National Drought Management Authority
TURKANA COUNTY
DROUGHT EARLY WARNING BULLETIN FOR MAY 2020

A Vision 2030 Flagship Project

MAY EW PHASE

Drought Situation & EW Phase Classification

Biophysical Indicators

- Rainfall with a temporal distribution of 5-7 days was received across all the livelihood zones in May. Cumulative rainfall received during the 6-month period (December 2019-May 2020) represents 226% of the total rainfall normally received for the period.
- Stability in the condition of vegetation was witnessed in May with above normal vegetation greenness being observed across all the sub counties as supported by the VCI-3month of 101.
- The recharge level of most open water sources was generally above 75 percent capacity.

Socio Economic Indicators (Impact Indicators)

- Body condition of all livestock species across all the livelihood zones was good and improving. Distance to water source for both domestic use and animals did not change from that recorded in April and was within the normal range. However, milk production and consumption level was low and generally outside the usual range for May.
- Terms of trade declined slightly but was within the normal range. In addition, there was no migration taking place nor livestock deaths attributed to starvation/dehydration reported during the month under review.

Early Warning (EW) Phase Classification

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

Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)	226	80-120
VCI-3 month (County)	101	>35
VCI-3 month (T. East)	95	>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	1.6Litres	> 2.3 Litres
Livestock deaths (attributed to drought)	No Deaths	No Deaths

Access Indicators	Value	Normal Range
Terms of Trade (ToT)	50	>29
Milk Consumption	1.4 Litres	>2.1 Litres
Return distance to water sources (Household)	2.9 km	< 4.9 km
Cost of Water(KSh/20L)	KSh. 0-5	<KSh .5

• Short rains harvests • Short dry spell • Reduced milk yields • Increased HH Food Stocks • Land preparation	• Planting/Weeding • Long rains • High Calving Rate • Milk Yields Increase	• Long rains harvests • A long dry spell • Land preparation • Increased HH Food Stocks • Kidding	• Short rains • Planting/weeding • High Calving Rate • Milk Yields Increase

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

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The County experienced significant rainfall during the first dekad of May with a gradual decline being witnessed across the second and third dekads. The temporal distribution across all sites in the County was 5-7 days during that period.
- The progression from the fourth week of the previous month to the first week of the month under review and across the subsequent three weeks was fair with at least in each week one or two wet days being recorded.

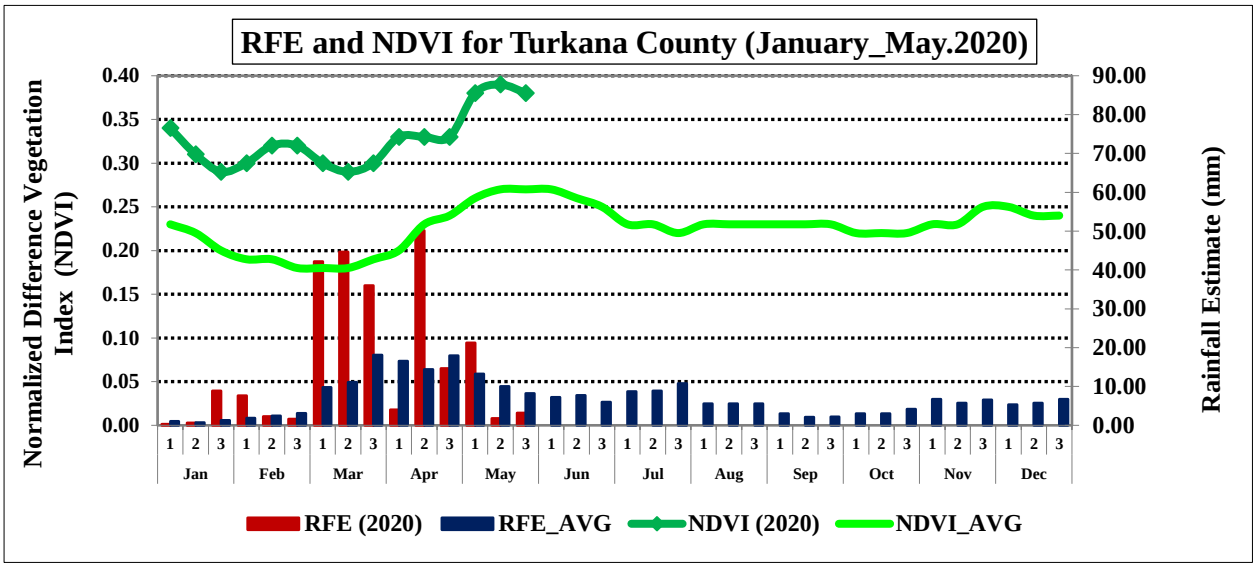

Figure 1:Dekadal Rainfall (mm) and NDVI Values compared to the Long Term Mean
Source: VAM-World Food Programme

- Rainfall reported in dekad one of the month under analysis as depicted in figure 1 was 160 percent of the respective long term dekadal rainfall for estimate mean.
- The net effect of the observed rainfall scenario was reflected in the condition of vegetation that remained good as further supported by Normalized Difference Vegetation Index (NDVI) for the period that was above the average.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- For to the period; December 2019 to May 2020, the total rainfall recorded accounted for 226 percent of the cumulative rainfall normally received during that period as shown in figure 2.

