A Vision 2030 Flagship Project

National Drought Management Authority

KWALE COUNTY

DROUGHT EARLY WARNING BULLETIN APRIL 2023

APRIL 2023 EW FLAG

Drought Situation & EW Phase Classification

Biophysical Indicators

- The first dekad in April received below normal rains while the second dekad received above-normal rains.
- The vegetation condition for April was above average with an improving trend.
- The state of water sources was normal.

Socio Economic Indicators (Impact Indicators)

Production indicators

- Land preparation had begun in both the mixed farming and livestock farming livelihood zones following the onset of the long rains season.
- Milk production was within seasonal norms for this time of the year.

Access indicators

- Terms of trade (casual labour to maize) were approximately 50 percent lower than seasonal averages implying decreased household purchasing power for April.
- Milk consumption was within seasonal ranges for this time of the year.
- Return distances to water sources for household consumption were 42.9 percent above normal for this time of the year.

Utilization Indicators

- The proportion of children at risk of malnutrition was 2.0 percent in April having remained similar to 3.4 percent recorded in March.
- Food consumption patterns remained stable in April as the food consumption score was recorded as 36.8 compared with 32.0 in March.
- The reduced coping strategy index was estimated at 15.3 in April having remained stable in comparison with 14.85 in March.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Recovery	Improving
Livestock Farming	Recovery	Stable
County	Recovery	Improving
Biophysical Indicators	**Value**	**Normal Range/Value**
VCI	71.08	>45
State of Water Sources	5	5
Production indicators	**Value**	**Normal**
Crop condition (maize and legumes)	-	-
Milk Production (Litres)	4.5	4.6
Livestock Migration Pattern	-	-
Livestock deaths (from drought)	-	-
Access Indicators	**Value**	**Normal**
Terms of trade	28.5	64.8
Milk Consumption (litres)	3.2	3.3
Return distance to water sources for households (km)	5.2	3.5
Utilization indicators	**Value**	**Normal**
Nutrition Status, MUAC (% at risk of malnutrition)	2.0	-
Food consumption score (FCS)	36.8	-
Reduced coping strategy index (rCSI)	15.3	-

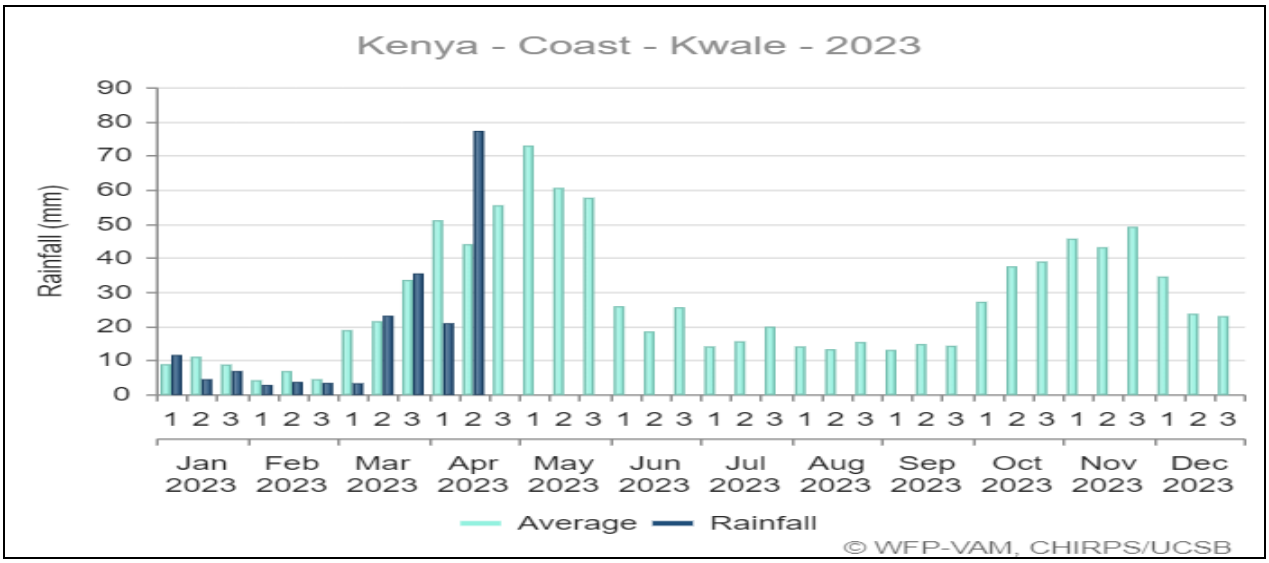
Seasonal calendar

▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased household food stocks ▪ Land preparation	▪ Planting/weeding ▪ Long rains ▪ High calving rate ▪ Milk yields increase	▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased household food stocks ▪ Kidding (Sept)	▪ Short rains ▪ Planting/weeding

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

1.1 RAINFALL PERFORMANCE

- The first dekad of the month received 20.602 mm of rainfall which was approximately 40 percent of the normal amount of 50.77mm in the long-term average (LTA).
- The second dekad received above average rainfall of 76.952mm compared with the expected 43.755 mm in the LTA as shown in the graph below.
- The temporal rainfall distribution was good while the spatial distribution was even during these two dekads as both the livestock farming and mixed farming livelihood zones received rains. However, the amounts were considerably less in the livestock farming livelihood zone.
- The rains are still on-going in the county.



2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

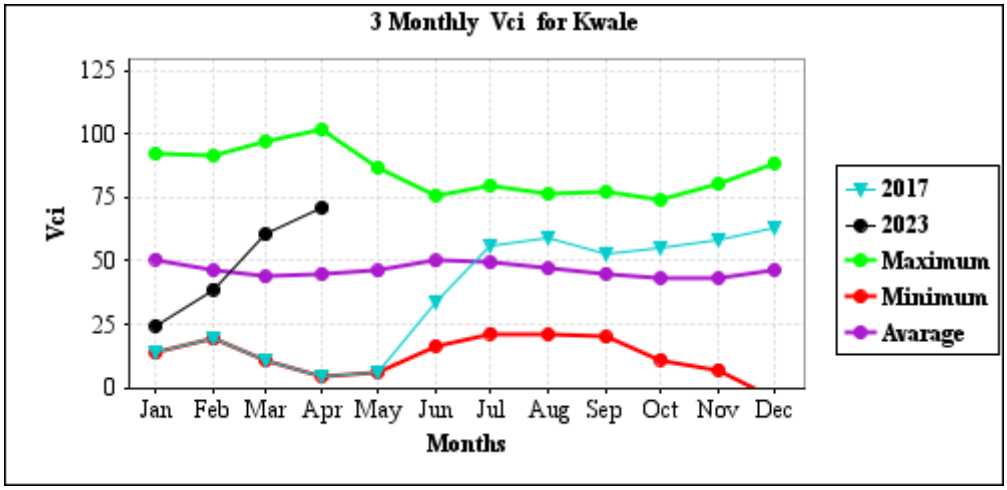
2.1.1 3-monthly Vegetation Condition Index (VCI)

- The county's vegetation greenness improved by a 17.6 percent margin as the VCI increased from 60.45 in March to 71.08 in April as shown in the table below.
- The county was therefore classified in the above-normal vegetation greenness band similar to March.
- All sub-counties recorded improved vegetation greenness and were classified in the above-normal vegetation greenness band with the exception of Msambweni Sub-county which was categorized in the normal band. The table below illustrates the change in vegetation greenness across the sub-counties.
- In general, the vegetation condition had also improved across both livelihood zones.

