

National Drought Management Authority

TURKANA COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MARCH 2020



A Vision 2030 Flagship Project



MARCH EW PHASE

Drought Status: NORMAL



Shughuli za kawaida

Early Warning (EW) Phase Classification

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

Drought Situation & EW Phase Classification

Biophysical Indicators

- Enhanced rainfall with a temporal distribution of 8-10 days was received across all the livelihood zones during the month of March. Cumulative rainfall received during the 6-month period (October 2019 to March 2020) represents 237 percent of the total rainfall normally received for the period.
- Stability in the condition of vegetation was witnessed in March with above normal vegetation greenness being observed across all the sub counties as evidenced by the shift in VCI-3month from 102 to 117.
- Open water sources were recharged to 75 percent capacity.

Socio Economic Indicators (Impact Indicators)

- Body condition of all livestock species was good and stable. Distance to water source remained stable and within the normal range. Milk production level rose slightly and like consumption it was within the seasonal range.
- Terms of trade rose and fell above the range for the month by a significant margin. Neither was there migration taking place nor starvation/dehydration deaths reported in March.
- Coping strategy index remained stable and within the normal range with approximately 23 percent of households being classified as having a poor FCS. Proportion of children 'at risk' of malnutrition was stable and remained within the normal range for the month under review.

Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)	237	80-120
VCI-3 month (County)	117	>35
VCI-3 month (T. East)	79	>35
State of Water Sources	5-6	5-6

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

Access Indicators	Value	Normal Range
Terms of Trade (ToT)	52	>34
Milk Consumption	2.0 Litre	>2.0 Litres
Return distance to water sources	3.8 km	< 6.3 km
Cost of Water(KSh/20L)	KSh. 0-5	<KSh .5

Utilization Indicators	Value	Normal Range
Nutrition Status, MUAC (% at risk of malnutrition)	13.1	<15.0
Food Consumption Score (FCS)	31	>35
Coping Strategy Index (rCSI)	16.0	<16.9

- Short rains harvests
- Short dry spell
- Reduced milk yields
- Increased HH Food Stocks
- Land preparation

- Planting/Weeding
- Long rains
- High Calving Rate
- Milk Yields Increase

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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 experienced an early rainfall onset during the first dekad of March with rainfall received being highly enhanced. Consequently, most areas reported an average of 8-10 wet days during the aforementioned month.

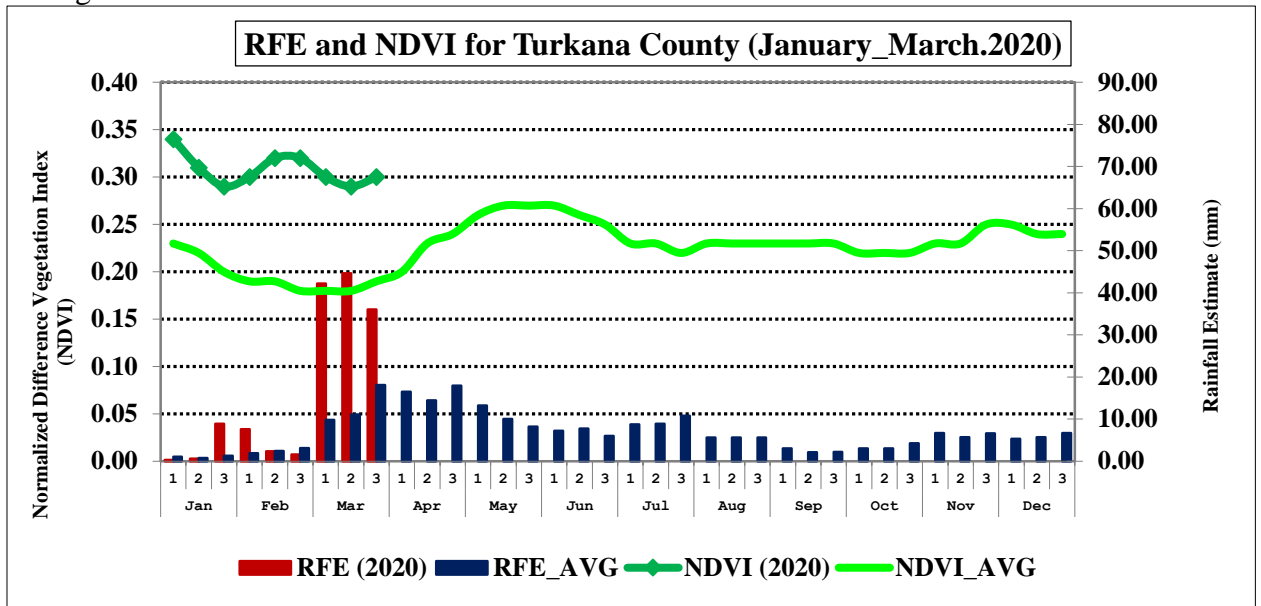


Figure 1: Dekadal Rainfall (mm) and NDVI Values Compared to the Long Term Average
Source: VAM-World Food Programme

- As indicated in figure 1, dekadal rainfall for estimate amount across the dekads was remarkably higher than the corresponding long term dekadal average.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

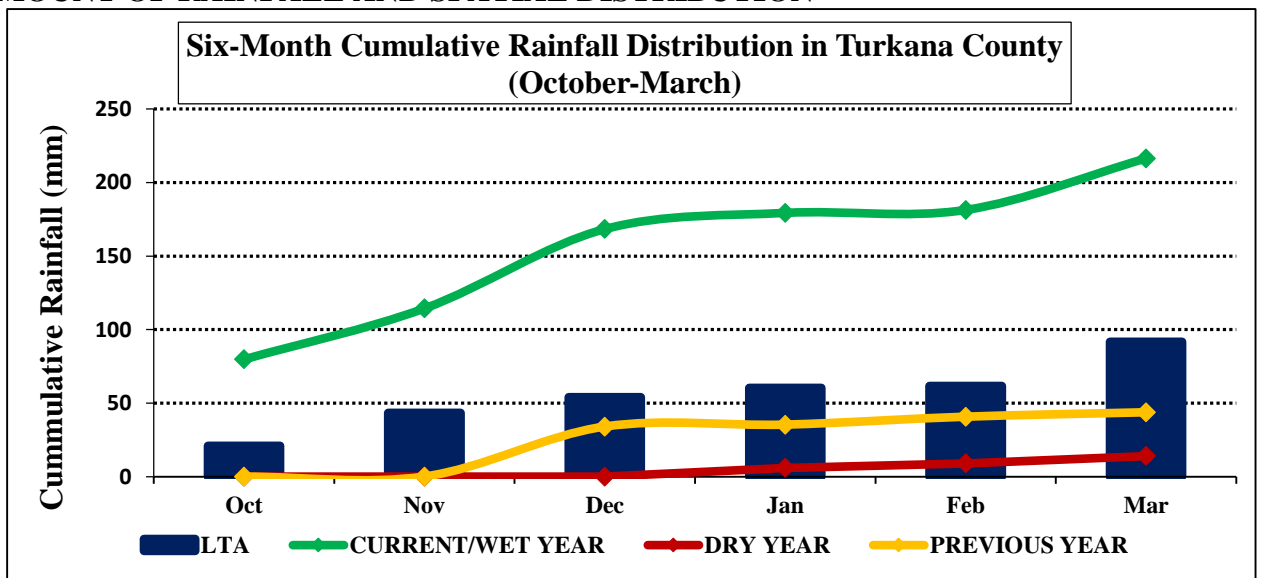


Figure 2: Six Month Cumulative Rainfall Trend
Source: Meteorological Department-Turkana

- The cumulative rainfall recorded for the period commencing October 2019 to March 2020 represented 237 percent of the normal cumulative rainfall for the period as depicted in figure 2.
- In addition, amount of rainfall received in Lodwar town during the month of March, which is normally the baseline for the county accounted for 117 percent of the normal rainfall for the month.