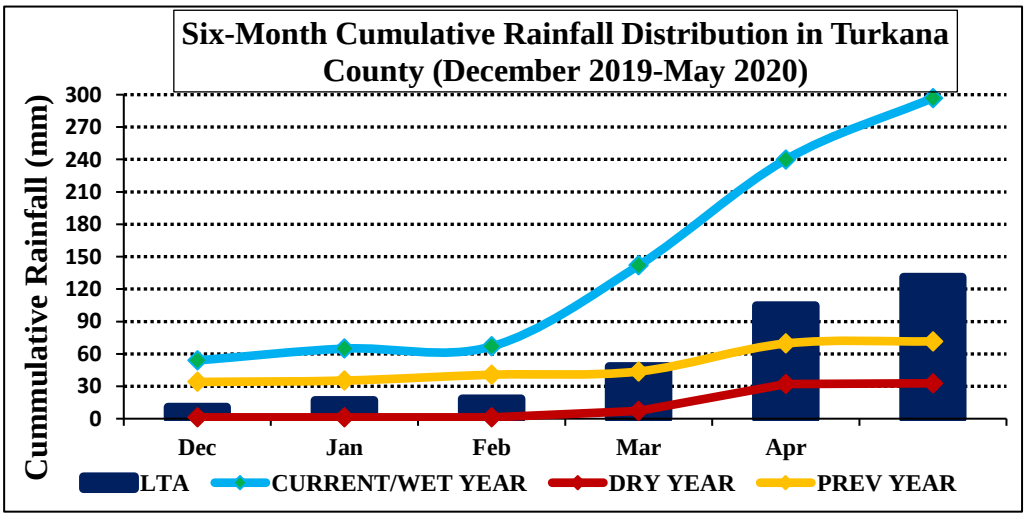

Figure 2:Six Month Cumulative Rainfall Trend
Source: Meteorological Department

- Most sites across the three livelihood zones remained generally wet during the first dekad as a result of experiencing significant precipitation exceeding the respective long term averages.

- The distribution in space of the rainfall received was even with all areas in the County having varied wet days in May.
- Comparatively, the aforementioned cumulative rainfall for the period under review was notably higher than that for a similar six-month period during the previous year by 313 percent.
- The period starting in December 2016 and ending in May 2017 was rated as the driest year historically with cumulative rainfall being only 36.5mm.

1.3 OTHER EVENTS

1.3.1 Flooding

- The were no significant flooding episodes witnessed save for a few sites mainly in Turkana south, west and Loima that reported flash floods mainly along the seasonal rivers.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

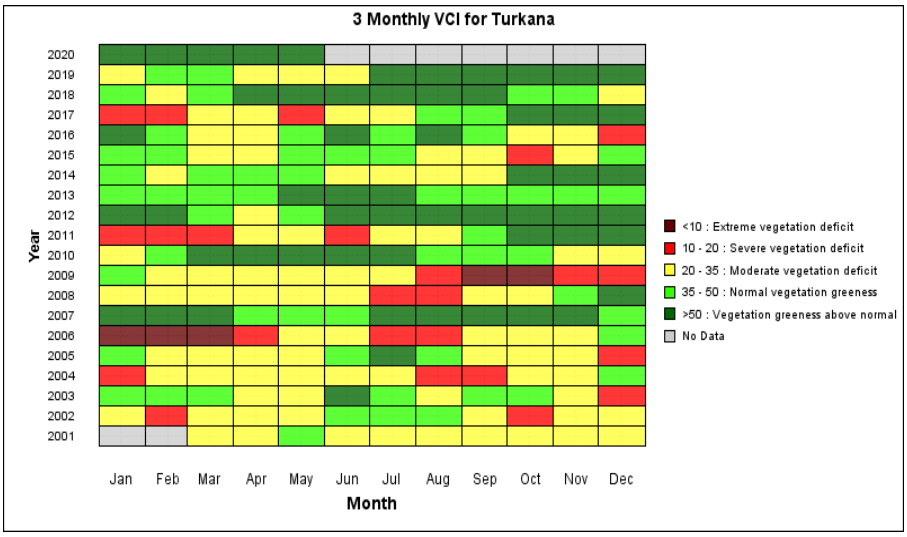

Figure 3:Vegetation Condition in Turkana County

- The condition of vegetation condition remained relatively good in May albeit deteriorating slightly in comparison to the month of April as evidenced by the shift in the VCI-3month value for the entire County from 117 to 101.
- Nonetheless, as illustrated in figure 3, vegetation greenness across all the Pastoral, Agro Pastoral and Fisheries livelihood zones was above normal.
- The current stability in vegetation condition spanning for a period of 11 months as shown in matrix has been occasioned by receipt of good rainfall over the last three seasons.
- The respective VCI-3month values recorded for Loima, Turkana south, west, central, north and east sub counties were 116,114,110,109,95 and 75 indicative of above normal vegetation greenness for the reporting period.
- The impact of the Desert Locusts was however evident in a number of sites in every sub county where significant portions of forage had been decimated leading to

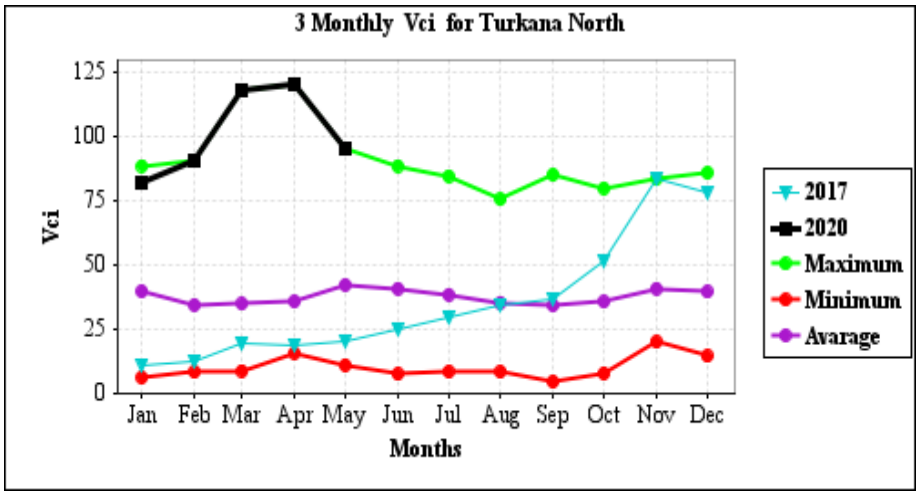

Figure 4:Vegetation Condition in Turkana North

observed deteriorating trend as for instance depicted in figure 4.

- Nevertheless, precipitation received over the MAM period has sufficed in promoting regeneration thus alleviating the severity.