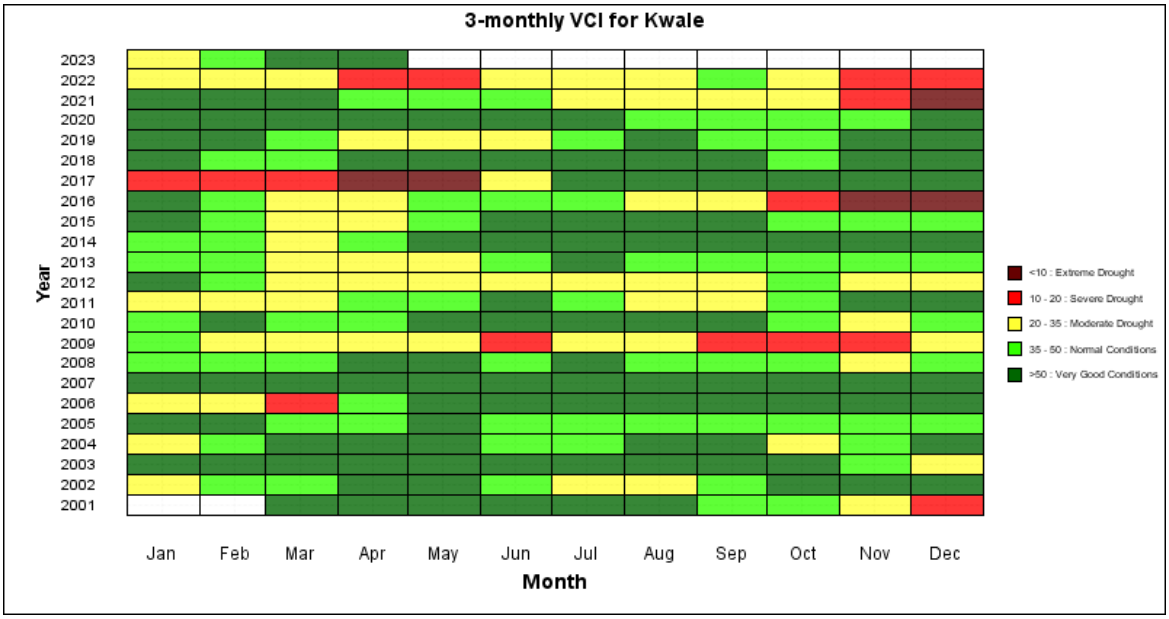
Area	3-monthly VCI (October 2022)	3-monthly VCI (November 2022)	3-monthly VCI (December 2022)	3-monthly VCI (January 2023)	3-monthly VCI (February 2023)	3-monthly VCI (March 2023)	3-monthly VCI (April 2023)
Kwale County	30.07	17.33	17.46	24.4	38.8	60.45	71.08
Kinango Sub-county	20.98	9.15	11.23	20.17	36.76	62.36	75.81
Lunga Lunga Sub-	42.06	24.56	22.02	28.59	40.94	58.31	67.79

county							
Matuga Sub-county	41.65	32.65	30.62	30.29	40.5	58.27	64.43
Msambweni Sub-county	51.44	40.92	36.13	39.89	49.28	53.42	47.04

- The vegetation condition index was also above-average for this time of the year as shown in the graph below.



- The current vegetation greenness at county level was also better than at a similar time last year when the county was classified in the severe drought category as shown in the matrix below.