- During the month under review, the distribution in space of the rainfall received was even especially across all the dekads and hence all sites remained wet during that period.
- Cumulative rainfall recorded for a similar six-month period during the previous year was significantly lower than that of the current year by 402 percent.
- The period starting October 2016 to March 2017 was considered to be the driest year within the last twelve years having recorded only 13.5mm of rainfall while the current year was classified as the wettest period during a similar span of time.

1.3 OTHER EVENTS

- There were no other serious notable events such as floods/flash floods that was witnessed during the period under review.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The condition of vegetation remained relatively good in March as depicted by the shift in the VCI-3month for the county from 102 reported in February to 117 during the month under review. The level of vegetation greenness across the county was thus above normal as illustrated in figure 3 that represents a retrogressive analysis of the condition of vegetation.

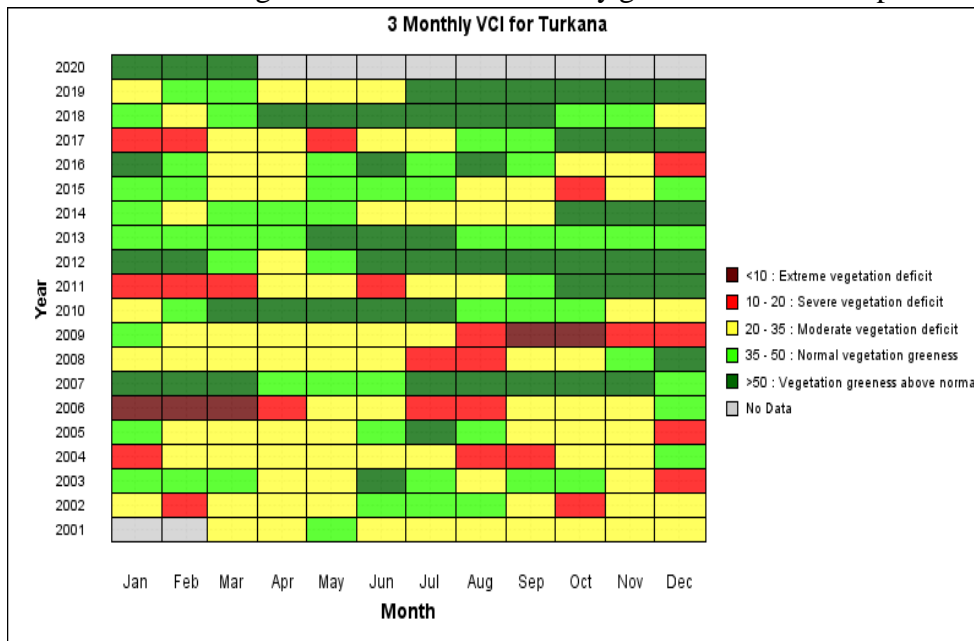


Figure 3: Vegetation Condition in Turkana County

stability in the condition of vegetation save for Turkana east that depicted a negative trend attributed to the impact of the Desert locusts as illustrated in figure 4.

- Nevertheless, receipt of enhanced rainfall in March coupled with the cumulative effect of the off season rainfall experienced in dekad three of January and dekad one of February was the major driver of the observed stability in the condition of vegetation.

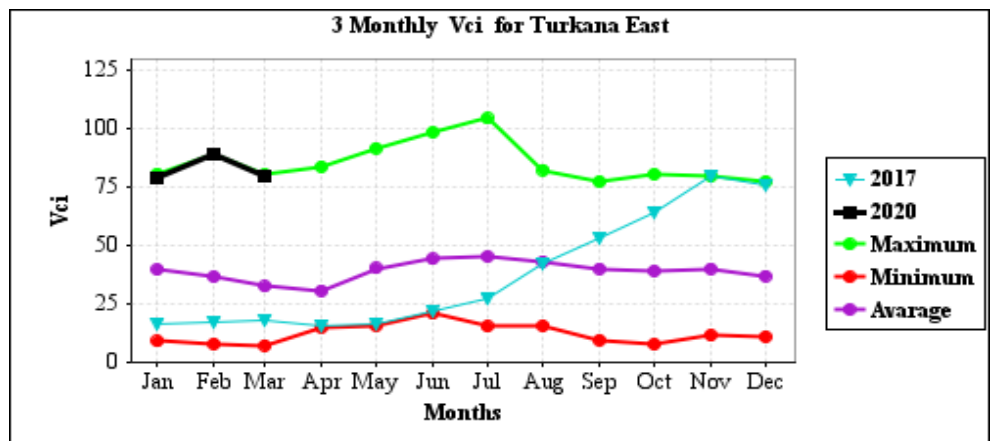


Figure 4: Vegetation Condition Trend in Turkana East

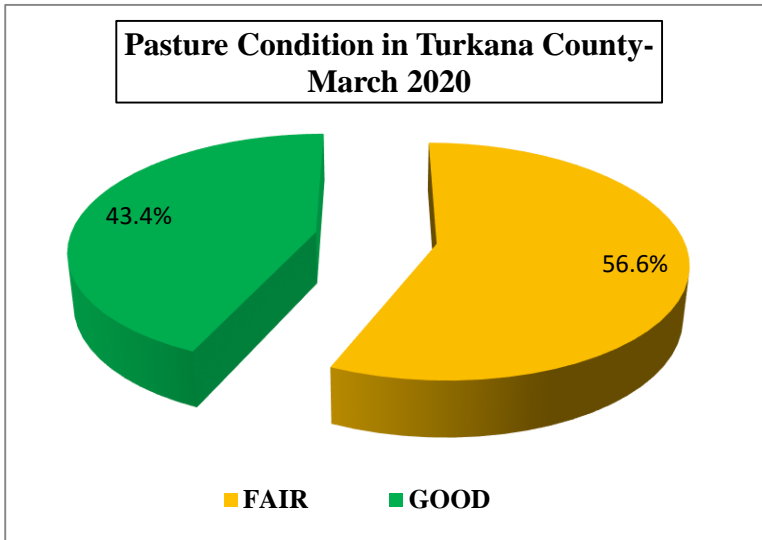


Figure 5: Pasture Condition in Turkana

2.1.2 Pasture

- Condition of pasture was generally fair to good across most sites within the plains as depicted in figure 5. The observed pasture level was marginally above the one normally witnessed at such a time of the year in the county.
- Stable pasture condition could be attributed to receipt of enhanced rainfall in March compounded by the cumulative effect of the off season rainfall experienced in January and February.

parts of the Fisheries livelihood zones is anticipated to last for at least a period of two to three months with a possibility of extending up to four months if significant rainfall is experienced across the March, April, May (MAM) season.

