absconders and four mortalities were recorded too.
- A total of 1,069 contacts had been traced and currently 128 were on follow up at the active six quarantine facilities in the county.

1.3.2 Flooding

- Increased rainfall in the catchment zone for Turkwel dam has led to a significant rise in the water level. The average inflow into the dam in September 2020 was projected at 200 percent of the long term average (LTA) (about 40m³/s) but the actual inflow has been above 300 percent of LTA (approximately 63m³/s).
- Consequently, the heavy rainfall has resulted to the dam level rising and surpassing the projected September 2020 end month level of 1146.30 metres above sea level (MASL) by 0.89m. Only 2.81 metres remains before the dam overflows and therefore the risk of significant flooding being witnessed in the downstream areas of Turkana South, Loima and Turkana Central remains high.
- Along the Fisheries livelihood zone, increased water levels continued being witnessed in Lake Turkana with the spill over leading to destruction of businesses and homesteads in close proximity.

1.3.3 Desert Locusts Invasion

- Despite the desert locusts that had invaded the county earlier in the year being successfully controlled through air surveillance and ground spraying, the risk of re-invasion remains high given that new swarms have been reported in the neighbouring county of Samburu and therefore surveillance efforts need to be scaled up.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Below is a visual illustration (matrix) of how months have been categorized based on the applicable VCI thresholds. Every month is linked to an appropriate vegetation deficit band upon conducting a retrogressive analysis of the vegetation condition.

- The basis for VCI is comparison of the relative NDVI change with respect to the minima and maxima NDVI value recorded historically.

- The condition of the overhead drought resistant shrubs/species did not change significantly from the one observed

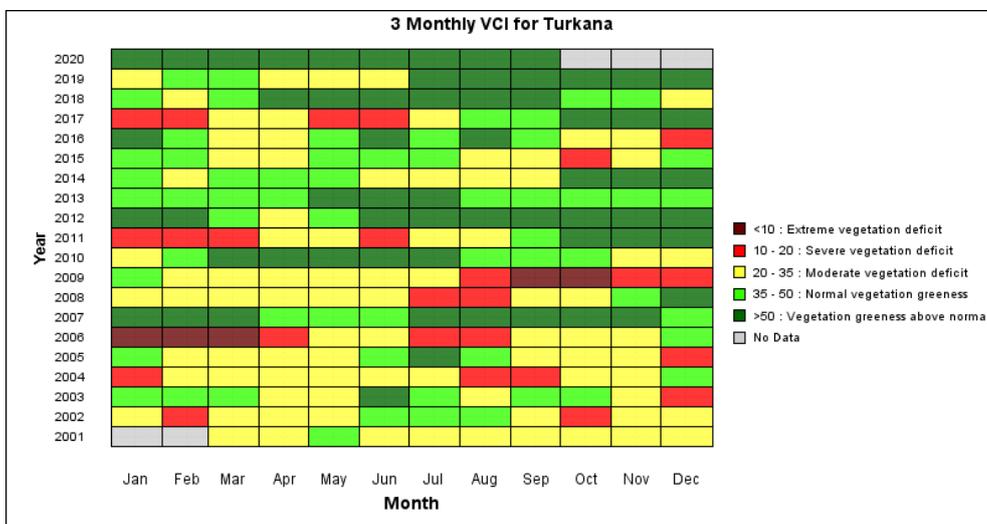


Figure 3: Vegetation Condition in Turkana County ; Source : Boku University

during the previous month of August as evidenced by the VCI-3month value of 91 for the entire county that remained the same as the one reported previously.

- Therefore, in a number of sites especially those in the Agro-pastoral livelihood zone and some sections of the Pastoral livelihood zone like Turkana West and Kibish, vegetation greenness was generally above normal depicting relatively good conditions for September (Figure 3).
- Stability in the condition of vegetation as supported by the VCI-1month that remained unchanged from August was recorded in only Loima Sub county.
- Overall, a declining trend in the condition of vegetation across the other five Sub counties was witnessed during the period under analysis; for instance, the VCI-1month for Turkana Central, Turkana East, Turkana North, Turkana South and Turkana West shifted to 87, 73, 63, 96, 93 from 109, 86, 87, 106 and 108 respectively reported in August.
- Turkana North (Lake zone, Kaeris, Nakalale and Kaaleng) experienced the highest level in

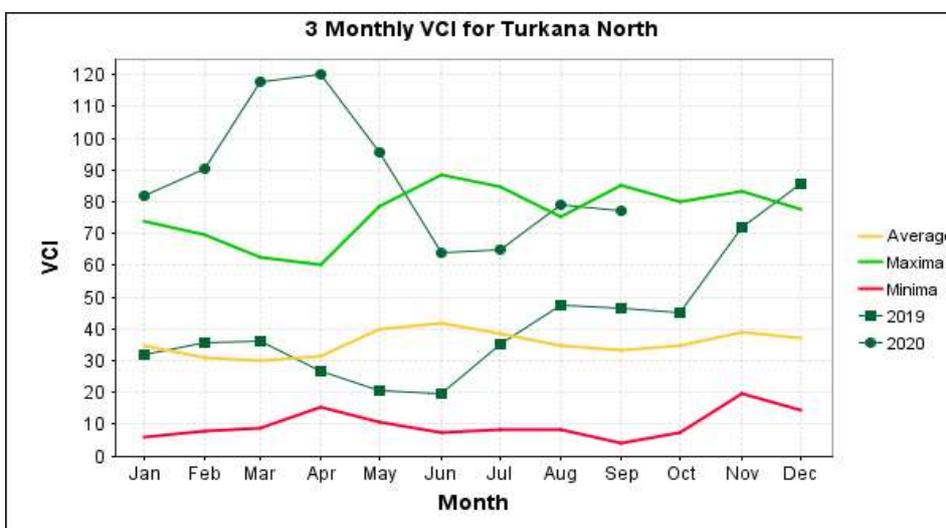


Figure 4: Vegetation Condition Trend in Turkana North ; Source : Boku University

vegetation condition deterioration during the month of September (Figure 4). Notable though, above normal vegetation greenness in some parts of the county was due to the cumulative effect of the off season rainfall received during the June, July and August period that sufficed in sustaining the greenness within a relatively desirable level despite dry and hot weather conditions dominating across all the livelihood zones during the month under review.

- The VCI-3month forecast for October indicates normal to above normal vegetation greenness across the entire county; however, there shall exist variation in greenness with Turkana East and North anticipated to present the lowest level towards the end of the forecast period (Figure 5).