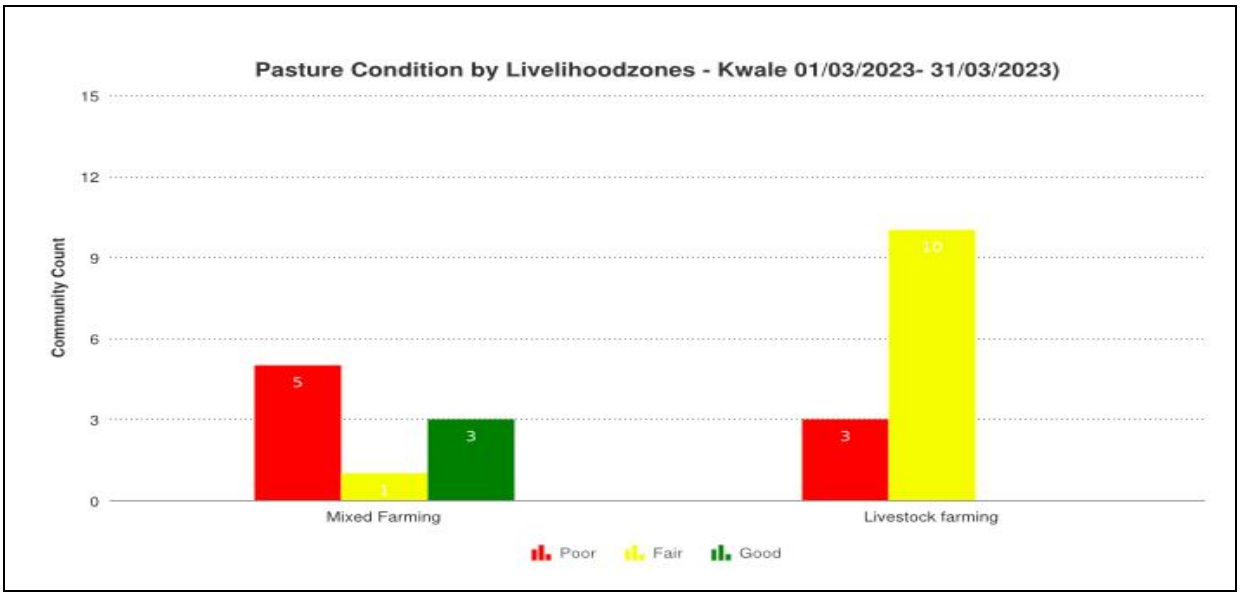


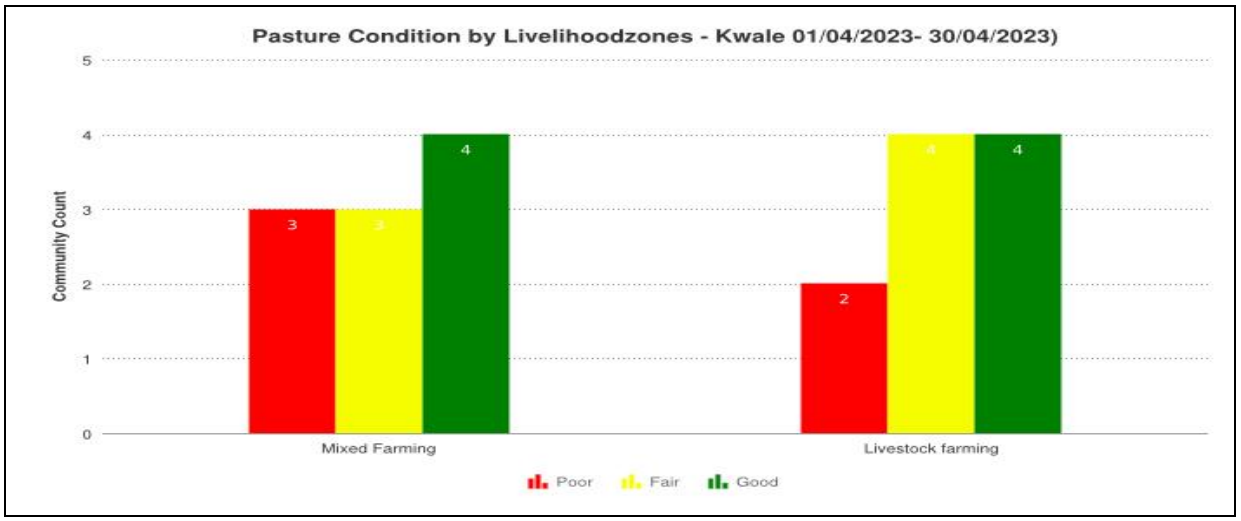
Field Observations (Pasture and browse conditions)

Pasture

- Pasture condition improved in comparison with last month as the proportion of households who reported good condition increased from 13.6 percent in March to 40 percent in April.

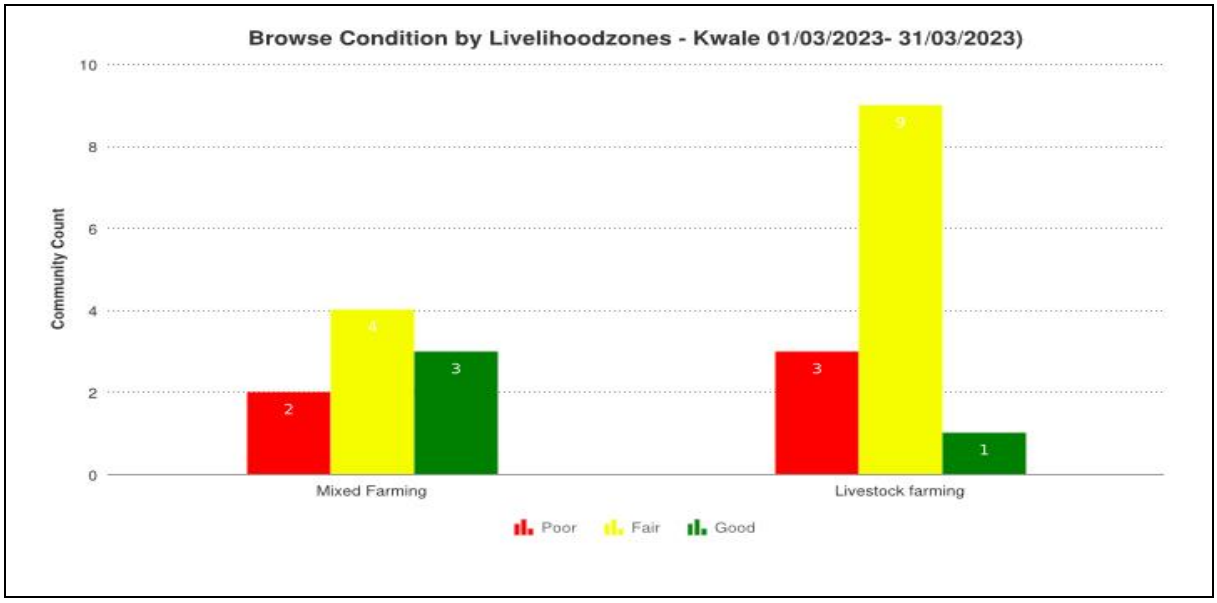
- The proportion who recorded fair pasture condition also increased from 35 percent in March to 50 percent in April.
- In addition, the proportion who reported poor condition decreased from 36.4 percent in March to 25 percent in April.
- The received rains resulted in increased rejuvenation of pasture.
- The improvement was also recorded at livelihood zone level as recorded in the graphs below.