- There was no major/serious hindrance to pasture resource access across the three livelihood zones during the month of March.
- Uniformity in terms of quantity and quality of pasture was observed in all the three livelihood zones during the period under review.

- Available pasture in the Pastoral, Agro Pastoral and some

2.1.3 Browse

- The condition of browse in March was generally good with some pockets especially in the Fisheries livelihood zone having browse of fair condition as shown in figure 6.
- Receipt of enhanced rainfall across the three dekads of the period under review was the major factor that accelerated/stabilized the condition of browse.
- Available browse across the Pastoral, Agro Pastoral and Fisheries livelihood zones is forecasted to last for a minimum period of four months.
- During the reporting period, there was no major impediment to browse access reported across all the sites in the county.
- The quality and quantity of browse observed in the three livelihood zones during the month of March did not show any significant variation.

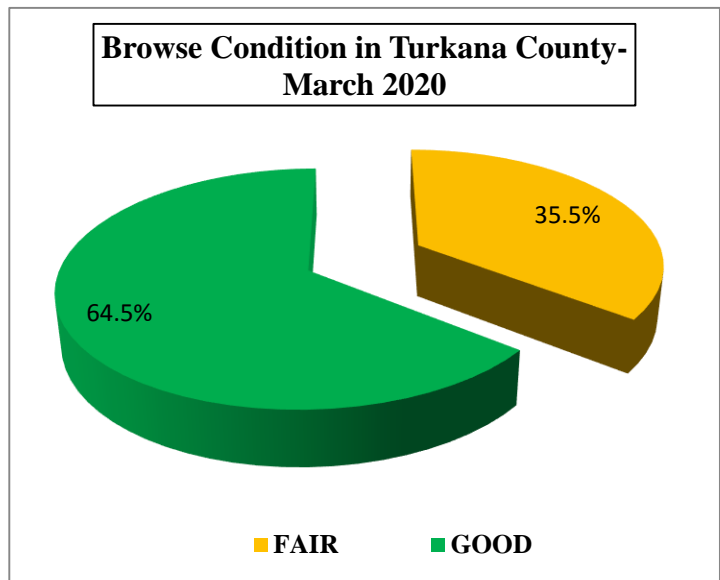


Figure 6: Browse Condition in Turkana

2.2 WATER RESOURCE

2.2.1 Sources

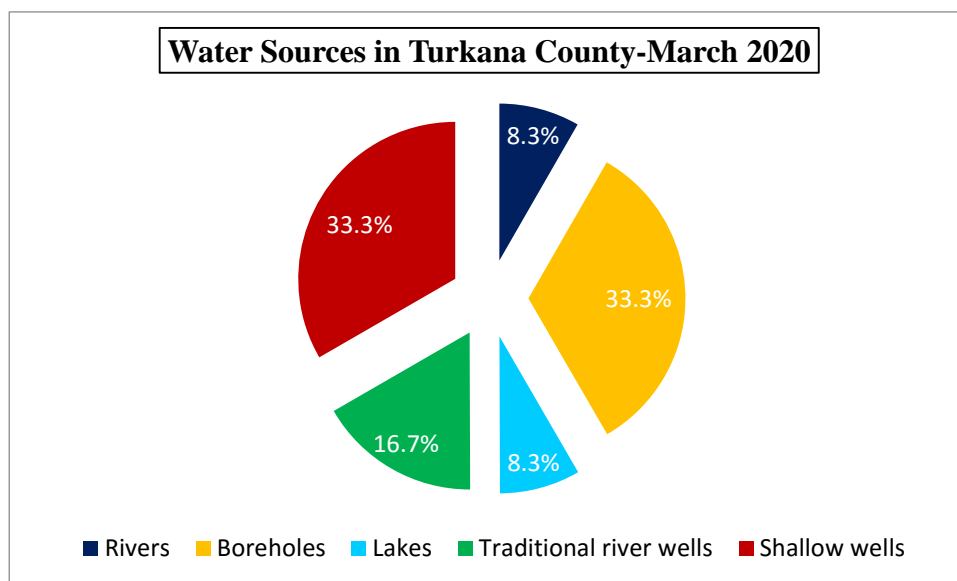


Figure 7: Water Sources in Turkana County

- Boreholes, Shallow wells and traditional river wells remained the major water sources in use by the community during the month under review as shown in figure 7.

- An increase of three percent was recorded in the proportion of households drawing water from boreholes and

shallow wells with that of traditional river wells dropping by a similar margin in March.

- Majority of the open water sources including pans, dams and rock catchments were at over 75 percent capacity across the three livelihood zones. Water flow along most seasonal rivers including Kerio, Kawalase, Kospir, Lokichar, and Natiira was witnessed during the first and second dekad of the month. Consequently, available water is projected to last for a period of three to four months.
- The observed water situation during the month under review was considerably better in comparison to the one normally witnessed for the period across the three livelihood zones.
- The water sources in use during the period under analysis were the normal sources where households drew water from at such a time of the year across all the sites in the county.

2.2.2 Household access and Utilization

- Stability in the household return trekking distance to water source was observed during the period under review with the average distance being 3.8 km as illustrated in figure 8.

- Compared to the five-year average household trekking distance to water source, the reported distance for the month of March was significantly lower by a margin of 40 percent.

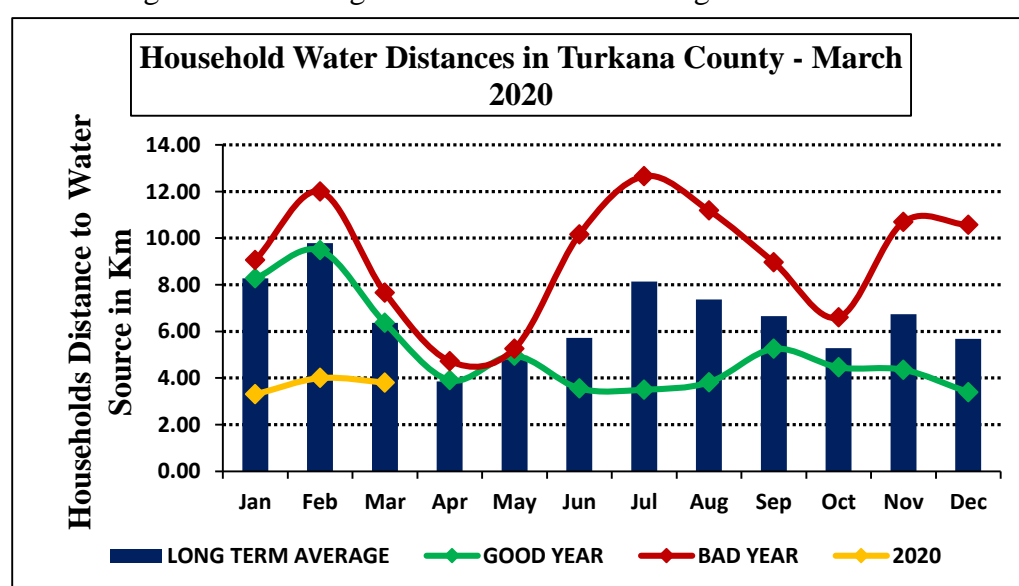


Figure 8: Household Access to Water Source

- The Pastoral livelihood zone reported the

longest distance in relation to the one recorded along the Fisheries and Agro Pastoral livelihood zones.