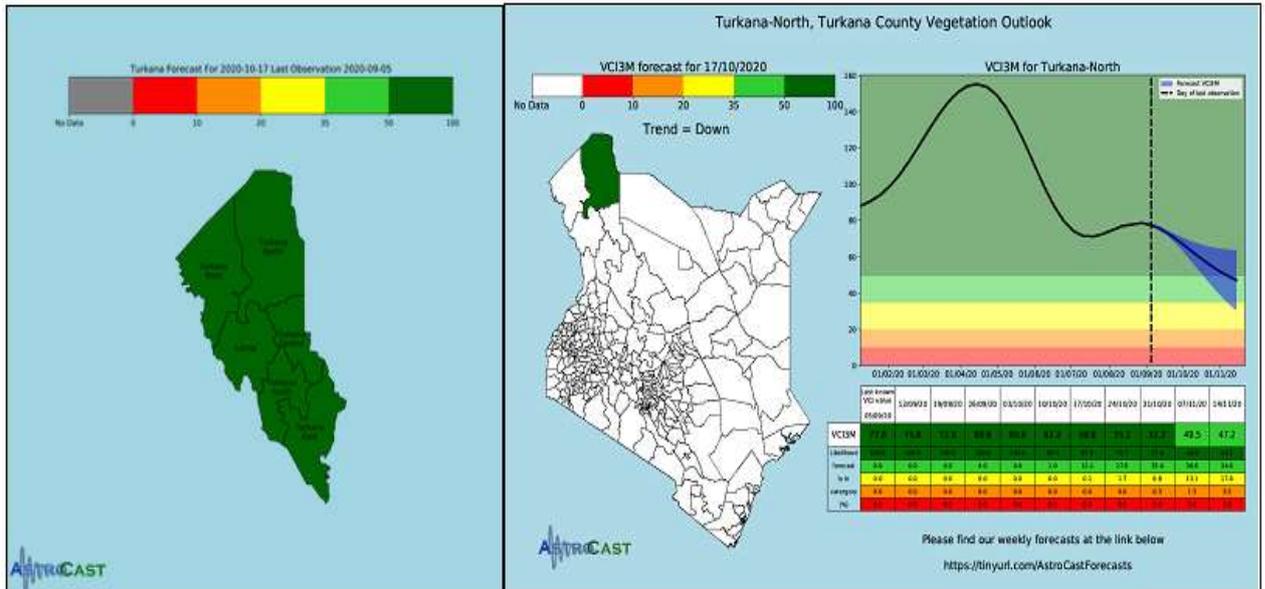


Figure 5: VCI-3 Month Forecast for Turkana County and Trend for Turkana North Sub county
Source: ASTROCAST

- At five percent significance level, it's projected that remarkable decline in the condition of vegetation will most likely be observed in all the Sub counties across the outlook period.

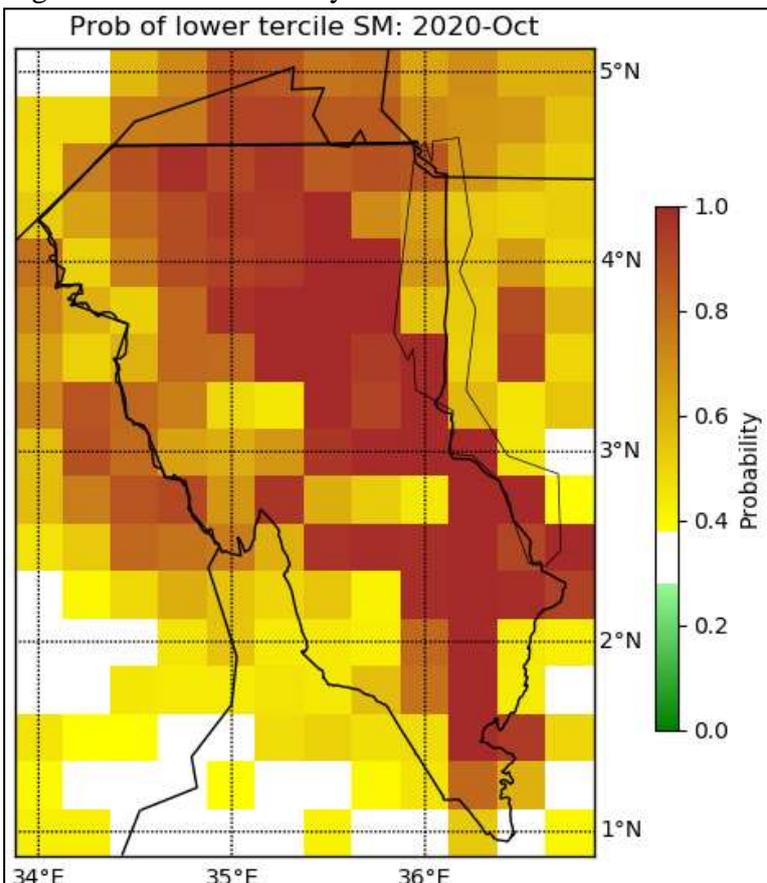


Figure 6: Probability of Below Normal Soil Moisture
Source: University of Reading

condition being observed during the outlook period shall remain medium to high with pasture and browse level especially within the plains expected to diminish gradually resulting to reduced livestock productivity. The projected increase in trekking distance will most likely have a negative impact on the market return value of livestock albeit not to an extreme extent.

The rate of deterioration in the condition of vegetation during the forecast period is anticipated to be high along the Eastern side of the county affecting Lakezone, Kalokol, Kang'atotha, Township, Kaeris, Kerio, Kanamkemer Kalapata, Kaaleng/Kaikor and Katilia wards to a greater extent owing to the highly enhanced probability of below soil moisture along that belt across October.

The situation in the aforementioned areas will most probably be compounded by the expected average to below average rainfall during the OND season with relative stability anticipated along the Western side as a consequence of the cumulative effect of the off season rainfall received in that belt and the relatively low probability of below tercile soil moisture. (Figure 6).

Therefore, the likelihood of a negative trend in the livestock body

2.1.2 Field/Ground Observations: Pasture

- Pasture condition as observed during the transect drive and interviews with the key informants from 27 communities across all the three major livelihood zones was generally fair to poor during the period under analysis (Figure 7). Majority of the sites exhibiting pasture of poor condition were along the Fisheries and Pastoral livelihood zones.
- Notwithstanding the decline in pasture condition observed in September, the prevailing level of pasture during the month of September was at par with the one normally observed at such a time of the year across most areas in the county.
- The witnessed deterioration in the condition of pasture especially in the Fisheries and the Eastern wing of the Pastoral livelihood zone could be ascribed to absence of off season rainfall along that belt coupled with drier than normal conditions resulting from above normal sub surface temperatures that accelerated degeneration of pasture during the month of September.
- Available pasture in some sections of the plains like Turkana South (Lobokat, Kaputir wards), Letea, Lapur, Kalobeyei, Nanaam and Turkwel wards is expected to last for a period of one month and less as opposed to one to two months normally. Kaeris, Kataboi, Kalolol, Kapua, Nachukui, Lopii, Lokichar and Loperot were some of the sites whose pasture had depleted.
- Some of the commonly reported constraints to pasture access during the period under review were proliferation of some poisonous invasive species (*Prosopis Juliflora*) across most sites in Turkana North and West, perennial insecurity in the major pasture migratory corridors/reserves in Kibish and Turkana East and high disease prevalence in some areas where livestock had converged.
- Significant variation in the quality and quantity of pasture was observed with that along the Fisheries livelihood zone being starkly poor in comparison to the one in the Agro-pastoral and the Western wing of the Pastoral livelihood zone.

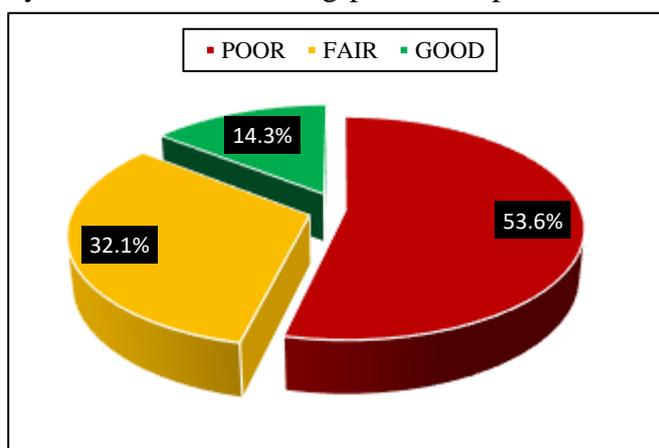


Figure 7: Pasture Condition in Turkana County; September 2020

2.1.3 Field/Ground Observations: Browse

- Browse condition was generally fair with isolated sections in Turkana South, East, Loima and the entire Turkana West boosting browse whose condition was good (Figure 8). Browse level during the month under review was equally at par with the normal level witnessed at such a time of the year in the Pastoral and Agro-pastoral livelihood zones.