Browse

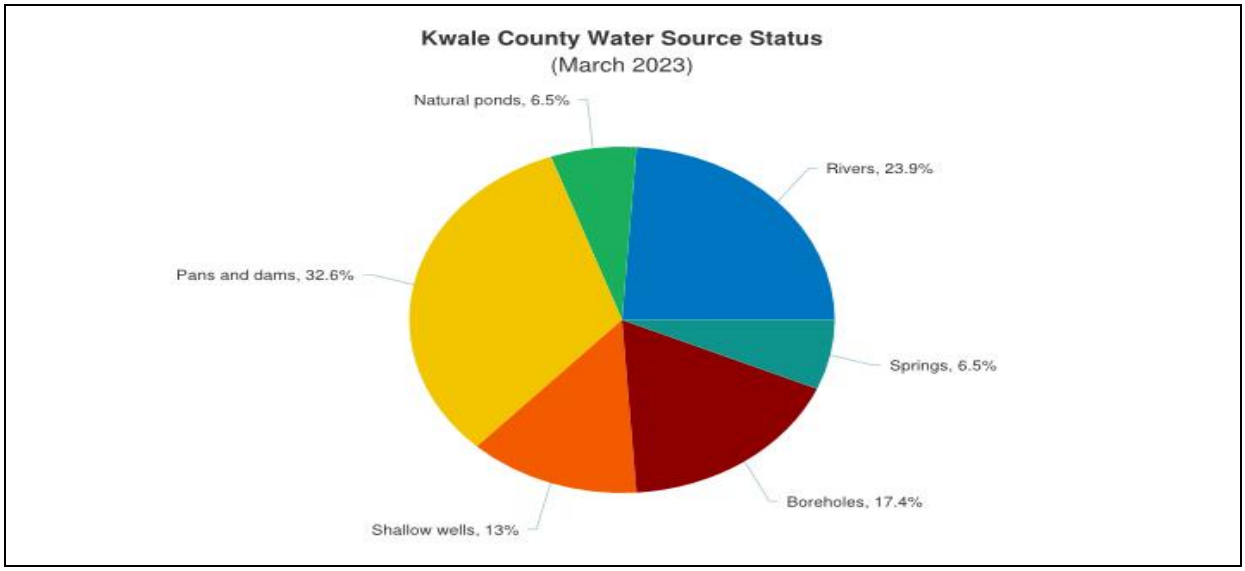
- Browse condition improved as the proportion of households who reported poor condition reduced from 22.7 percent in March to nil in April.
- The proportion that reported good condition increased from 18.2 percent in March to 50 percent in April further underscoring the improvement.
- Like pasture, browse benefited from improved rejuvenation occasioned by the rains this month.
- The charts below illustrate the improvement in browse condition at livelihood zone level.

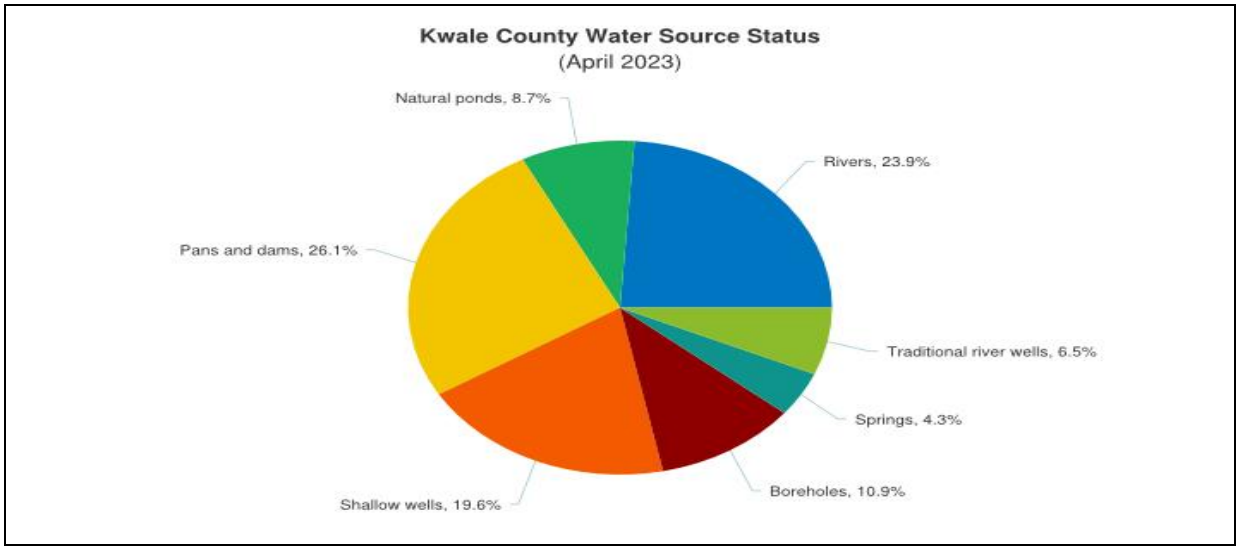


2.2 WATER RESOURCES

2.2.1 Sources

- Most households relied on pans/dams, rivers, shallow wells and boreholes as their main sources of water in April.
- The pie-charts below indicate the change in water source reliance in March and April.





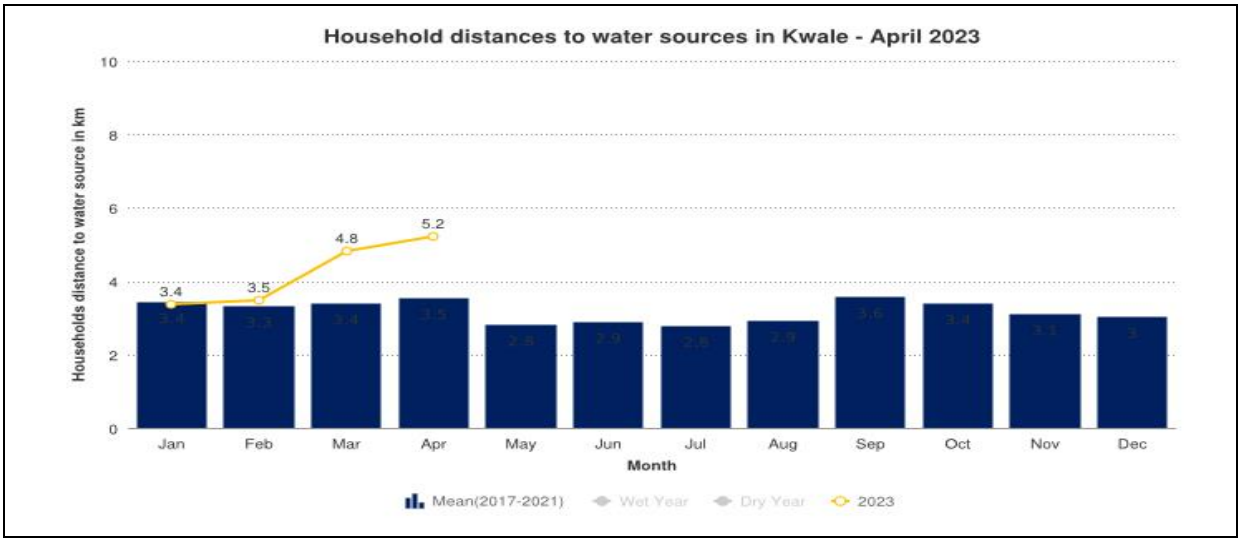
- The status of water sources in the county for the month was 5 implying normal water availability as described in the table below.
- The rains received this month had recharged water sources in both the mixed farming and livestock farming livelihood zones.