2.1.2 Pasture

- The condition of pasture was generally good to fair, most sites along the peripheries of the County exhibited pasture of good quality and quantity. On, the other hand, some areas in the plains especially in the Fisheries livelihood zone had pasture of fair condition.
- Additionally, the observed pasture level during the month under review was substantially above the one normally witnessed across most sites in the County at such a time of the year.
- Among the major drivers of the observed pasture condition during the period was receipt of rainfall during the first half of the month that stabilized the situation especially in the peripheries with the declining trend in some areas being attributed to the Desert Locusts that had invaded and decimated sizeable portions.
- It is expected that available pasture especially in some areas along the Pastoral and Agro Pastoral livelihood zones would last for a period of 2-3 months with a possibility of extending to four months if as forecasted by the meteorological department average to above average rainfall is experienced in June.

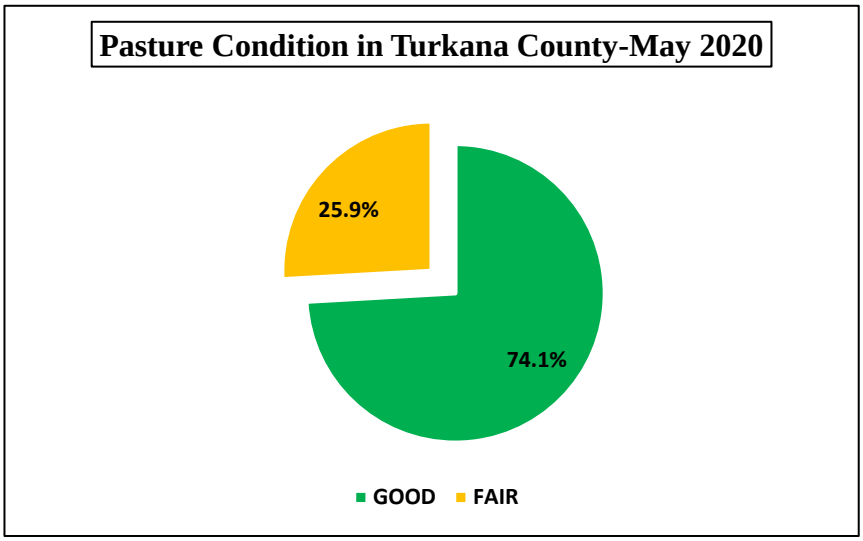

Figure 5: Pasture Condition in Turkana

- There was no major constraint to pasture access reported across all the livelihood zones during the month of May.
- Observed pasture quantity and quality in the Agro Pastoral and Pastoral livelihood zones did not vary significantly, however, the situation in the Fisheries livelihood zone was slightly different in both aspects

2.1.3 Browse

- The condition of browse was good across most sites in the County during the month of May with those depicting some slight deterioration being as a result of the large swarms of Desert Locusts that were feeding especially on the palatable species.
- The stabilization in the condition of browse from the previous months across all the livelihood zones was due to receipt of rainfall during the first dekad of May and the months of April and March that promoted regeneration.
- It is anticipated that the available browse across the Agro Pastoral and Pastoral livelihood zones would last for a period of 3-4 months on condition that the swarms of Desert Locusts are controlled/managed effectively and some rainfall is received across the month of June.
- For all the areas in the County, there was no pronounced impediment to browse access witnessed or reported during the review period.
- Unlike in the Fisheries livelihood zone whose browse quality and quantity was not dense, across the Agro Pastoral and Pastoral livelihood zones there was no variation in the quantity and quality of browse that was observed.

2.2 WATER RESOURCE

2.2.1 Sources

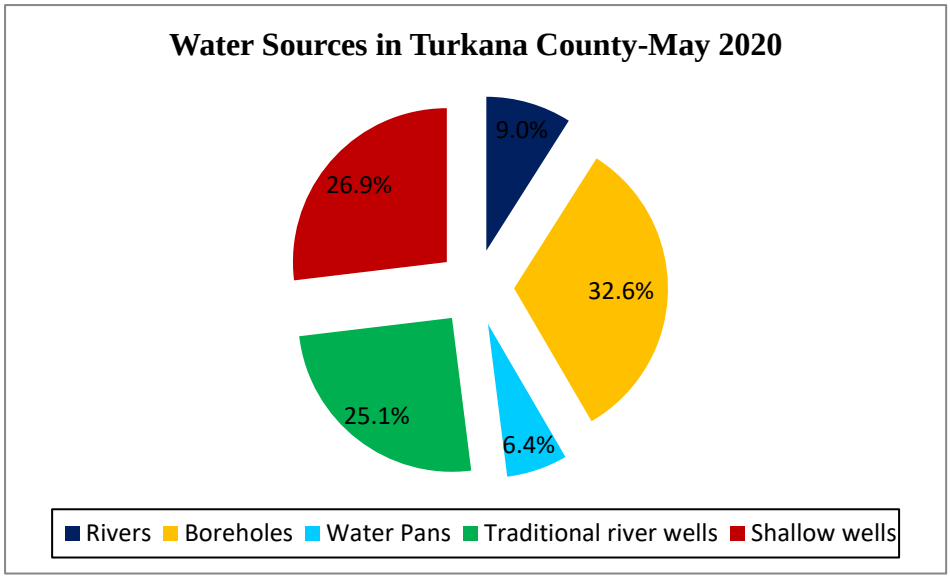

Figure 6: Water Sources in Turkana County

- As illustrated in figure 6, during the period under review, Boreholes, Shallow wells and Traditional river wells were the major sources of water for most households.
- There was no noticeable variation in the proportion of the population utilizing the different water sources from the one reported in April and that could be ascribed to the ease of access to water in sites adjacent to households occasioned by continued receipt of rainfall across all livelihood zones.
- Most of the open water sources (exceeding 75 percent) in all the three livelihood zones were at full capacity having further recharged during the month of May. Periodic huge volumes were witnessed along the seasonal rivers (Kawalase, Natiira, Kospir, Kerio, Lokichar among others) often leading to significant damage with the permanent Turkwel river also depicting a similar scenario during the month under review. It is highly anticipated that available water would suffice to last up to the month of August.
- The water situation in May across all the livelihood zones was considerably better compared to the one normally witnessed for the period.
- Further, the water sources in use during the month of May were the normal sources where households normally drew water from at such a time of the year across all the livelihood zones.