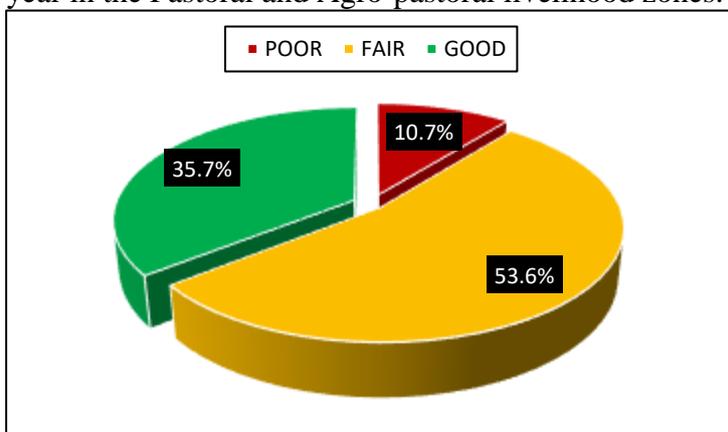


Figure 8: Browse Condition/Situation in Turkana; September 2020
browse access during the month under review.

Deterioration in browse condition more so along the Fisheries livelihood zone could be attributed to above normal temperatures prevailing during the period under review compounded by absence of off season rainfall in September. Available browse in the Pastoral and Agro-pastoral livelihood zones is projected to last for a period of 1-2 months as opposed to 2-3 months normally. Insecurity and high prevalence of notifiable diseases were some of the major impediments to

- Variation in browse quality and quantity was witnessed with the situation in the Fisheries livelihood zone being a stark contrast of the other livelihood zones.

2.2 WATER RESOURCE

2.2.1 Sources

- The major sources of water during the period under review across the three livelihood zones included boreholes, traditional river wells and shallow wells (Figure 9).
- There was no significant shift in the proportion of the population utilizing the different water sources during the month of September from August. The observed pattern was as a result of the water situation not deteriorating remarkably during the period under review and thus households accessed water easily through the open water sources scattered across the three livelihood zones.

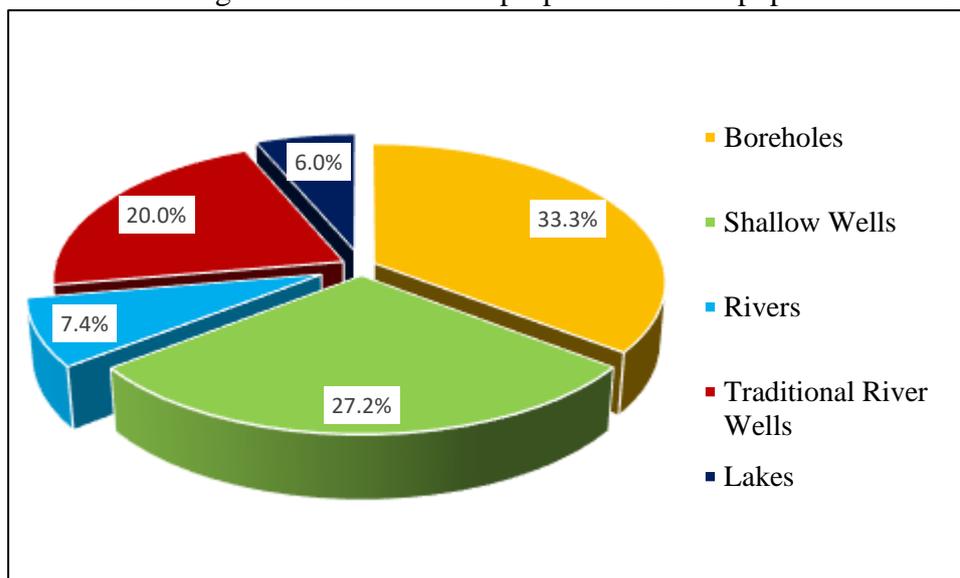


Figure 9: Sources of Water in Turkana County; September 2020

- During the period under review, water level in the open water sources like rock catchments, water pans and dams dropped but generally most were at 50 percent capacity with that volume of water anticipated to last for a period of two months. However, siltation especially at the inlets was a serious problem observed across most water pans especially those that were not protected.
- Across the three livelihood zones, the water situation in September was at par with the level normally witnessed for the month under review.
- The two permanent rivers traversing through the county whose water is normally utilized for irrigation boosted huge volumes occasioned by the heavy rainfall impounding within the catchment areas of West Pokot, Baringo and Elgeyo Marakwet.
- Notably the water sources in use during the month of September were the normal sources where majority of households drew water from at such a time of the year.

2.2.2 Household access and Utilization

- The return trekking distance to water source for households adjusted upwards by 22 percent and averaged 5.6 km in September. The recorded distance was however lower than the long term average distance for the period under analysis by 15 percent and at par with the one reported for the same month during the wet years (Figure 10).
- The longest distance was recorded along the Agro-pastoral livelihood zone while the least was reported in the Pastoral livelihood zone and thus no considerable

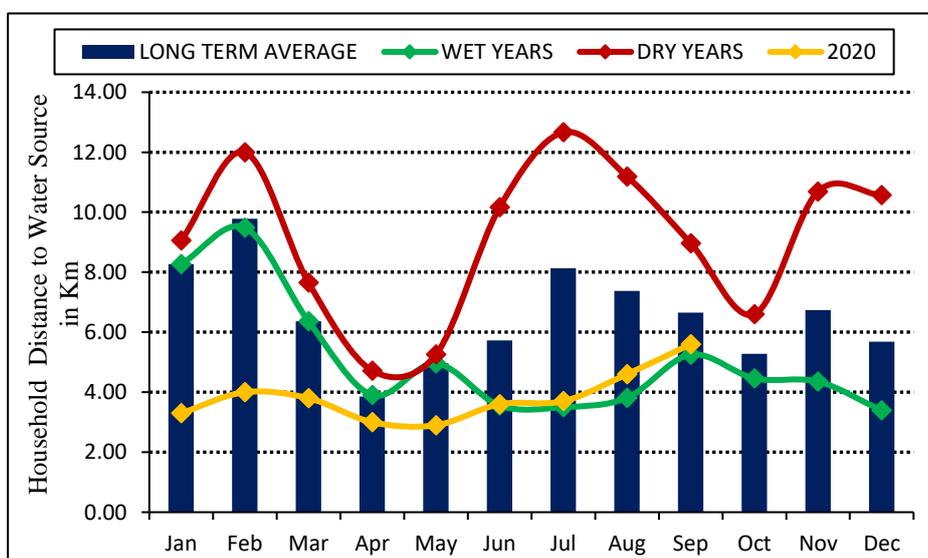


Figure 10: Household Access Distance to Water Source

shift from the scenario witnessed during the previous month of August.

- Despite the water situation not deteriorating significantly, the average waiting time at water source by households' increased slightly with respect to the previous month. Along the Pastoral and Agro-pastoral livelihood zones, households' spent an average of 20 minutes at the water point as opposed to 30 minutes normally while in the Fisheries livelihood zone, the waiting time averaged 30 minutes compared to 45 minutes normally.
- Water consumption per person per day also dropped slightly in September with an individual in the Fisheries, Pastoral and Agro-pastoral livelihood zones consuming 15 litres, 10 litres and 20 litres compared to 20 litres, 15 litres and 25 litres normally in that sequence.
- During the reporting period, the cost of water at source within the rural areas was cost free but water vendors along major urban centres including Kalokol, Kakuma, Lokichoggio and Lodwar among others dispensed a 20 litre jerrican at five shillings and transporters were charging an average of KSh. 20 to KSh 40 depending on the distance covered. The reported price was within the normal range for the month of September.
- In reference to the outlook for the short rains season by KMD and the MET office, Hadley centre, the likelihood of the water situation worsening across the forecast period shall remain high with the recharge level for the open water sources anticipated to be fairly low.

2.2.3 Livestock access

- During the month under review, the return trekking distance to water points for livestock from grazing areas shifted to 8 km representing an increase of 27 percent from the previous month. Despite the reported increase, the prevailing distance was still lower and within the seasonal five-year average by 16 percent and at par with the one recorded for the same period during the wet years (Figure 11).
- The Fisheries livelihood zone reported the longest trekking distance followed by the Pastoral livelihood zone while along the Agro-pastoral livelihood zone, the distances were relatively shorter.