- The average waiting time at the water source remained unchanged from the one reported during the previous month. Therefore, across the three livelihood zones, households spent an average of 15-20 minutes in the queue to access water in March.
- In addition, the average water consumption per person per day did not vary from the one reported in February with household's resident in the Agro Pastoral livelihood zone consuming an average of 30 litres while those along the Fisheries and Pastoral livelihood zones consumed an average of 20 litres in March.
- The cost of water remained free at source with a 20 litre jerrycan being dispensed at five shillings at the point of sale along the major urban centres.
- The reported price of water during the month under review was within the seasonal range for the period.

2.2.3 Livestock access

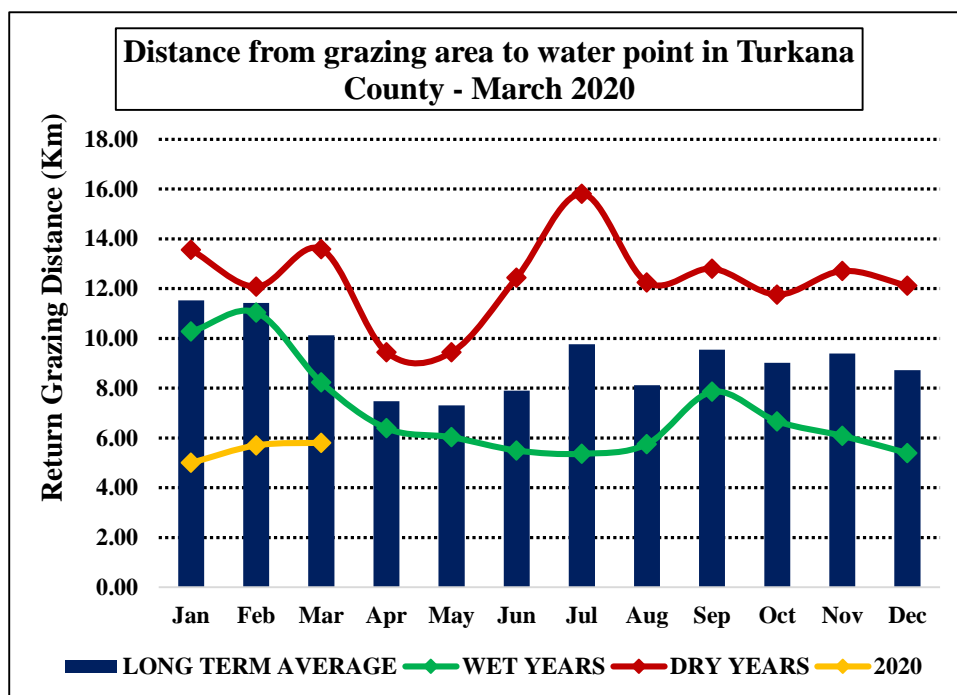


Figure 9: Return Distance to Water Source from Grazing Areas

• During the period under review, the trekking distance from grazing sites to water sources remained unchanged from the one recorded in February and thus averaged 5.8 km as shown in figure 9.

• The recorded distance for the month under review was significantly lower than the five-year average trekking distance for the period by 42 percent.

• The longest trekking distance from grazing sites to water source was recorded along the Fisheries and Pastoral livelihood zone in comparison to the one reported in the Agro Pastoral livelihood zone.

- The stabilization in the average trekking distance to water source from grazing areas could be attributed to pasture availability within sites in close proximity to water sources such as traditional river wells and shallow wells.
- There was no variation in the watering frequency for livestock from the one reported in February and therefore, across the Pastoral, Agro Pastoral and Fisheries livelihood zones, all livestock species accessed water at least four to five times per week.
- Stability in watering frequency for livestock could be ascribed to increased number of functional boreholes and shallow wells coupled with a significantly reduced depth of traditional river wells averaging less than two metres along the numerous seasonal rivers criss-crossing most parts of the county.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The body condition for all livestock species was good across the three livelihood zones during the month under review. Cattle were fat and blocky while the tail in sheep was fatty; on the other hand, goat exhibited a smooth body condition with the hump in camels was well built.
- Improved livestock body condition across the month of March could be attributed to availability of substantial reserves of browse and pasture coupled with the reduced trekking distance to water source.

3.1.2 Livestock Diseases

- The prevalence of tick borne diseases remained generally high across all the sub counties with some households especially in Turkana east and central reporting incidents of Pest Pestes Ruminantes (PPR) in small stock during the month of March.
- Cases of Contagious Caprine Pleuropneumonia (CCPP) and Contagious Bovine Pleuropneumonia (CBPP) were reported in Turkana south and Loima during the month under review.

3.1.3 Milk Production

- During the reporting period, thirty-five percent of the sampled households reported on own milk production and thus the proportion did not vary significantly from the one that reported on own milk production during the month of February across the three livelihood zones.