2.2.2 Household access and Utilization

- Stability in the household access distance to water source was observed during the month of May and thus it remained unchanged from the one reported previously in April as depicted in figure 7.
- The reported distance was lower than the long term average trekking distance for the month of May by 42 percent.
- The longest distance was recorded in the

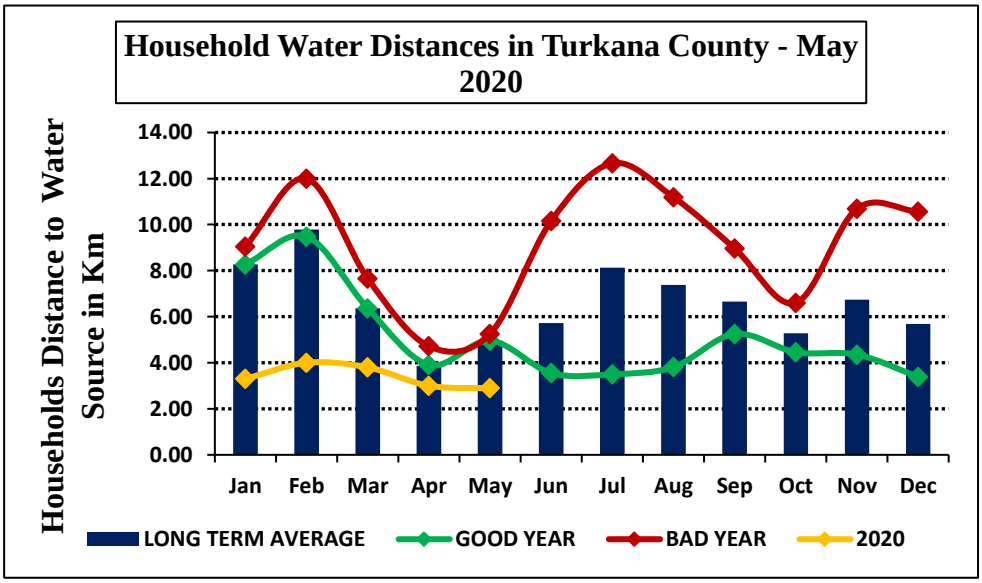

Figure 7: Household Access Distance to Water Source

Fisheries livelihood zone followed by that along the Agro Pastoral livelihood zone while the shortest was reported along the Pastoral livelihood zone during that period.

- In addition, the reported distance during the current year was even lower than the long term average distance for the period during a good year by 18 percent.
- The reported average waiting time at the water source was equally below the normal one for the month of May with households spending an average of 10-15 minutes in the queue for water points such as boreholes owing to less congestion across all the livelihood zones.
- The level of water consumed remained stable in relation to the one reported in April with a resident of the Agro Pastoral and Pastoral livelihood zones consuming an average of 30-40 litres per day while those in the Fisheries livelihood zone consumed 20-30 litres during that period.
- Water at source within the rural areas/community level was cost free whereas in the urban centres a small proportion of the population (less than five percent) accessed water at a cost of five shillings per 20 litre jerrycan with the cost rising to Ksh. 20 once delivered to site.
- The above price of five shillings was within the seasonal range for the month of May.

2.2.3 Livestock access

- The trekking distance from grazing areas to water sources remained unchanged from the one reported in April as illustrated in figure 8.

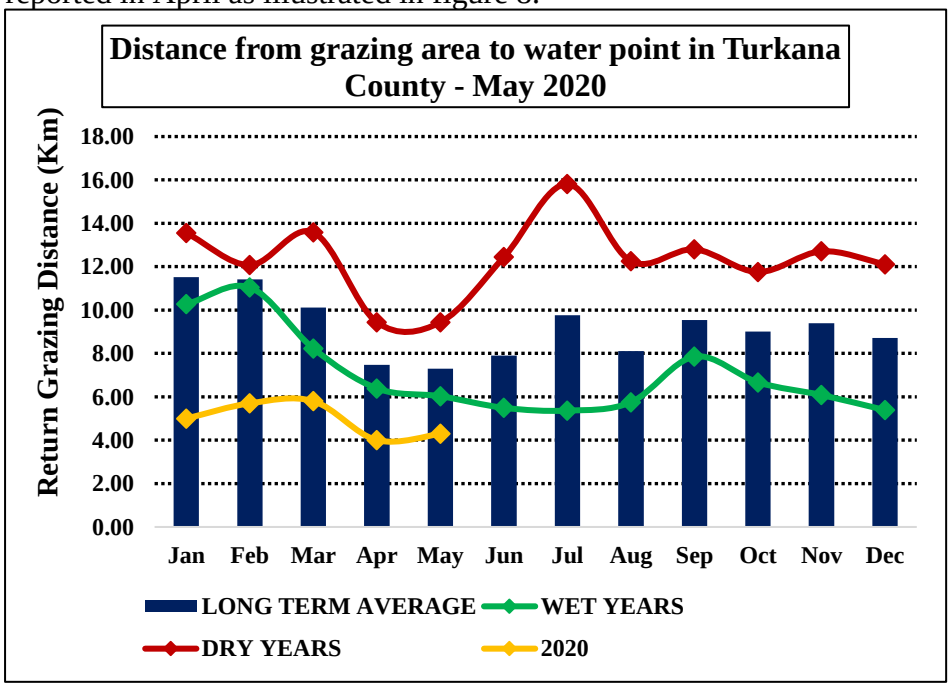

Figure 8:Return Distance to Water Source From Grazing Sites

- In comparison to the long term average trekking distance for the month of May, the reported distance was lower by 41 percent.
- The shortest distance was reported in the Agro Pastoral livelihood zone followed by the Fisheries livelihood zone with the longest trekking distance being reported along the Pastoral livelihood zone during the period under review.
- The observed trend could be attributed to pasture and browse availability in fairly adequate quantities and of good quality in most areas coupled with sufficient recharge of open water sources like water pans and rise in water table translating to a further reduction in the depth of traditional river wells along the many seasonal rivers criss-crossing most areas.
- Equally the watering frequency remained above the normal level with all livestock species in the three major livelihood zones in the County accessing water five to six times per week save for some Pastoralists out of own choice allowed their livestock especially the large stock to access water three to four times only per week.
- The stability in watering frequency during the period under analysis could be ascribed to improved water availability owing to a significant number of water structures such as Boreholes and Shallow wells remaining functional, majority of water pans being fully recharged and availability of personnel to look after the livestock.