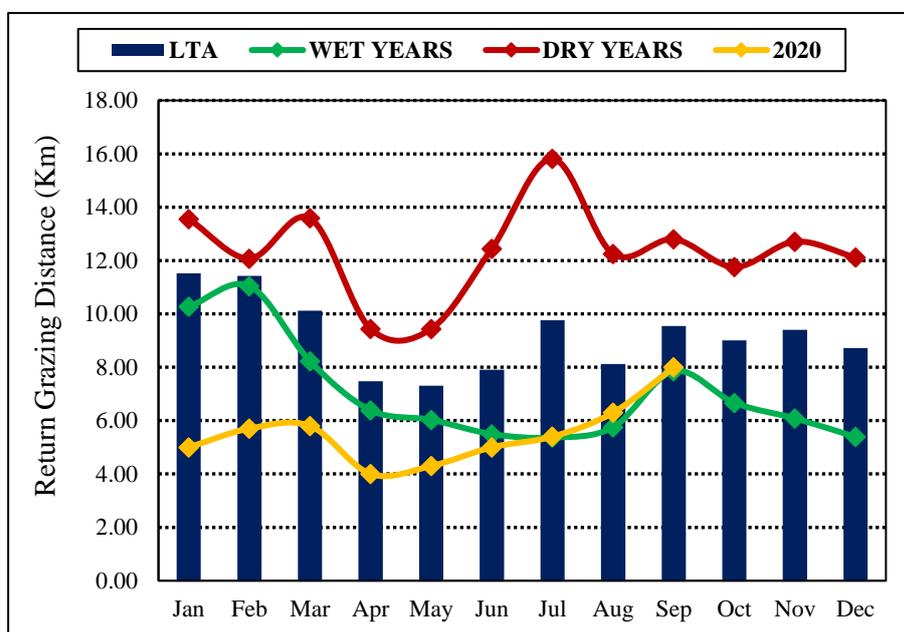


Figure 11: Return Distance to Water Source From Grazing Areas: September 2020

in a week while camels accessed water 1-2 times per week. On the other hand, the watering frequency for small stock in the Agro-pastoral and Pastoral livelihood zones averaged 4-5 times in a week while that of the large stock was four times in a week.

- The observed trend in watering frequency was not occasioned by water scarcity but rather pasture and browse in availability in sites adjacent to water points across all the three livelihood zones. However, continued increase in the depth of traditional river wells and breakdown of some boreholes that some pastoralists relied on in watering their livestock was to a slight extent a factor influencing the observed scenario.

Dwindling and depletion of pasture in some sites within the plains triggered migration of livestock towards areas along the peripheries of the county that had pasture but were slightly far from water points hence the observed trend in September.

The watering frequency for all livestock species generally reduced in September. Along the Fisheries livelihood zone, small stock accessed water 3-4 times

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition for all species was generally fair with isolated cases among the small stock along the Fisheries livelihood zone that had a poor body condition in September.
- Along the Agro-pastoral and Pastoral livelihood zones, the borderline fore-ribs were not visible in goats and camels but in some sites the 12th and 13th ribs in cattle and sheep were visible. Camels and goats in some sections of the Pastoral livelihood zone like Turkana West and Agro-pastoral areas of Turkana South and Loima were characterized with a good smooth appearance.
- The observed livestock body condition for all species in September was at par with the one normally observed for similar periods during the previous years.
- Deterioration albeit to a slight extent in the body condition of all livestock species was noted during the month under review and a similar trend is anticipated across October before the onset of the short rains in dekad three of the month as per the forecast. Trekking distances are projected to be longer across October as the above normal temperatures currently being witnessed accelerate the degeneration of forage leading to further deterioration in livestock body condition.

3.1.2 Livestock Diseases

- Incidents of Haemorrhagic septicaemia (HS) and Contagious Bovine Pleuropneumonia (CBPP) were reported in Turkana Central and Turkana North Sub counties in September.
- Along the Fisheries livelihood zone in areas like Kalokol, Kataboi and Nachukui, some households reported cases of Contagious Caprine Pleuropneumonia (CCPP) with incidents of Pest Petis Ruminantes (PPR) in small stock being reported in Turkana West.
- Among other diseases whose relative prevalence was high included: Helminths, Enteritis and Shoat pox (*source: e-Surveillance-Veterinary Department, Turkana County*).

3.1.3 Milk Production

- From the sampled 270 households, 18 percent reported to have milked either goats or camels during the period under analysis and that represented a nine percent decline from August.
- Production level declined marginally from the previous month and averaged 1.5 litres in September (Figure 12).
- Not only was the production level for the month under review lower than the long term average for the month of September by 40 percent but also the one reported for the same period during the wet years by 55 percent.

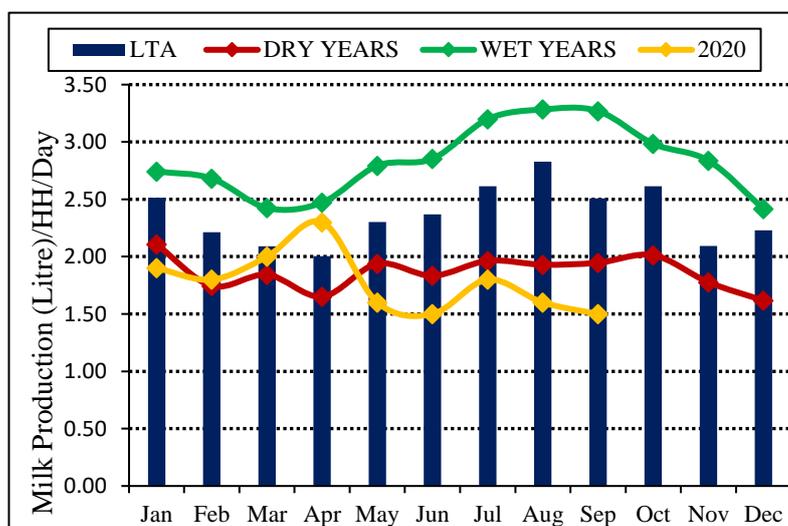


Figure 12: Average Amount of Milk Produced Per Household

- Milk was generally not available within the markets in the Fisheries livelihood but in some sections of the Pastoral and Agro-pastoral livelihood zones, a litre retailed at KSh. 60-80.
- The decline in milk production could be attributed to longer trekking distances occasioned by pasture and browse in availability in some sites across the three livelihood zones.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- Harvesting of maize and sorghum was on going in the rainfed areas but the production level was significantly low owing to destruction of the crops by desert locusts in June at the critical stage. Meanwhile, select few farmers had commenced land preparation in readiness for the short rains.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The price of a 4-year old medium sized bull decreased slightly to KSh. 15,690 during the month under review across the three livelihood zones (Figure 13).