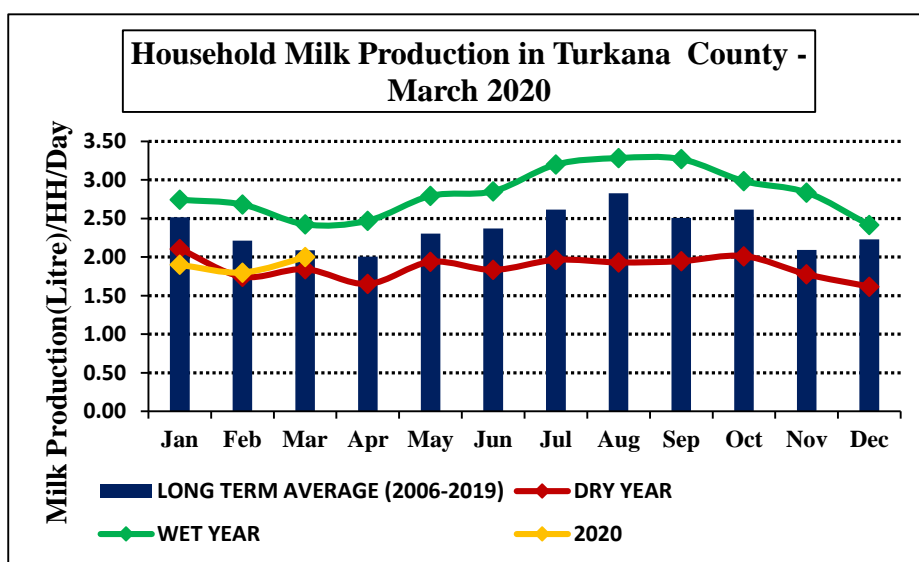


Figure 10: Average Amount of Milk Produced Per Household

- Amount of milk produced per day per household increased slightly to two litres from the 1.8 litres reported previously as depicted in figure 10.
- The reported production level for the period under analysis was at par with the long term average production for the period but lower than that reported for the same month during the wet years by 17 percent.
- The cost of a litre of milk remained the same as the one reported in February where in the Pastoral and Agro Pastoral livelihood zones it retailed at KSh. 50-60.
- The increase in milk production could be attributed to pasture/browse and water availability within remarkably shorter trekking distances coupled with the calving taking place in March.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- During the long rains season, majority of the farmers mainly in the Agro Pastoral livelihood zone plant Maize, Sorghum and Cowpeas.
- The major agricultural activity taking place during the period under review was land preparation and planting.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The price of a 4-year old medium sized bull remained stable in relation to the previous month with a bull trading at KSh.15, 340 during the month under review across the three livelihood zones as illustrated in figure 11.
- Improved cattle body condition ascribed to adequate pasture and water availability within decreased trekking distances compounded with reduced supply to market owing to less pressure on school fees were the major drivers of the observed stability in the trading price during the month of March.
- The Pastoral livelihood zone reported an average price of KSh. 15,330 while the Agro Pastoral livelihood zone recorded an average price of KSh. 15,350 during the period under analysis.
- The reported market price of cattle for the month under review was at par with the five-year average price for the period but slightly lower than the one posted for the same month during the wet years by nine percent.

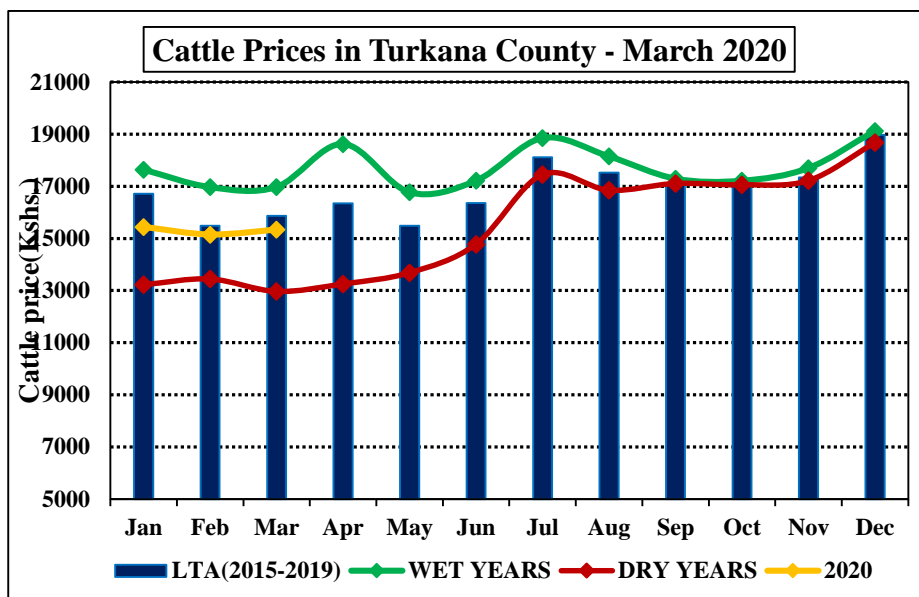


Figure 11: Cattle Price Trend in Turkana County

4.1.2 Small Ruminants Prices (Goat price)

- Despite adjusting upwards, the shift in the price of a 2-year old medium sized goat was not significant in relation to the one reported in February and thus it exchanged at KSh. 3,190 as illustrated in figure 12.

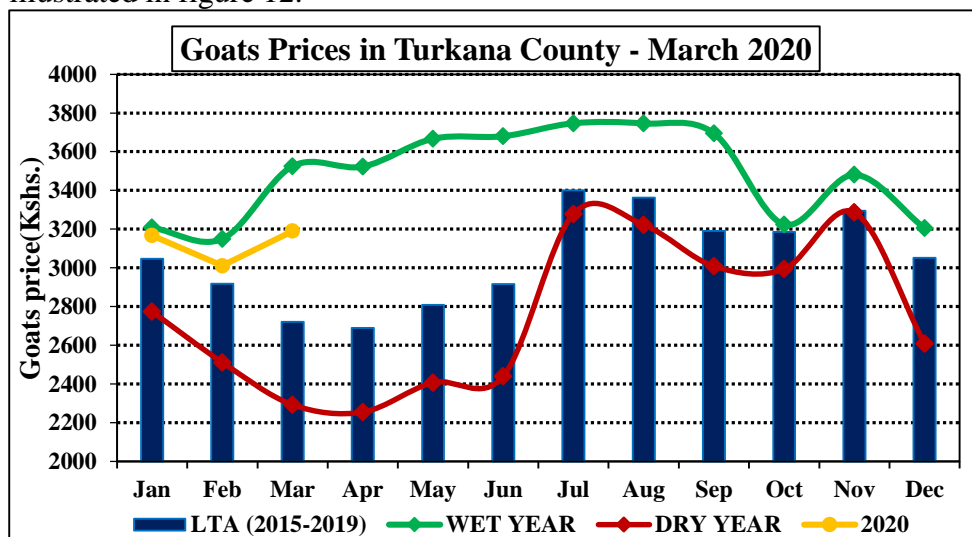


Figure 12: Goat Price Trend in Turkana County

the Agro Pastoral and Pastoral livelihood zones returned an average price of KSh. 3,170 and KSh. 3,125 in that order.

- The reported price of goat for the month of March was higher than the five-year average price for the period by 17 percent but lower than the one recorded for a similar period during the wet years by 11 percent.

- The reported adjustment albeit marginal could be ascribed to the improved goat body condition occasioned by availability of quality browse and water in adequate levels across all sites.