3.0 PRODUCTION INDICATORS
3.1 LIVESTOCK PRODUCTION
3.1.1 Livestock Body Condition

- During the month of May, the body condition for all livestock species was good across the three livelihood zones. Camels and goats had a very good smooth appearance with the bone over the back not visible while the tail in sheep was fatty and buried with cattle being fat and blocky shaped.
- In comparison to the same period during the previous years, the observed body condition of all livestock species during the month of May was considerably better.
- Availability of adequate forage reserves in areas adjacent to households and water sources that meant significantly reduced trekking was the major driver of the improved body condition of all species during the reporting period.
- It is projected that the livestock body condition for all species shall remain stable across June with the anticipated receipt of rainfall likely to stabilize pasture/browse availability.

3.1.2 Livestock Diseases

- Diarrhoea (attributed to feeding on Desert Locust faeces), skin and respiratory syndromes remained the top three syndromes reported in May across all the livelihood zones.
- Majority of households in the Pastoral livelihood zone areas including Letea, Lokichar, Lorugum and Kaeris wards reported incidents of Pest Petis Ruminantes (PPR), Contagious Bovine Pleuropneumonia (CBPP) and increased cases of worms.
- Cases of Increased cases of Haemorrhagic septicaemia(HS), Contagious Caprine Pleuropneumonia (CCPP) and Mange were equally reported in the Fisheries and Agro Pastoral livelihood zones during the period under analysis ***(source: e-Surveillance-Veterinary Department, Turkana County)***

3.1.3 Milk Production

- Out of the small proportion of households (approximately 24 percent of the sample) that reported on own milk production mainly in Pastoral and Agro Pastoral livelihood zones, amount of milk produced per day per household decreased as illustrated in figure 9.
- Compared to the long term average production for the month of May, the reported production during the month under review was lower by 30 percent. Similar to the previous month, milk per litre traded at KSh. 50-60 across all sites in the County.

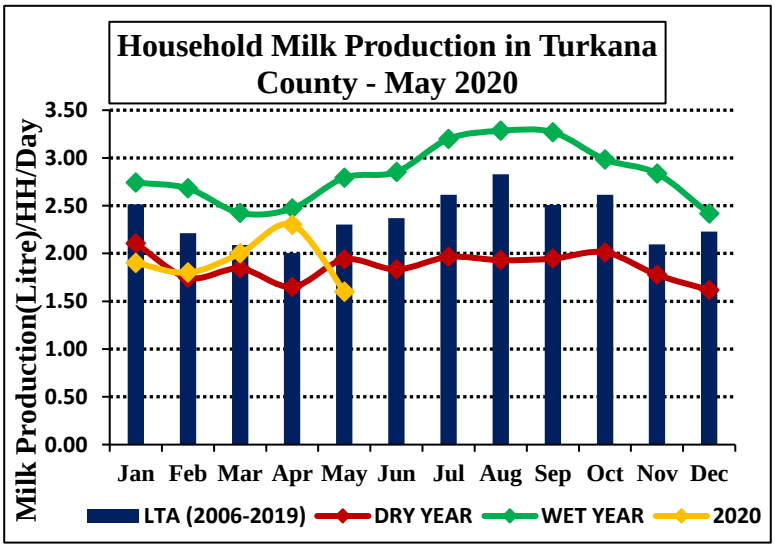

Figure 9:Average Amount of Milk Produced Per Household

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

- The major agricultural activity taking place during the period under review across the Agro Pastoral livelihood was mainly weeding with the crops having grown past knee height while farmers who specialize in horticulture farming were continually supplying green leafy vegetables, kales, tomatoes and water melons to the major markets in the County.

4.0MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- As depicted in figure 10, during the month of May the price of a 4-year old medium sized bull did not shift remarkably from the one reported in April and hence it traded at KSh. 15,520.