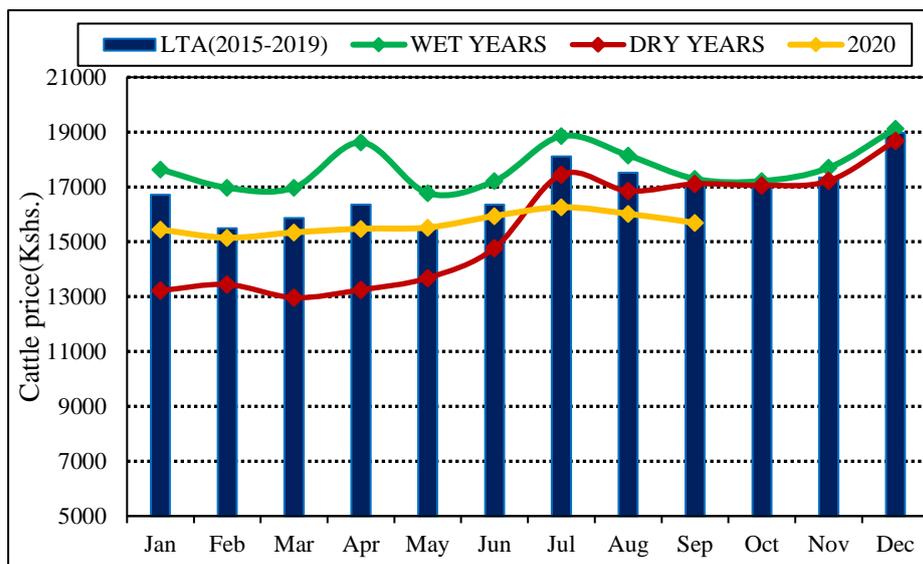


Figure 13: Cattle Price Trends in Turkana County

The decrease in price could be attributed to the deteriorating cattle body condition occasioned by pasture in availability coupled with the elongated trekking distance witnessed during the period under review. The least price of KSh. 15,560 was recorded in the Pastoral livelihood zone while the highest price of KSh. 15,830 was reported along markets in the Agro-

pastoral livelihood zone in Turkana South and Loima during the month of September.

- The recorded price of cattle for the month under analysis was lower than the five-year average price for the same month by nine percent and by the same margin with respect to the price reported for September during the wet years.

4.1.2 Small Ruminants Prices (Goat price)

- During the period under analysis, a decline of 10 percent in the price of a 2-year old medium sized goat with respect to the one reported in August was recorded and it thus traded at an average price of KSh. 3,220 (Figure 14).
- The body condition of goat deteriorated slightly owing to constraints in accessing quality browse in adequate quantities across all the livelihood zones hence the observed price negativity in September.
- Price variation across the livelihood zones was minimal with markets in the Agro-pastoral, Pastoral and Fisheries livelihood zones returning an average price of KSh. 3,280, KSh. 3, 225 and KSh. 3,080 in that sequence.
- In comparison to the recorded price of goat for the period under analysis during the wet years, the reported price for the month of September was lower by 13 percent but at par with the corresponding long term average price for the period under review.

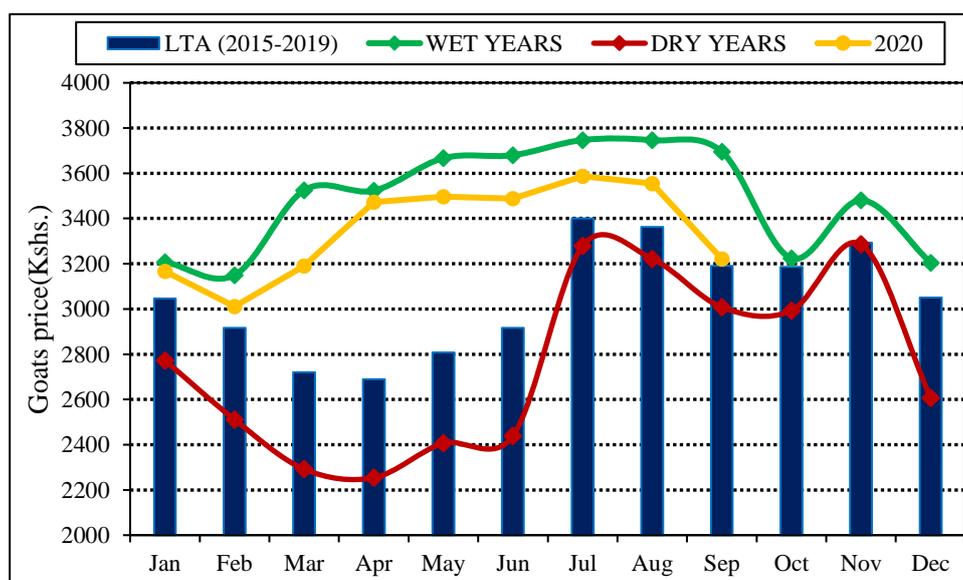


Figure 14: Goat Price Trends in Turkana County

4.1.3 Camel Prices

- The price of a 4-year old camel did not show any considerable fluctuation from the one reported previously and thus it traded at KSh. 2,490 during the month under review across the Agro-pastoral and Pastoral markets where sales were recorded (Figure 15).
- The body condition of the camel remained relatively similar and stable in relation to the month of August as a result of the camel being able to access the overhead palatable species whose condition was good to fair hence the observed price stability. Along the Pastoral livelihood zone markets, the camel traded at an average price of KSh. 24,875 while in the Agro-pastoral livelihood zone, it traded at Ksh. 24,920.

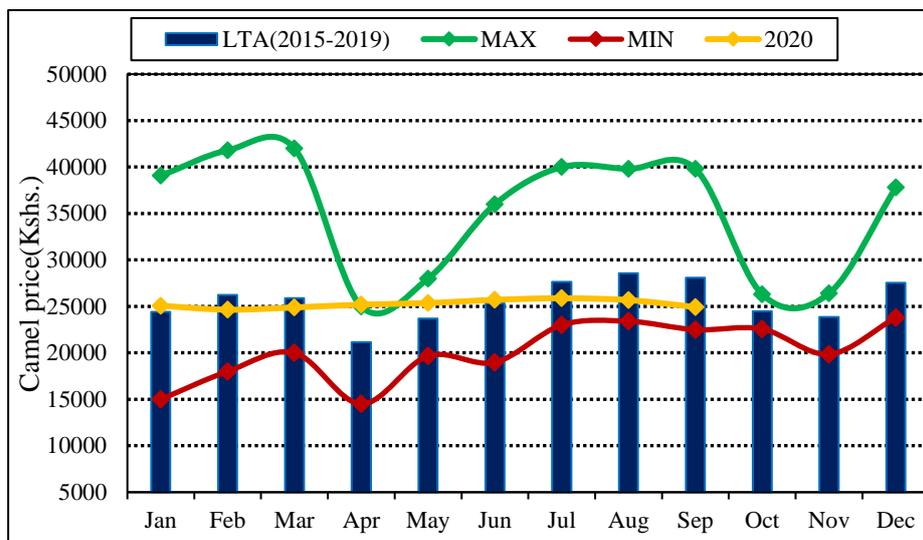


Figure 15: Camel Prices Trend in Turkana County

- Not only was the reported price of camel during the month of September slightly lower than the long term average price for the period under review by 12 percent but also inferior to the maximum price of camel reported over the last seven years for a similar period by a margin of 37 percent.

4.2 CROP PRICES

4.2.1 Maize

- A kilogram of maize retailed at KSh. 70 across all the major markets during the period under analysis and thus it remained stable in relation to the month of August (Figure 16).
- The reported price was at par with the long term average price of maize for the month of September but higher than the one recorded for the similar period during the wet years by eight percent.
- The highest price of KSh. 76 was reported along the Fisheries livelihood zone while markets along the Pastoral and Agro-pastoral zones posted an average price of KSh. 72 and KSh. 61 in that order.