- The Fisheries livelihood zone reported the highest trading price of KSh. 3,250 while

4.1.3 Camel Prices

- During the month under review, the price of a 4-year old camel remained the same as the one reported previously and hence it traded at KSh.24, 890 across the Agro Pastoral and Pastoral livelihood zones as depicted in figure 13.
- The observed stability in the price of camel could be attributed to the fact that the body condition

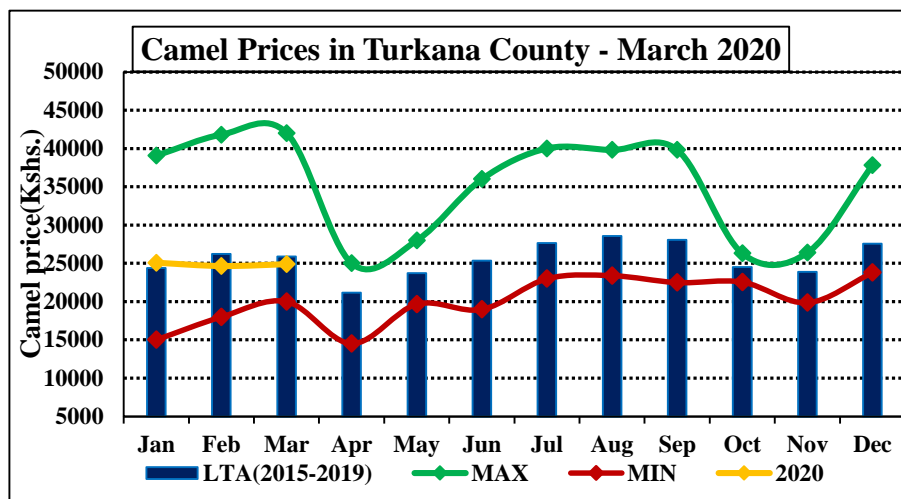


Figure 13: Camel Price Trend in Turkana County

of camel did not adjust significantly from the one observed in February owing to the push factors not changing considerably to have a positive impact.

- The Pastoral livelihood zone reported an average price of KSh. 24,830 while the Agro Pastoral livelihood zone returned an average price of KSh. 25,000 during the month under analysis.
- Whereas the recorded price of camel during the month under review was at par with the five-year average price for the period, the highest reported price of camel for a similar period over the last five years was however significantly higher by 40 percent.

4.2 CROP PRICES

4.2.1 Maize

- A kilogram of maize retailed at KSh. 60 during the period under analysis as illustrated in figure 14 and thus dropped slightly in relation to the month of February.
- Compared to a similar period during the wet years, the reported price during the month of March was significantly lower by 19 percent and similarly with the long term average price for the month under review by 25 percent.

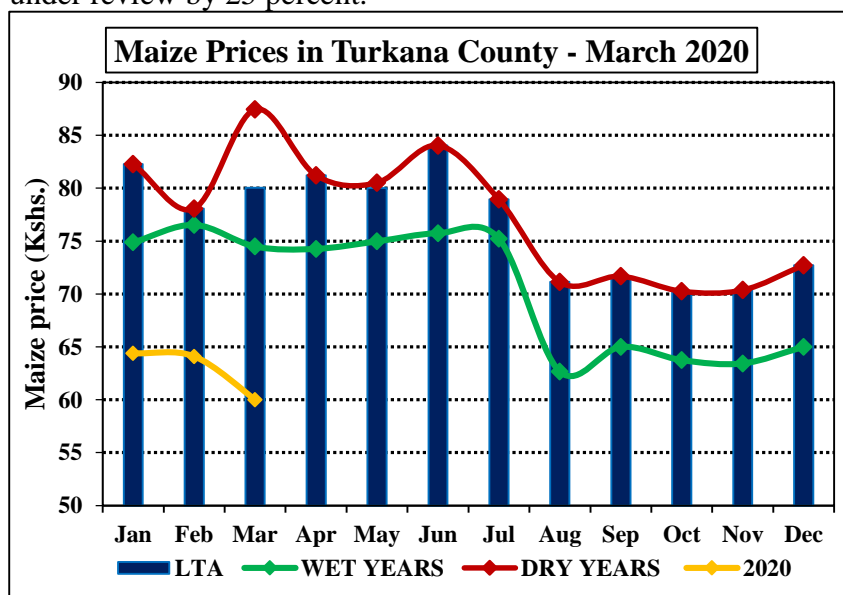


Figure 14: Maize Price Trend in Turkana County

- The lowest price of KSh. 60 was recorded along the Agro Pastoral livelihood zone while the highest of KSh. 65 was posted along the Pastoral and Fisheries livelihood zones.

However, notably high prices ranging up to KSh. 100 per kilogram of maize were reported in some of the markets in Turkana north and Kibish sub counties in March.

- Existence of substitute cereals such as sorghum and improved availability occasioned by continuous

supply of the commodity from external markets were the major drivers of the observed stability in price during the period under review.

4.2.2 Beans

- As illustrated in figure 15, the price of beans in March remained the same as the one reported in February with a kilogram of beans exchanging at KSh.100 across all the three livelihood zones.
- Improved availability of the pulse in the market occasioned by continuous supply of the commodity from the external markets where farmers had stocks was the major factor influencing the observed stability during the period under review.
- The Fisheries, Agro Pastoral and Pastoral livelihood zones reported an average price of KSh. 100 during the period under analysis.
- Not only was the reported price of beans for the month under review lower than that posted for a similar period during the wet years by 20 percent but also considerably lower than the long term average for the period by 23 percent.

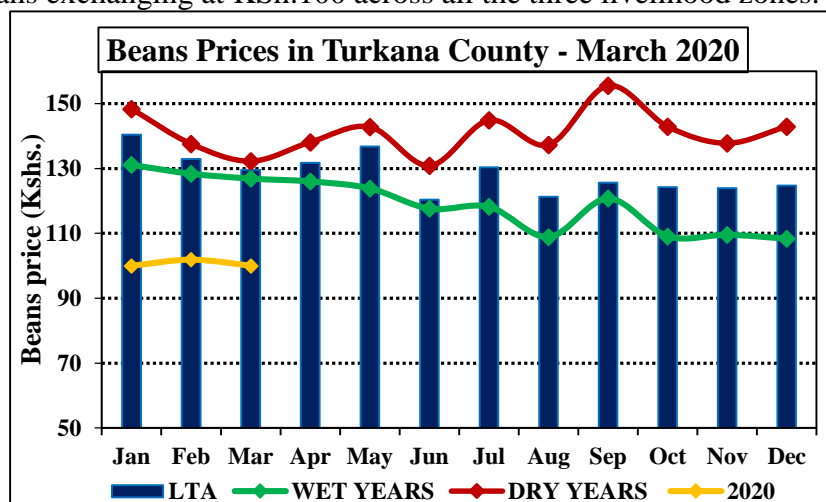


Figure 15: Beans Price Trend in Turkana County

4.3 Livestock Price Ratio/Terms of Trade

- A slight shift upwards in the terms of trade was recorded during the month under review with the ToT being 53 as shown in figure 16. Consequently, from proceeds obtained upon sale of a goat similar to the one traded previously, pastoralists were in a position to add six more kilograms of maize to the quantity purchased in February.