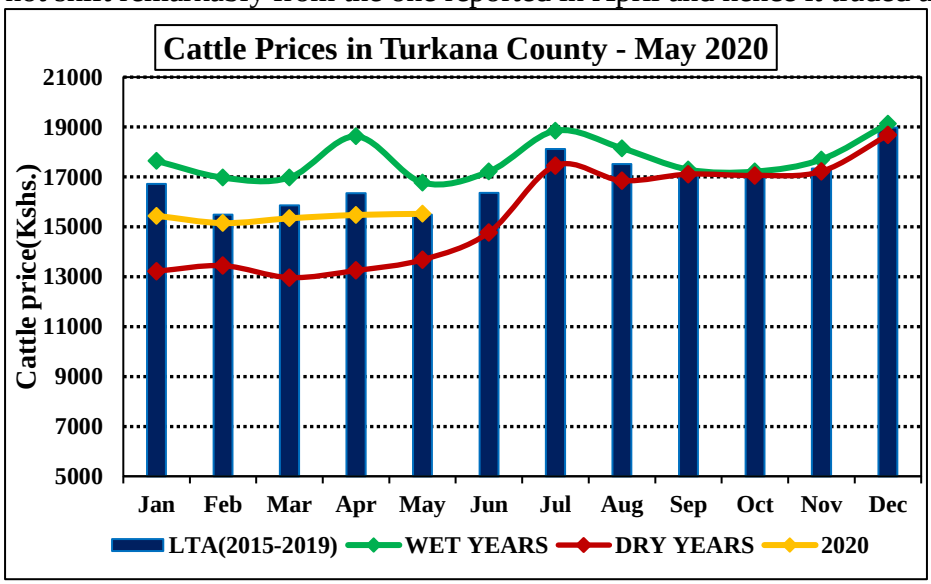

Figure 10:Cattle Price Trend in Turkana County

- Pasture and water availability within a limited trekking distance enhanced improvement/ promoted stability in cattle body condition coupled with limited market sales attributed to the prevailing good rangeland conditions were the major factors influencing the observed trend during month under review.
- The price reported along the Pastoral livelihood zone was KSh. 15,460 while that of the Agro Pastoral livelihood zone was KSh. 15,670.
- The recorded price of cattle for the month under analysis was at par with the five-year average price for the same month but slightly lower than the one reported for the same period during the wet years by approximately seven percent.

4.1.2 Small Ruminants Prices (Goat price)

- Stability in the price of a 2-year old medium sized goat was noted in May with the trading price remaining unchanged from the previous month at KSh.3495 as shown in figure 11.
- Existence of quality palatable browse in areas in close proximity to households improved access by goats leading to a further albeit slight improvement in goat body condition, that coupled with limited market activity resulted to the observed stability in goat price during the month under review.

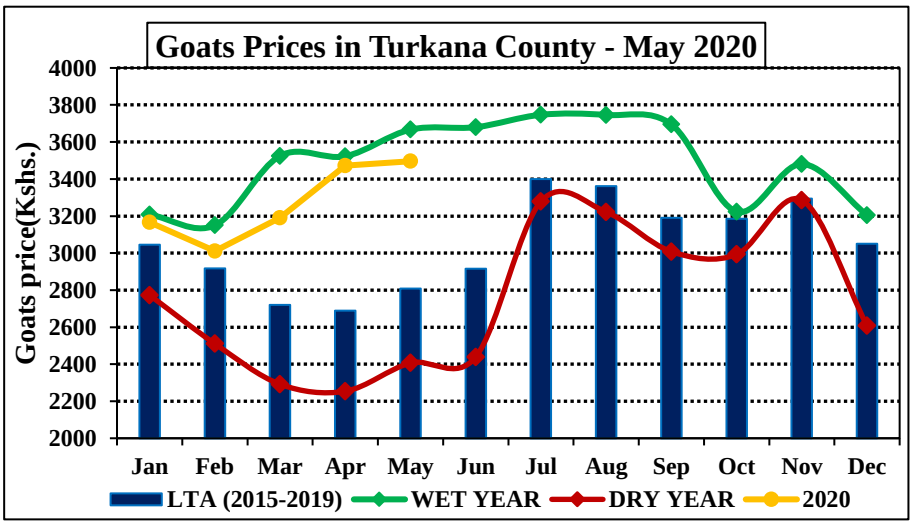

Figure 11: Goat Price Trend in Turkana County

- The reported price of goat along the Pastoral, Fisheries and Agro Pastoral livelihood zones was KSh. 3,480, KSh. 3,490 and KSh. 3,550 respectively.
- In comparison to the recorded price of goat for the period under analysis during the wet years, the reported price for the month of May was slightly lower by five percent but significantly higher than the corresponding long term average price by 25 percent.

4.1.3 Camel Prices

- During the month under review, 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. 25,360 as depicted in figure 12 across the Agro Pastoral and Pastoral markets where sales were witnessed.

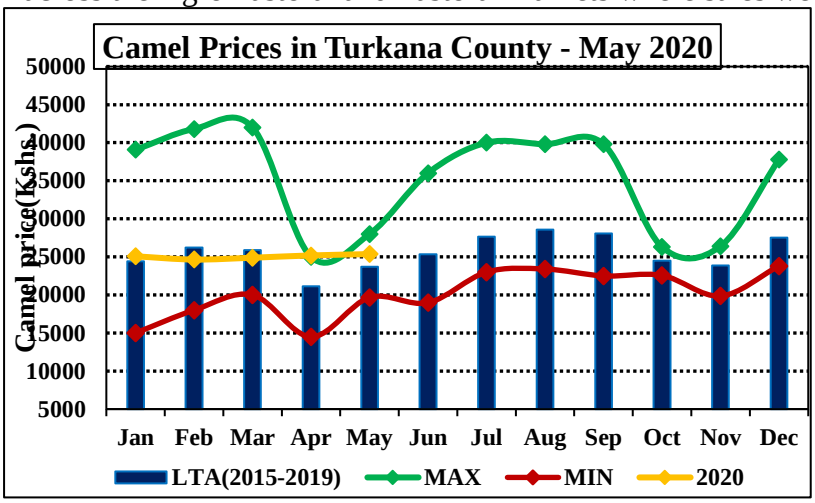

Figure 12:Camel Price Trend in Turkana County

- The body condition of the camel remained relatively good and stable in relation to the month of April as a result of the easily available quality palatable species of browse in most areas hence the observed price stabilization.
- The highest price of KSh. 25,420 was reported in the Agro Pastoral livelihood zone while the lowest price of KSh. 20,270 was reported along the Pastoral livelihood during the period under review.
- The reported price of camel during the month of May was slightly lower than the maximum price of camel reported over the last seven years for a similar period by 10 percent but higher than the long term average price for the month of May albeit by a small margin of seven percent.

4.2 CROP PRICES

4.2.1 Maize

- A spike in the price per kilogram of maize was noted in May with a shift of approximately seven shillings upwards from that reported in April being recorded as illustrated in figure 13.
- Noteworthy though was the fact that the prevailing price was still lower than the respective long term average and that reported for a similar period during the wet years by 13 and seven percent in that order.
- The Pastoral, Fisheries and Agro Pastoral livelihood zones reported an average market price of KSh. 75, KSh. 65 and KSh. 60 accordingly during the month of May.