INDEX	STATUS OF WATER SOURCE	DESCRIPTION
1	**EMERGENCY SITUATION**	All main water sources have dried up; only few boreholes still yielding significant amounts
2	**STRONGLY INADEQUATE**	Surface water sources have dried up while the underground water sources are yielding very little amounts of water. Breakages of boreholes contribute to worsen the situation. Acute water shortage in many areas within the livelihood

	3	**INADEQUATE**	Surface water sources have dried up while the underground water sources are yielding modest amounts of water. Concentration of livestock around few water points contribute to spread communicable diseases and to degradation of rangeland
	4	**DECLINING**	The water availability is below normal for the period
	5	**NORMAL**	The water availability is normal for the period
	6	**GOOD**	The water availability is above normal for the period

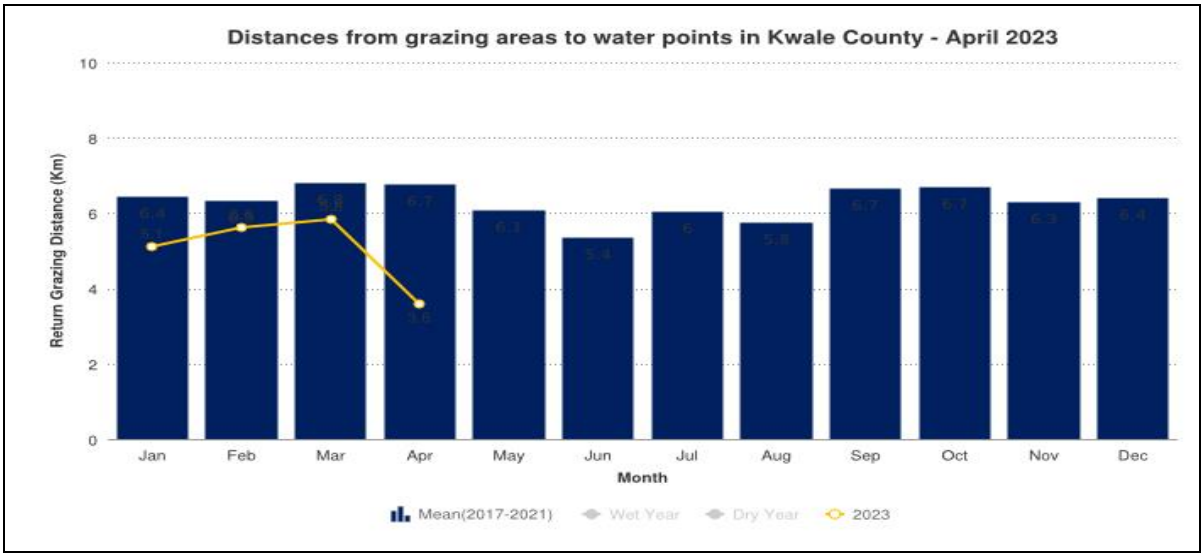
2.2.2 Household access and utilization

- The average distance to water sources for household consumption was estimated at 5.2 km in April having maintained a stable trend in comparison with 4.8 km recorded in March.
- The distance was higher than the 2017-2021 LTA by a 42.9 percent margin which was recorded as 3.5 km as shown in the graph below.



2.2.3 Livestock access to water

- The average distance from grazing areas to water sources was estimated at 3.6 km in April having reduced by more than 50 percent from 6.8 km recorded in March.
- The current distance was 46.3 percent lower than the 2017-2021 LTA which was estimated at 6.7 km as shown in the graph below.