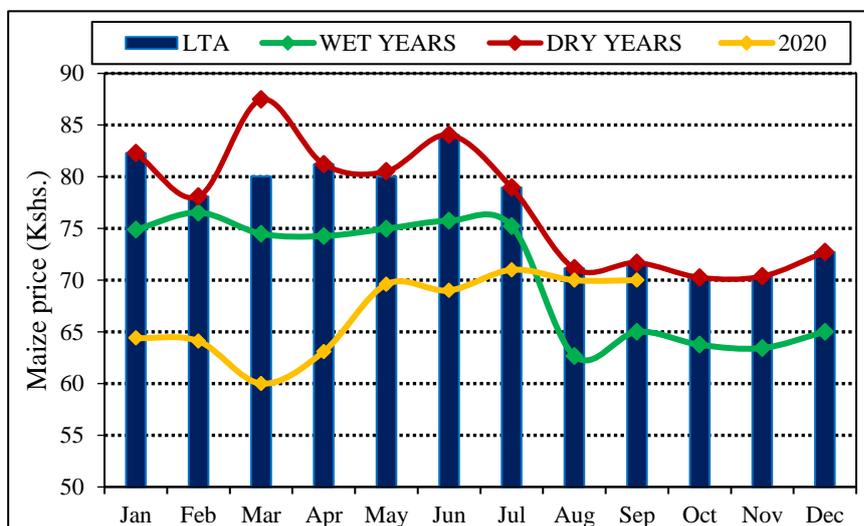


Figure 16: Maize Price Trend in Turkana County

- Far flung markets in Turkana North including Nachukui, Lokitaung, Kaeris, Kaikor and Kokuro normally dominated by select few traders and whose access roads are poor returned a price in the range of KSh. 100-120 while those in the high potential Agro-pastoral sites of the county like Kalemngorok, Kainuk and Turkwel posted an average price of Ksh. 60 in September.
- Availability of substitute cereals such as sorghum and improved accessibility occasioned by continuous supply of the commodity from external markets in Kitale and Kapenguria coupled with imports from Uganda were the major drivers of the observed stability in price during the period under review.

4.2.2 Beans

- The price of beans per kilogram adjusted slightly upwards during the period under review to Ksh.123 (Figure 17). The increase in price 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.

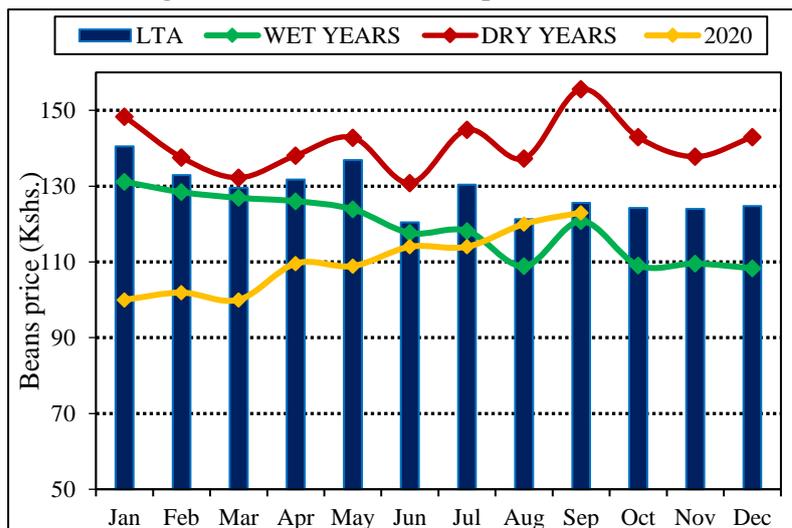


Figure 17: Beans Price Trend in Turkana County: September 2020

Overall, there was no significant variation in the price of beans across the three livelihood zones during the reporting period and consequently along markets in the Pastoral, Fisheries and Agro-pastoral livelihood zones; a kilogram of beans traded at KSh. 124, KSh. 122 and KSh. 121 accordingly.

- Noteworthy, the reported price for the period under review fell in between the long term average price on the higher side and the one recorded during the wet year on the lower side with a two percent margin of separation.

4.3 LIVESTOCK: CEREAL PRICE RATIO/TERMS OF TRADE (ToT)

- The terms of trade declined slightly during the period under review with proceeds from the mostly/normally traded goat (2-year-old male) in the market sufficing to purchase 45 kilograms of maize as opposed to 50 kilograms previously (Figure 18). Therefore, during the review period, pastoralists who are normally dependent on markets for cereals supply were disadvantaged.
- Despite the witnessed decline, the reported ToT was higher than the long term average ToT by 19 percent but lower than the one reported for the same month during the wet years by 20 percent.
- Therefore, the purchasing power of Pastoral households was slightly eroded during that period but a good proportion were able to purchase basic essential food stuffs albeit in small quantities but not well diversified in terms of meeting dietary needs especially for the under-fives given that the high cost of transportation following the outbreak of COVID-19 and increased number of household members to feed occasioned by continued closure of schools was exerting pressure on the available disposable incomes.
- The notable drop in the price of goat was the major driver of the observed negative trend in the terms of trade during the period under review.
- The ToT is anticipated to decline further albeit not significantly across October with the projected drop in the price of goat as browse reserves continue depleting.

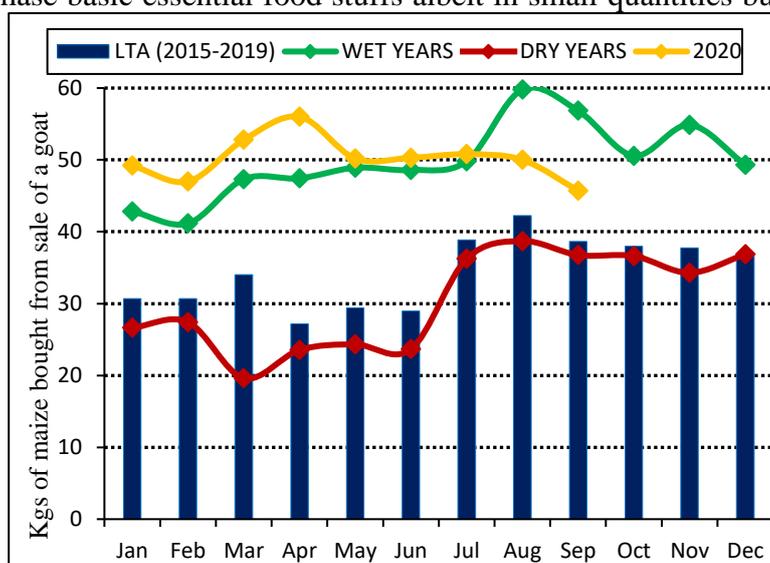


Figure 18: Terms of Trade Trend in Turkana County

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- From the sampled 270 households, 18 percent reported to have consumed milk out of own production during the month of September with a decline of seven percent in consumption level being recorded. The average consumption for the period under analysis was thus 1.5 litres / household / day (Figure 19).

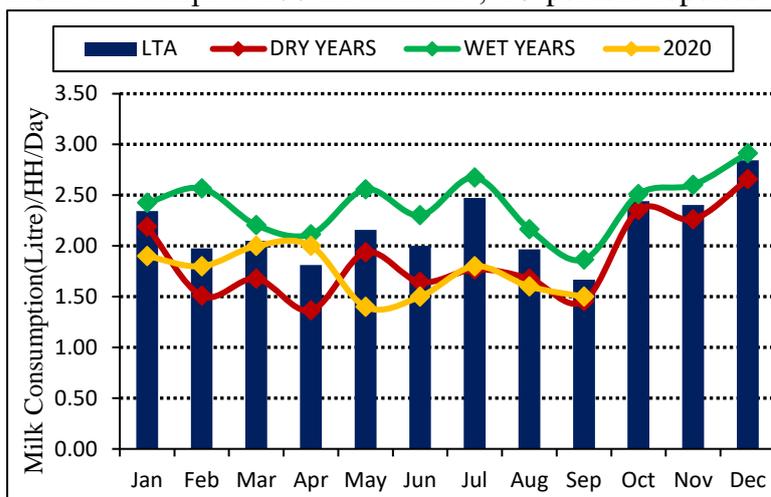


Figure 19: Milk Consumption Pattern in Turkana County

herd owing to resumption of migration in search of pasture and browse was the other factor influencing the observed trend.

- The milk consumption level is expected to decline further during the first half of October before it starts ascending towards the last dekad of the subject month with the onset of the OND season.
- The reported consumption level during the month under review was lower than the one recorded for the same period during wet years by 20 percent and at par with the long term average.

The low consumption could be attributed to reduced production at household level occasioned by the yield per animal among the initially high producers decreasing marginally with no more calving/lambing taking place.