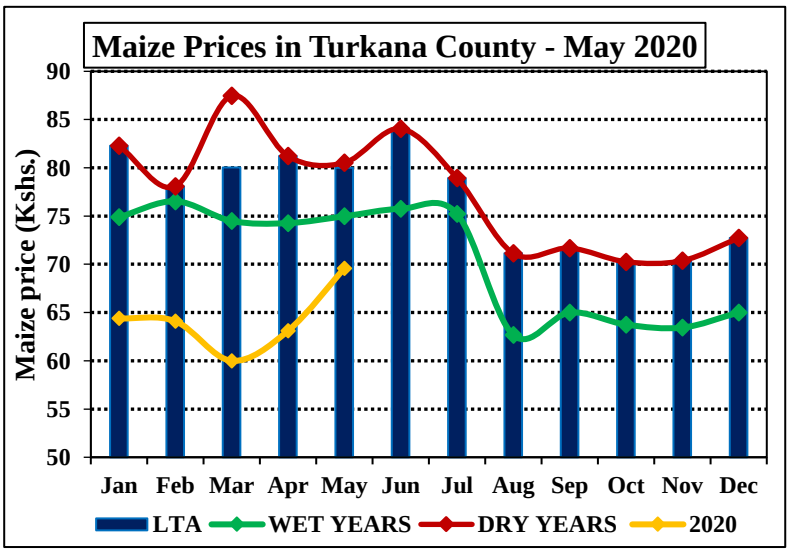

Figure 13:Maize Price Trend in Turkana County

- Significantly high prices continued being reported in interior markets within the Pastoral livelihood zone such as Kaeris, Lokitaung, Kaikor, Kibish among others and this was partly due to the reported case of COVID-19 during the month that affected the normal flow and also as a consequence of the already dilapidated roads in some areas that had further been made impassable by the floods witnessed during the MAM season.
- The observed trend in maize price across markets was also occasioned by continued closure of the international border with Uganda at Moroto that consequently meant reduced importation of maize with the situation being worsened by the limited movement of cargo trucks from Kitale market that also forms a major supply source for the internal markets.

4.2.2 Beans

- Stability was noted in the price of beans across the three major livelihood zones with a kilogram retailing at KSh. 108 during the period under review as shown in figure 14.

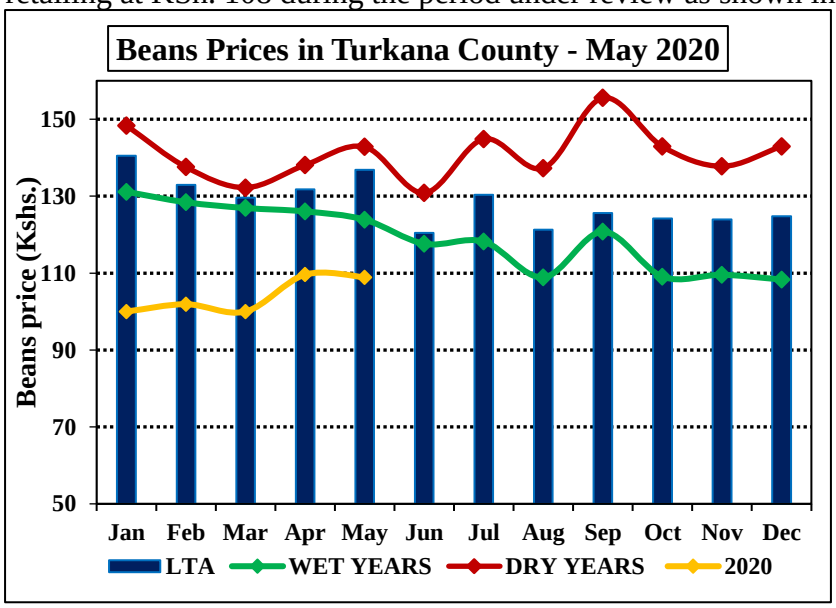

Figure 14:Beans Price Trend in Turkana County

- Decrease in demand for beans occasioned by existence of other pulse substitutes like Cowpeas from the internal harvest coupled with prioritization of maize were the major drivers of the observed trend in beans price.
- The Fisheries livelihood zone posted the highest price for the second consecutive month of KSh. 113 while the Pastoral and Agro Pastoral livelihood zones reported an average price of KSh.110 and KSh. 102 in that sequence.
- Compared to the recorded price of beans for the same period during the wet years, the reported price for the month of May was lower by 12 percent and also lower than the corresponding long term average sale price by 21 percent.

4.3 Livestock Price Ratio/Terms of Trade

- The terms of trade declined slightly during the period under review with proceeds from the mostly/normally traded goat in the market sufficing to purchase 50 kilograms of maize as opposed to 56 kilograms previously (figure 15). Therefore, during the review period, pastoralists who are normally dependent on markets for cereals supply were disadvantaged.
- Despite the observed decline, the reported terms of trade was at par with the one recorded for a similar period during the wet years but significantly higher than the respective long term average by 72 percent.
- Therefore, the purchasing power of Pastoral households was slightly eroded during that period but majority were able to purchase basic essential food stuffs albeit in small quantities but lacking variety/ not well diversified in terms of meeting dietary needs especially for the under-fives.