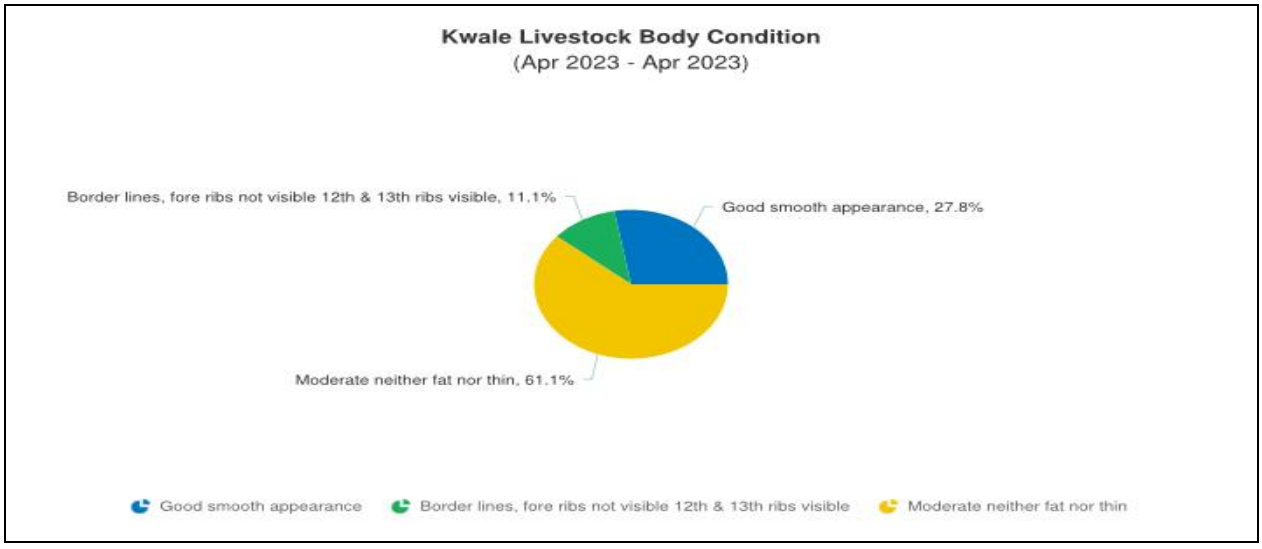


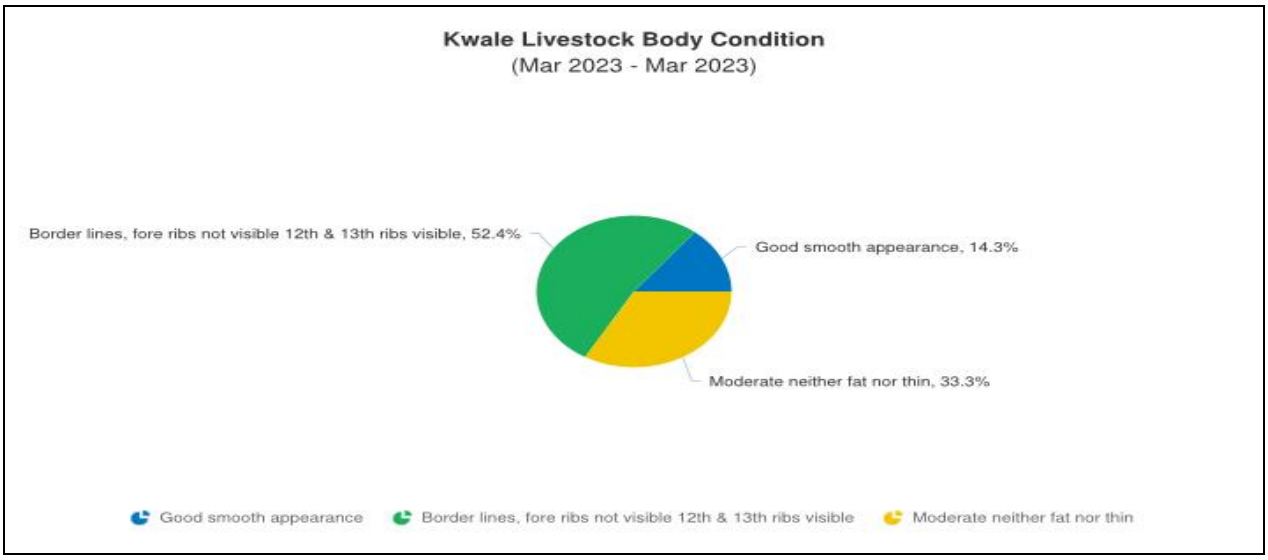
3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition had recorded some improvement in April as the proportion of livestock classified as stressed (borderline fore-ribs not visible; 12th and 13th ribs visible) had reduced from 52.4 percent recorded in March to 14.3 percent in April as shown in the pie-charts below.
- The proportion of livestock classified as normal (good smooth appearance) increased by approximately 50 percent from 14.3 percent in March to 27.8 percent in April further underscoring the improvement.
- Both pasture and browse condition had recorded an improvement and could have contributed to the improved body condition in livestock.





- The table below provides a description of various levels of body condition in livestock.

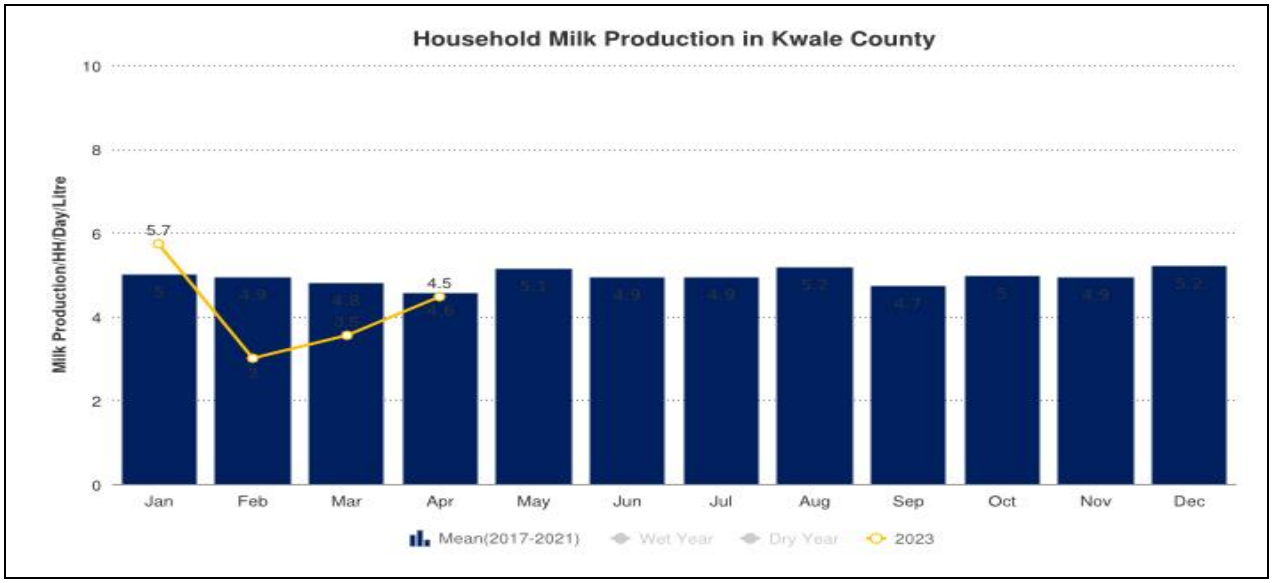
Level	Classification	Characteristics (this describes majority of the herd and not individual isolated stock)
1	Normal	Very Fat Tail buried and in fat
		Fat, Blocky. Bone over back not visible
		Very Good Smooth with fat over back and tail head
		Good smooth appearance
2	Moderate	Moderate. neither fat nor thin
3	Stressed	Borderline fore-ribs not visible. 12th & 13th ribs visible
4	Critical	Thin fore ribs visible
5	Emaciated	Very thin no fat, bones visible
		Emaciated, little muscle left

3.1.2 Livestock Diseases

- No epidemic-prone diseases were recorded in April.

3.1.3 Milk Production

- Milk was produced mainly from cattle in April.
- The average milk production at household level was approximated at 4.5 litres in April having increased by a 45.2 percent margin from 3.1 litres recorded in March.
- The current production was normal for this time of the year compared with 4.6 litres recorded in the 2017-2021 LTA as shown in the graph below.



3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and condition of food crops