Further, reduced size of the milking herd owing to resumption of migration in search of pasture and browse was the other factor influencing the observed trend.

5.2 FOOD CONSUMPTION SCORE (FCS)

- Proportion of households out of the sample of 270 across the three livelihood zones categorized as having a poor, borderline and acceptable food consumption score during the month of September was 28 percent, 40 percent and 32 percent respectively.
- Compared to the previous month therefore, there was no considerable variation in terms of the proportions within the aforementioned food consumption score categories.
- Stability in the food consumption pattern was witnessed as evidenced by the overall food consumption score for the county of 33 that did not vary remarkably from the one posted in August implying that most households were consuming staples and vegetables every day, accompanied by oil and pulses a few times in a week during the month.

- Majority of the households classified as having a poor FCS could be traced to the Pastoral livelihood zone followed by the Fisheries livelihood zone with the Agro-pastoral livelihood zone that still had some food stocks recording the least number during the period under review (Figure 20).

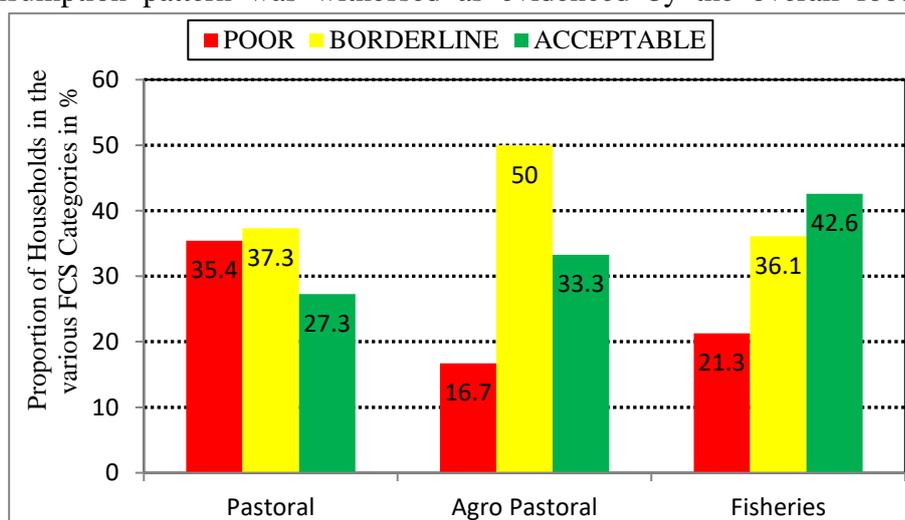


Figure 20: Food Consumption Pattern; September 2020

by the Fisheries livelihood zone with the Agro-pastoral livelihood zone that still had some food stocks recording the least number during the period under review (Figure 20).

- The Fisheries livelihood zone returned the lowest FCS of 31 during the period under analysis with Turkana North remaining the worst affected owing to the high level of vulnerability occasioned by the high poverty index and other structural issues that greatly limited access to food.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- From the sampled children aged five years and below across all the sentinel sites whose Mid-

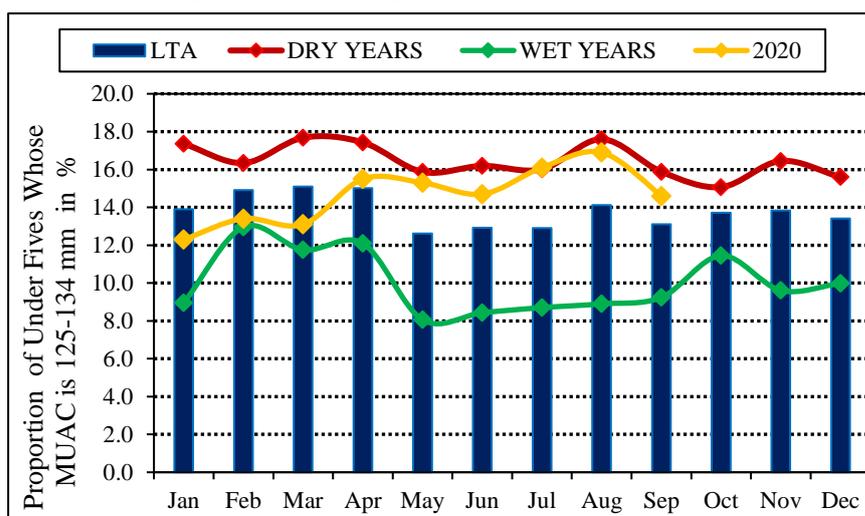


Figure 21: Malnutrition Trends in Turkana County; September 2020 : n=881

Upper Arm Circumference (MUAC) measurements were taken in September, 49 percent were males and 51 percent constituted females. Proportion of the under-fives whose MUAC measurements fell between 125-134mm declined slightly to 14.6 percent from the previous 16.9 percent (Figure 21).

Despite the decline, the recorded proportion of under-fives within the aforementioned MUAC

band during the period under analysis was higher than the 14-year average by 11 percent and the one reported for a similar period during the wet years by a remarkable margin of 58 percent.

- In reference to family MUAC, proportion of children coded 'yellow' (MUAC measurement was equal to or greater than 115mm but less than 125mm) implying moderately malnourished was 2.2 percent while those with MUAC less than 115mm coded as red implying severely malnourished was 0.6 percent during the subject month under review.
- The observed positive trend could be ascribed to improved ease of access to markets (to purchase food albeit not well diversified) following the relaxation of COVID-19 containment measures and roll out of some nutrition interventions within some malnutrition hotspots.
- The decline in proportion of children either moderately or severely malnourished could also be attributed to improved health seeking behaviour driven by a strong community referral system.

5.4 COPING STRATEGY

5.4.1 Reduced Coping Strategy Index (rCSI)

- The reduced coping strategy index (rCSI) remained unchanged from the one reported in August but was typically high at 16.6 implying majority of the households more so in the Fisheries and Pastoral livelihood zones were having a minimally adequate diet in September.
- Therefore, consumption based coping strategies in use during the month of September were ordinarily the same as those in application during the previous month across the three major livelihood zones.
- Residents of the Pastoral and Fisheries livelihood zones were highly constrained in accessing adequate food or money to buy food compared to the ones residing in the Agro-pastoral livelihood zone as evidenced by the corresponding rCSI (Figure 22).
- Pastoralists in Kaeris ward and Fisher folk in Lakezone ward both in Turkana North had significant difficulty in accessing food as depicted by the high rCSI owing to the high commodity prices.
- During the period under review, reliance on less preferred/less expensive food like rice and reduced number of meals eaten per day (from three to 1-2 meals) were the prevalent consumption based coping strategies applied by majority of the households under stress.

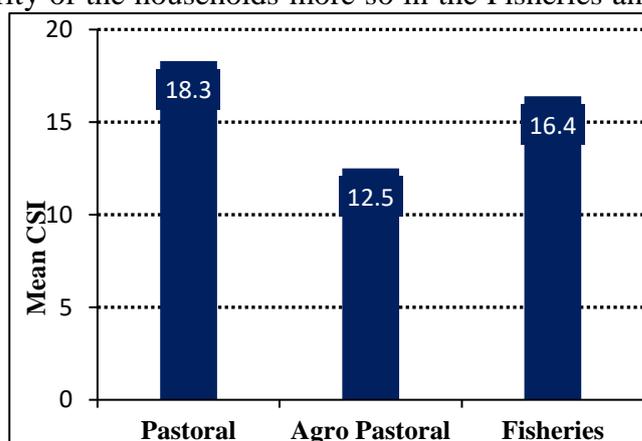


Figure 22: Reduced CSI for Turkana County ; September 2020

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD

- During the month under review, no relief food was distributed in the county.