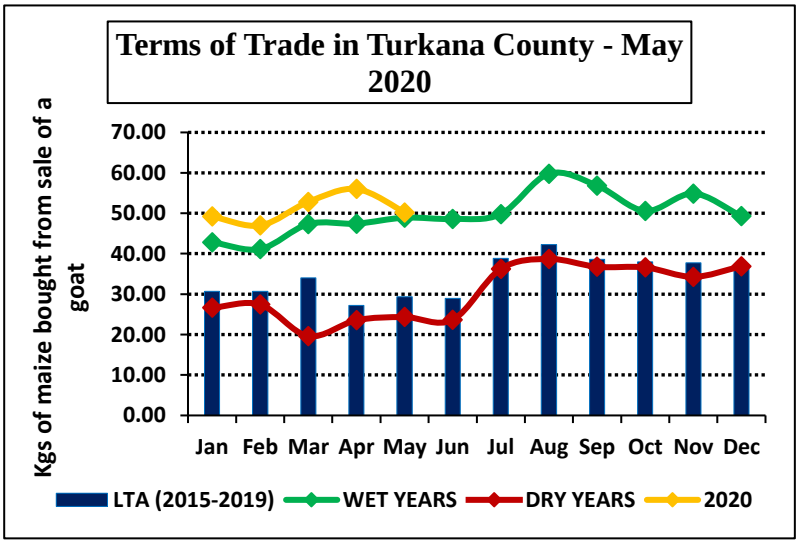

Figure 15:Terms of Trade Trend in Turkana County

- The notable hike in the price of maize was the major driver of the observed negative trend in the terms of trade during the period under review.
- The terms of trade is anticipated to decline further albeit not significantly across June and July before stocks out of the long rains harvest reach the markets and thus aid in stabilization of price.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS
5.1 MILK CONSUMPTION

- From the small proportion of households reporting on milk consumption during the month of May, a decline in the consumption level was witnessed as depicted in figure 16 and it thus averaged 1.4 litres per day per household.

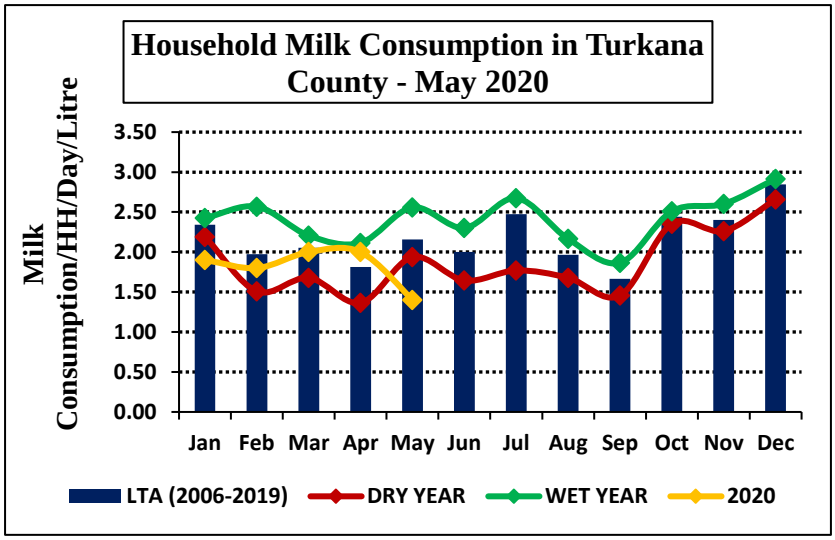

Figure 16:Milk Consumption Pattern in Turkana County

- The low consumption could be attributed to reduced production at household level occasioned by the yield per animal among the initially high producers decreasing with no more calving taking place.
- The reported consumption during the month under review was lower than the one recorded for the same period during wet years and the corresponding long term average by 45 and 35 percent respectively.

6.0 CURRENT INTERVENTION MEASURES (ACTION)
6.1 FOOD

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

6.2 NON-FOOD

Table 1: Non-Food Interventions

Intervention	Sub County/ Ward/Location	No. of Beneficiaries	Implementer(s)
Cash transfer to vulnerable households under HSNP	All the seven Sub Counties	39000	National Drought Management Authority

7.0 EMERGING ISSUES
7.1 INSECURITY
7.1.1 CONFLICT/HUMAN DISPLACEMENT

- There were no serious incidents of conflict/insecurity that were reported in all the livelihood zones during the month under review.

7.2 MIGRATION

- During the period under review, there was no form of migration taking place with most of the herd remaining within their normal wet season grazing sites adjacent to households.

7.3 FOOD SECURITY PROGNOSIS

- Pasture and browse quantity and quality is projected to remain within a desirable level over the next one month, therefore, stability in production indicators (body condition of livestock and market price) will be the most likely outcome over that period.
- No significant shift in the purchasing power is anticipated despite the terms of trade assuming a declining trend and therefore majority of pastoral households will be fairly well positioned in terms of meeting basic food requirements albeit lacking diversity.
- During that period, the level of malnutrition is equally anticipated to remain stable and within the normal range. However, existence of peace and security especially in the conflict hotspots will be key in taming any rise since households will be better equipped to bridge any foods gaps through markets despite the COVID-19 restrictions.
- Consequently, as the lean season starts, majority of households will most likely start experiencing 'crisis' food security outcomes as a consequence of pre-existing food gaps occasioned by the rising food prices.

8.0 RECOMMENDED INTERVENTIONS

- **Livestock/Veterinary**: Continued strengthening of the resilience/coping capacity of vulnerable poor Pastoral households through:
    - Conducting a restocking exercise of small stock targeting areas where livestock have been lost as a consequence of conflict/rustling and flooding witnessed since the short rains season up to the current MAM season across all the livelihood zones.
    - Enhancing animal health by regular mass vaccination targeting sites reporting increased incidents of CBPP, PPR, CCPP and Mange.
- **Health and Nutrition:** provision of face masks and hand sanitizers/water and soap to vulnerable members of the community while conducting continuous ground and media sensitization campaigns on COVID-19 and targeting sites experiencing high rates of malnutrition with essential services like education on child care practices and nutrition supplements while observing the MoH guidelines on Corona Virus.
- **Food and Safety Net:** Initiate/scale up urgent provision of relief food/ cash transfer targeting all vulnerable households that have severely been affected by flooding.
- **Agriculture:** Scale up efforts towards management of emerging swarms of Desert Locusts that pose a significant threat to food security through:
    - Enhancing surveillance through use of drones while leveraging on advisories from experts on migration patterns for effective control through aerial spraying.
    - Continuous capacity strengthening of the local communities on identification and reporting of the areas where eggs have laid, hoppers and adults sighted.
    - Constructive engagement of the local administration on information dissemination regarding invasion, control and management.