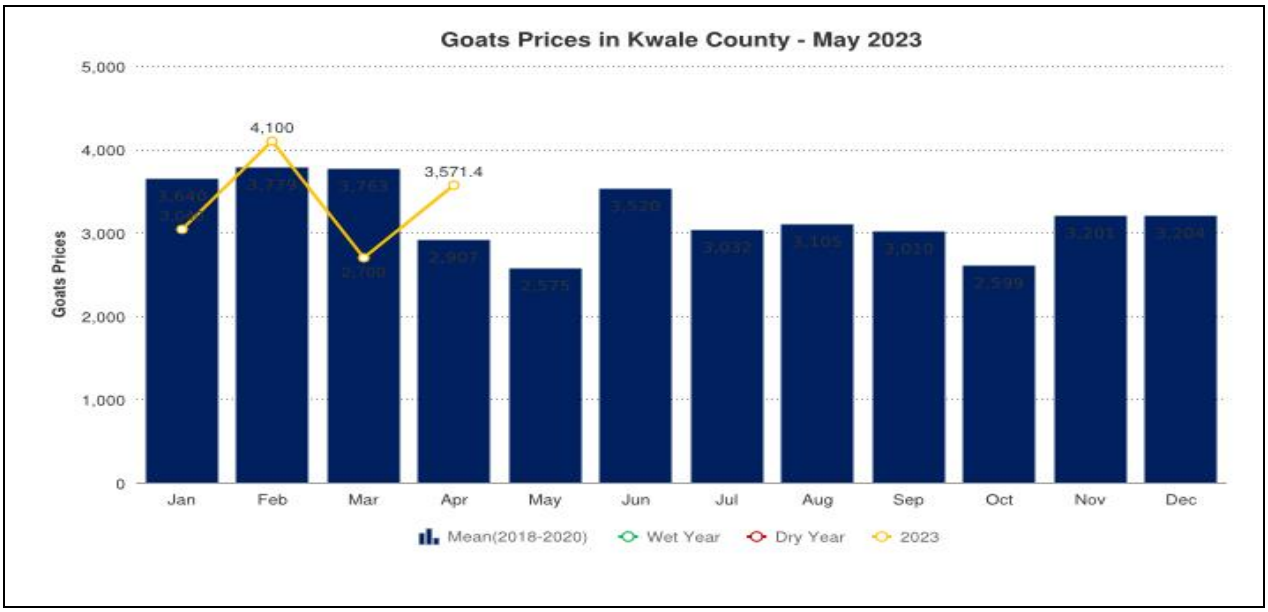
- Land preparation was on-going on a large scale in the county as the long rains season had begun.
- Planting had also begun in both livelihood zones for areas that had received rains since last month.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

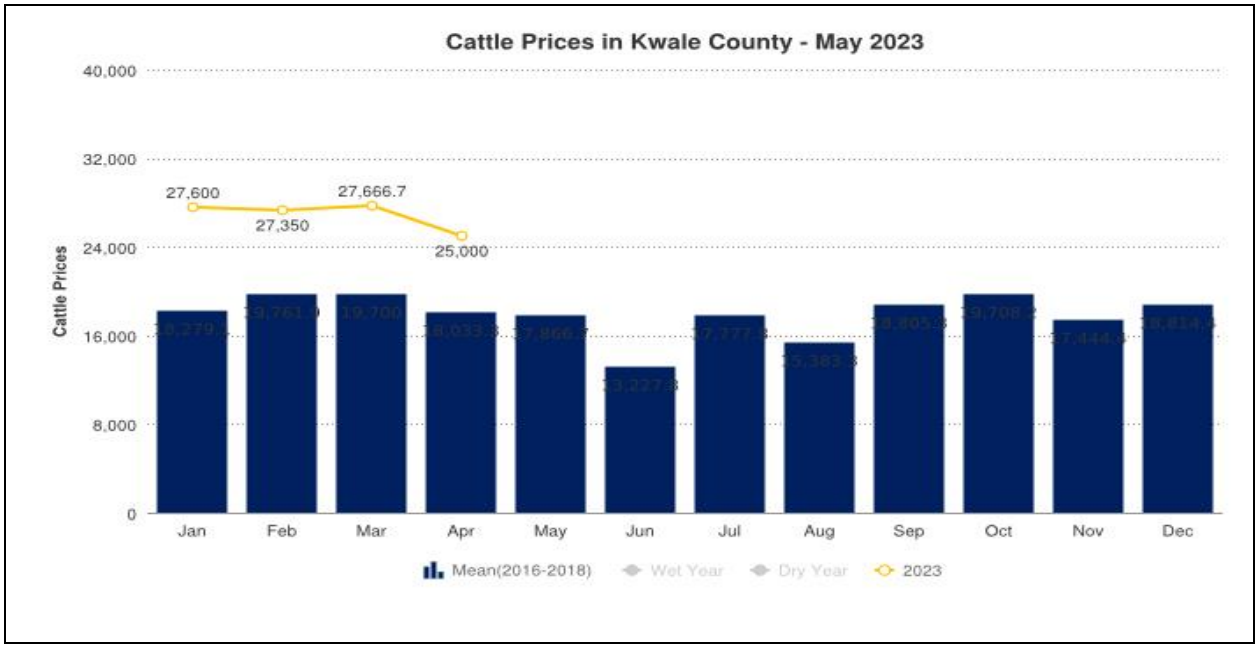
4.1.1 Goat prices

- The trading price of a medium-sized three-year old buck was Kshs 3,571.4 in April having increased by 32.3 percent margin compared with Kshs 2,700 recorded in March.
- The current price was 22.9 percent higher than normal in comparison with Kshs 2,907 recorded in the 2018-2020 LTA as shown in the graph below.



4.1.2 Cattle prices

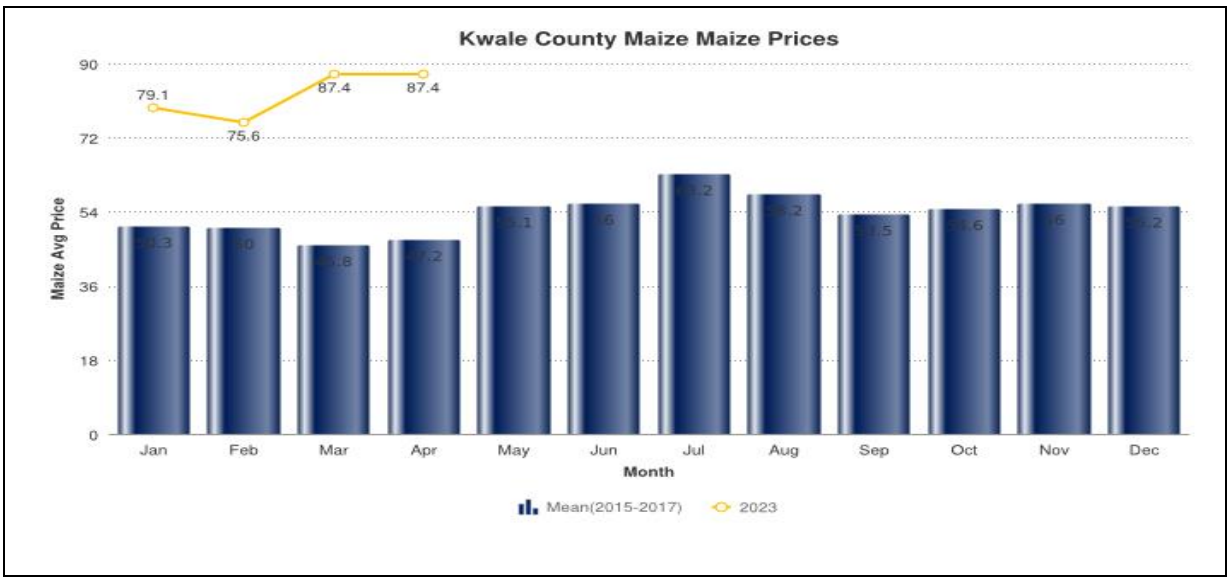
- The selling price of a mature three-year old bull was Kshs 25,000/- in April having decreased by a slight margin of 9.6 percent in comparison with Kshs 27,666.7 posted in March.
- The price was 38.6 percent higher than Kshs 18,033 recorded in the 2016-2018 LTA as shown in the graph below.