6.2 NON-FOOD

Table 2: Non-Food Interventions

Intervention	Sub County/ Ward/Location	No. of Beneficiaries	Implementer(s)
Commissioning of the Urum water reticulation peace dividend project	Loima Sub county (Namoni-Ang'ikala)	3,000	Ministry of Devolution and Asals/UNDP/ Turkana County Government (TCG)
Management of Acute Malnutrition	All the seven Sub counties	27,996	MoH, UNICEF, SCI, WVI, IRC ,KRCS and Afya Timiza
Cash transfer to vulnerable households through the Hunger Safety Net Programme (HSNP)	All the seven Sub counties	39,000	National Drought Management Authority (NDMA)
Distribution of supplementary livestock feeds to farmers who keep dairy goats (Toggenburg)	Turkana South (Angarabat and Lokapel), Loima (Kalemnyang in Lobei/Kotaruk ward and Kekorongole in Turkwel ward) and Turkana Central (Kanamkemer ward)	312	TCG: Department of Livestock Production/Frontier Children Development Organization (FCDO)
Training of TCG staff and community based facilitators on Pastoralist/Farmers field schools	Turkana South (Kaputir ward-Nakwamoru)	100	NARIGP/Turkana County Government (TCG)
Lake Turkana Overflow Assessment	Turkana Central and North	100,000	TCG
Desert locust surveillance and control	All the seven Sub counties	926,976	TCG and FAO
Assessment of Education facilities readiness in light of COVID-19	Seven Sub counties	428 Schools	MoE/TCG
Vaccination, treatment, deworming and ectoparasites control in goats and sheep	Turkana West	40,000	TCG/LOKADO
Hygiene promotion : awareness creation on COVID-19 and related containment measures	All the seven Sub counties	926,976	Ministry of Health-Public Health Department and Partners
Repair, Servicing of broken down boreholes and installation of water storage facilities at strategic points	All the Seven Sub counties	20,000	TCG; Ministry of Water

7.0 EMERGING ISSUES

7.1 INSECURITY

7.1.1 Conflict/Human Displacement

- Human displacement was however noted in the Fisheries livelihood zone following the continued over flow of Lake Turkana. Already estimated more than 6500 households' have been displaced and the number is expected to rise further during the short rains season.
- Fishing activities that constitutes the main source of livelihood for approximately 12 percent of the population that rely on them have been severely affected with Kerio, Kalokol, Kang'atotha and Lakezone wards being the worst affected.

7.2 MIGRATION

- Livestock migration began earlier in the month under review and towards the end of August along the Fisheries livelihood zone and continued throughout September as a result of the dwindling/depleted pasture and browse in some parts of the county within the plains.
- Livestock from Loima ward (Lorugum and Namuruputh) and some parts of Turkwel ward like Napeililim, Lomil and Lomeyana have moved towards Kotaruk and Lopuke bordering West Pokot County while those from Kibish sub county are concentrated at Loruth, Natelo, Katiende and Kibish areas near South Sudan border.
- Those from Turkana North are in Todonyang, Lokitipi plains and Lokwanamour ranges. Livestock from Turkana Central have migrated into Loima and Loru hills, while those from Turkana East have migrated into Kakong, Loru ranges and Nakukulas. Approximately 50 percent of cattle and 25 percent of the small stock from the affected areas have migrated in search of forage.

7.3 FOOD SECURITY PROGNOSIS

7.3.1 Assumptions

- According to the downscaled short rains forecast by KMD, the county is expected to receive near-average with a tendency to below-average rainfall during the OND season.
- As per the MET office, Hadley centre; the forecast probability for standardized precipitation index (SPI3 < -0.09) is enhanced above the baseline (46 percent) and according to the University of Reading; TAMSAT Alert soil moisture indicates enhanced probability of mid or below normal soil moisture for Turkana county during the short rains season.
- According to IGAD Climate Prediction and Application Centre (ICPAC), above normal rainfall is forecasted during the month of October in the catchment area of Turkwel dam and therefore based on an average inflow of about 60m³/, it is expected to overflow in November 2020.
- The negative impacts of COVID-19 outbreak in the county occasioned by restrictions on business operating hours and transportation of goods are likely to persist throughout October.

7.3.2 Food Security Outlook for October 2020

- It's highly probable that minimal agricultural activities will be witnessed during the outlook period due to the forecasted average to below average short rains and therefore available maize stock from the poor harvest held by Agro-pastoral households' is likely to deplete earlier than normal.
- Livestock productivity (body condition, milk production and market price) is projected to decline over the next one month as a consequence of the projected below normal soil moisture accelerating forage degeneration compounded by the late onset of the short rains.
- The likelihood of household purchasing power declining further shall remain high owing to forecasted negative trend in the ToT likely to persist across October and therefore significant food gaps are likely to emerge especially for households' dependent on fishing and livestock.
- The probability of malnutrition level remaining stable with a tendency to deteriorate will most likely be high driven by the COVID-19 containment measures that will continue hindering roll out of nutrition interventions especially by non-state actors.
- Consequently, a significant proportion of the population will be 'stressed' with another sizeable portion (approximately 25 percent) experiencing 'crisis' and 'emergency' food security outcomes.

8.0 RECOMMENDED INTERVENTIONS

Table 3: Hotspots to be targeted with Immediate Interventions

Turkana North	Turkana Central	Turkana East	Turkana South	Loima	Turkana West
Lokitoe ng'aber, Kataboi, Kanakurudio, Kangikurichana, Morueris, Kopotia Kaeris, Kangakipur, Kibusok, Riokomor, Mlima tatu-Lomii, Atearika, Losajait, Arekit, Nariokotome, Nachukui, Narengewoi, Lomekwi,	Kalokol, Township, Kawalase ,Kerio, Nayanae Angalalio, Kangirisae , Loturere	Lopii, Lokori, Lokwamosing , Lokwii, Katamanak, Kangitit, Lokoriokot	Kalapata, Nakanothan, Lochwaa, Kasuroi, Kapese, Kangirega, Nagetei, Kaekunyuk, Lokichar	Lorugum, Nakamane, Kaitese, Nadapal, Napeililim, Lomeyana, Lomil, Nasiger, Napeipabat , Koolioro	Kakuma, Abune, Lokipoto, Lolupe, Kalobeyei Songot

8.1 FOOD

Table 4: Food Related Immediate Recommended Interventions

Sector	Recommended Intervention	Sub-County/Ward	No. of Beneficiaries
Food and Safety Net	Provision of relief food/ cash transfer targeting additional vulnerable households' (affected by COVID-19 outbreak, Lake Turkana over flow and drought) currently experiencing IPC phase III and above food security outcomes.	All the Seven Sub Counties	38,500 - 53,500 HHs

8.2 NON-FOOD

Table 5: Non-Food Immediate Recommended Interventions

Sector	Recommended Intervention	Sub-County/Ward	No. of Beneficiaries
Livestock	Provision of supplementary livestock feed to the milking herd and repositioning others within the strategic reserves.	Lakezone, Kalapata, Kaeris, Kalokol, Kerio wards.	350,000-400,000 Shoats/Cattle
Health and Nutrition	Scale up mass screening and integrated medical outreaches targeting malnutrition hotspots in all the livelihood zones.	Countywide	46,000 - 49,000 under fives
Agriculture	Mechanized land preparation and Provision of drought tolerant seeds/farm tools to farmers within the rain-fed agricultural areas.	Letea, Kakuma, Turkwel, Kaputir, Lobokat, Katilu and Lokori/ Kochodin wards	10,250 Farmers
Veterinary	Enhance livestock disease surveillance while monitoring and vaccinating animals against HS, CCPP, PPR and CBPP.	Turkana North, West and Central	750,000-900,000 Shoats
Peace and Security	Conduct inter-county and cross border peace dialogue and awareness creation meetings for resource sharing.	Lobokat, Letea, Kibish Lokirama/Lorengipi, Lokichoggio, Kalobeyei, Katilu.	80,000-100,000
Water	Repair of broken down water facilities such as strategic boreholes at the same time installing water harvesting structures in strategic institutions.	Turkana North, Central, West, East, South and Loima	15,000-20,000 HHs