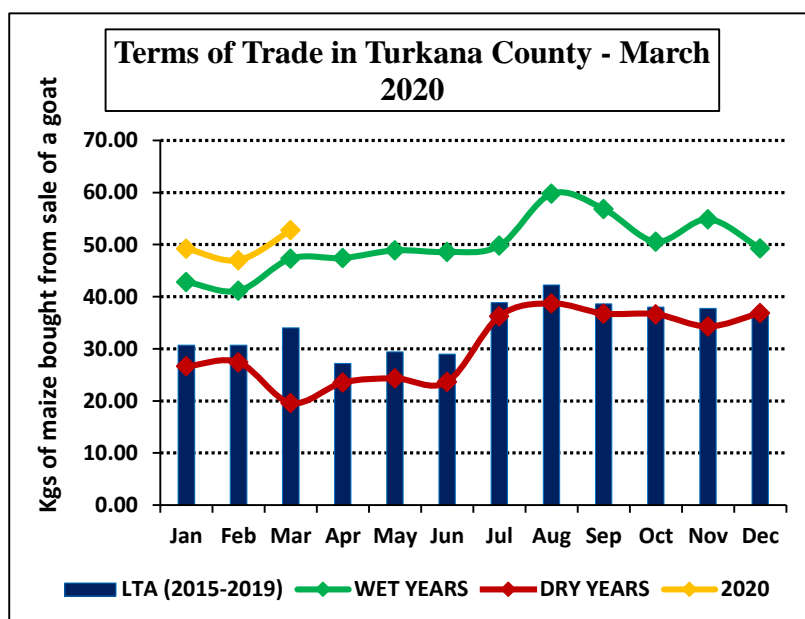


Figure 16: Terms of Trade Trend in Turkana County

- Therefore, pastoral households remained advantaged during the month under analysis owing to the relatively superior terms of trade translating to better access.
- The marginal drop in the price of maize albeit insignificant was the major driver of the shift in the terms of trade during that period.
- Stability in the terms of trade but tending to decline will most likely be witnessed across April with no significant shift in the price of goat but that of maize increasing likely to have a negative impact across that month and subsequent ones.

maize to the quantity purchased in February.

- Notably, not only were the reported terms of trade for March higher than the long term average ToT by 52 percent but also higher than the one recorded for the same period during the wet years by 13 percent.

pastoral households remained advantaged during the month under analysis owing to the relatively superior terms of trade translating to better access.

- The marginal drop in the price of maize albeit insignificant was the major driver of the shift in the terms of trade during that period.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

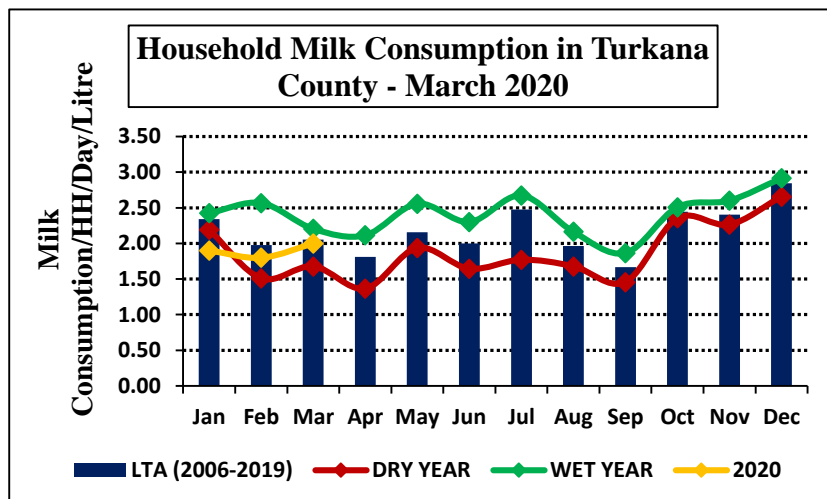


Figure 17: Milk Consumption Pattern in Turkana County

wider household base resulting from pasture/browse and water availability in adequate quantities coupled with the calving taking place during the month of March.

- Consequently, the consumption level for the period under review was at par with the long term average consumption for the month of March but slightly lower than the one reported for the same month during the wet years by approximately 10 percent.

- The proportion reporting to have consumed milk during the month under review constituted 33 percent of the sampled households. As illustrated in figure 17, a slight improvement in the consumption level was observed and it averaged two litres per day per household.

- The observed improvement in milk consumption could be attributed to ease of access to milk occasioned by a relatively stable yield per animal within a

5.2 FOOD CONSUMPTION SCORE (FCS)

- Proportion of households classified as having a poor, borderline and acceptable food consumption score during the month of March was 23 percent, 48 percent and 29 percent respectively.
- Compared to the previous month therefore, there was no significant shift in terms of the proportional percentages within the different food consumption score classes.
- Stability in the food consumption pattern was witnessed as evidenced by the overall food consumption score for the county that remained the same as the one posted in February of 31.
- As depicted in figure 18, the Pastoral livelihood zone reported the highest proportion of households with a poor FCS followed by the Fisheries livelihood zone with the Agro Pastoral livelihood zone recording the least during the period under review.
- During the period under analysis, the Agro Pastoral, Fisheries and Pastoral livelihood zones reported a food consumption score of 33,30 and 29 accordingly.

- Turkana north Sub County recorded the highest proportion of households with a poor food consumption score in March.

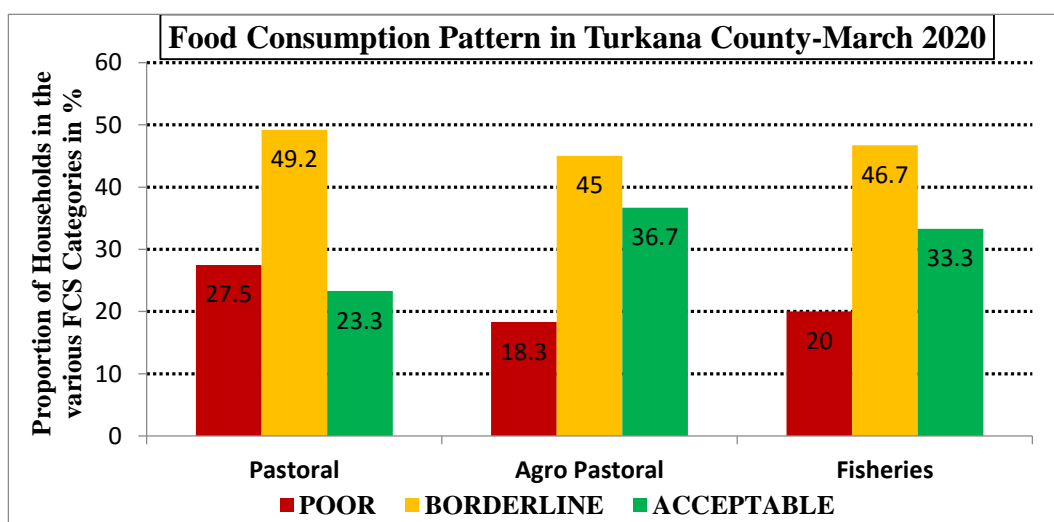


Figure 18: Food Consumption Patterns in Turkana-March 2020

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

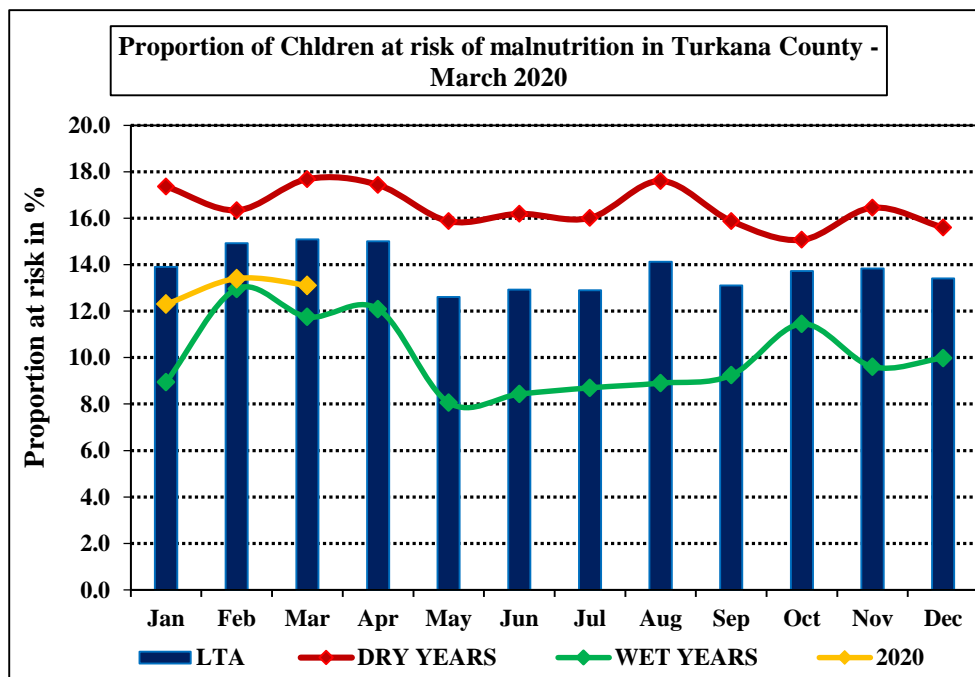


Figure 19: Mid at Risk Children 2020-Turkana, sample size, n=915

shown in figure 19.

- The recorded proportion above was lower than the long term average proportion of under-fives categorized as being ‘at risk’ for the period under review by approximately 14 percent and considerably lower than the one reported for the same period during the dry years by 27 percent.
- The recorded stability in proportion of under-fives considered as being ‘at risk’ albeit marginal could be attributed to the stable milk consumption pattern and availability of nutritious food commodities at household level accessed through markets that were well provisioned with the purchasing power not compromised due to the relatively better terms of trade.

- Out of the sampled under-fives across all the sentinel sites whose MUAC measurements were taken during the period under review, 52 percent were males while the females constituted 48 percent.
- Proportion of the under-fives rated as being ‘at risk’ of malnutrition remained stable at 13 percent as

5.4 COPING STRATEGY

5.4.1 Coping Strategy Index (rCSI)

- There was no noticeable shift in the coping strategy index during the period under analysis and hence it remained unchanged at 16.
- Therefore, coping strategies in application during the month of March were typically similar to those in use during the previous month across the three major livelihood zones in the county.
- As illustrated in figure 20, households residing along the Fisheries and Pastoral livelihood zones faced much difficulty in accessing food or money to buy food compared to the ones residing in the Agro Pastoral livelihood zone.
- The most commonly applied coping strategies during the month under review among a majority of households that were coping included reliance on less preferred/less expensive food and reduced number of meals eaten per day.

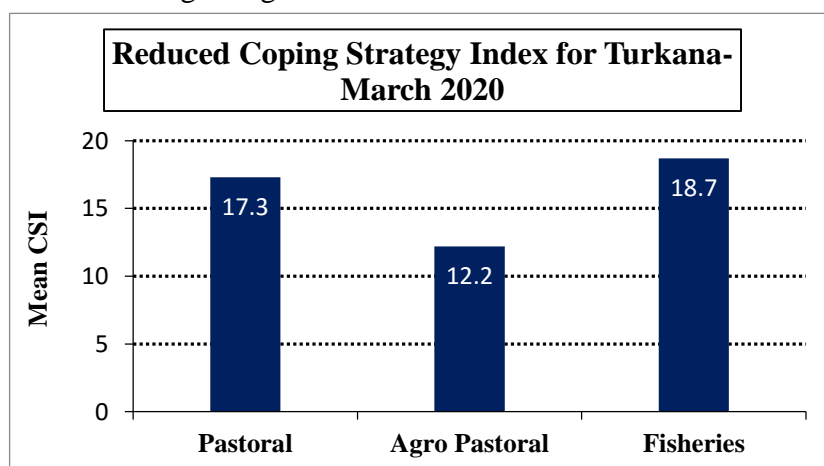


Figure 20: Reduced Coping Strategy Index-Turkana

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD

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

6.2 NON-FOOD

- During the period under analysis, there was no significant non-food intervention reported.

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- There were no serious incidents of insecurity/conflict reported in March across all the livelihood zones in the County.

7.2 MIGRATION

- No significant livestock migration was taking place during the period under review, livestock remained in their normal grazing areas.

7.3 FOOD SECURITY PROGNOSIS

- Livestock productivity (body condition, milk production and market price) is projected to remain stable and within a desirable level at least over the next one month as a consequence of the long rains sustaining further regeneration of pasture/browse reserves. However, forage loss attributed to the invasion of Desert Locusts approximated at 25 percent is expected across the MAM season and the likelihood of increased negative impacts shall remain high across June.
- It's highly probable that the purchasing power will decline marginally as a consequence of the terms of trade assuming a negative trend owing to the anticipated increase in the price of maize given market operations have been disrupted by the Corona Virus Pandemic and therefore majority of pastoral households will most likely experience significant food gaps.
- During that period, the level of malnutrition is equally anticipated to rise steadily and probably fall outside the normal range. Nevertheless, with implementation of multiple food provision systems by the Government and other non-state agencies especially in the malnutrition hotspots will serve to remedy the situation.
- Save for a few households in the Agro Pastoral zone that are expected to be within phase 1, majority of the households will most likely be 'stressed' with another significant proportion experiencing 'crisis' and 'emergency' food security outcomes over the next three months.

8.0 RECOMMENDED INTERVENTIONS

- **Food and Safety Net:** Provision of relief food for a minimum period of five months targeting 15% of the population currently experiencing 'crisis' and 'emergency' food security outcomes while instituting adequate measures for scale up as the population in need increases.
- **Health and Nutrition:** Promotion of hygiene and sanitation practices with a special focus on handwashing to mitigate against the spread of COVID-19 while targeting areas exhibiting high malnutrition rates with distribution of essential nutrition commodities and provision of appropriate health services.
- **Livestock:** Intensify efforts towards strategic hay reserves stock piling through provision of pasture seeds to farmer groups for pasture cultivation so as to promote availability of livestock feeds for utilization during periods of stress.
- **Veterinary:** Improve animal health by conducting mass vaccination in cross border sites where incidents of PPR, CCPP and CBPP have been reported while up scaling disease surveillance efforts to cover other areas within the county that are disease prone.