4.2 CROP PRICES

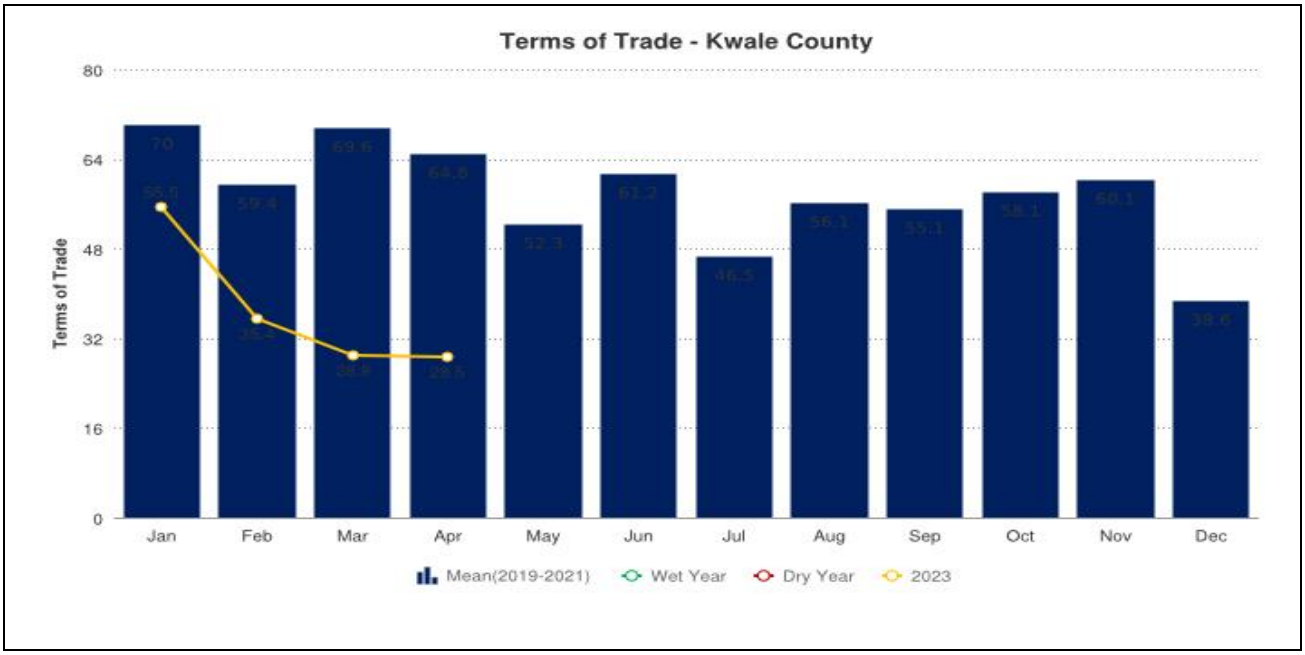
4.2.1 Maize

- A kilogram of maize was trading at Kshs 87.4 in April similar to March.
- The price was almost double that normally recorded at this time of the year recorded as 47.2 in the 2015-2017 LTA as shown in the graph below.
- The lack of harvests during the last cropping season coupled with increased transportation costs from outside the county could have contributed to the increased prices for maize.



4.3 TERMS OF TRADE (ToT) - CASUAL LABOUR VERSUS MAIZE PRICES

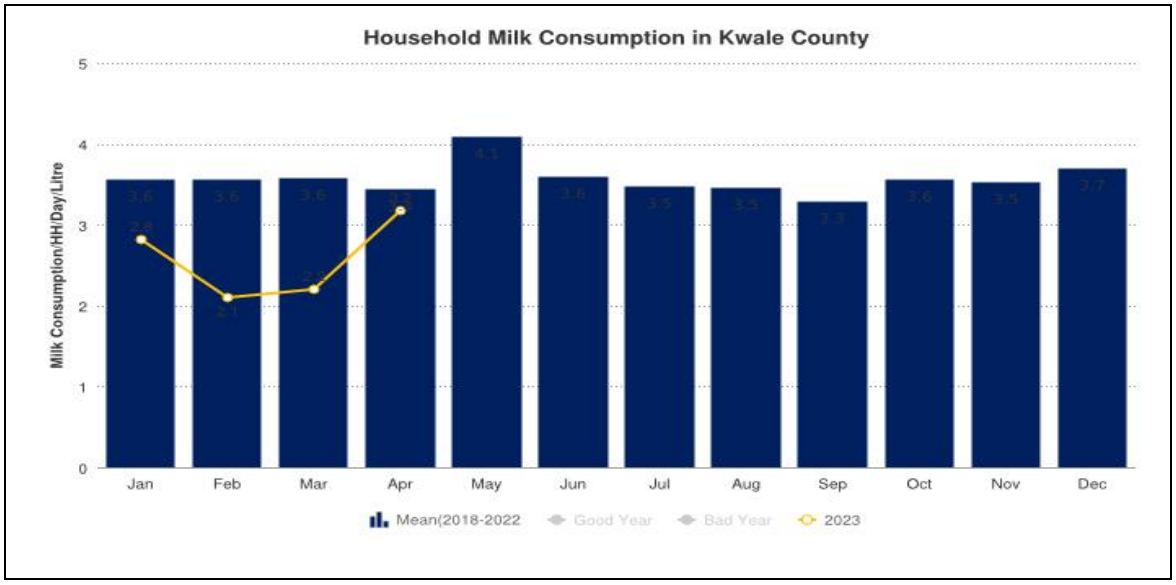
- The average ToT in April was estimated at 28.5 having maintained a stable trend in comparison with 28.8 recorded in March.
- The current ToT was less than 50 percent of that expected for this time of the year at approximately 64.8 in the 2019-2021 LTA as shown in the graph below.
- The implication was that household purchasing power had maintained a stable trend in comparison with last month. However, it was lower than expected compared with normal times.
- Households were therefore able to purchase a relatively similar quantity of maize this month in comparison with last month although it was approximately half of what they would normally purchase at this time of the year.



5.0 FOOD CONSUMPTION

5.1 MILK CONSUMPTION

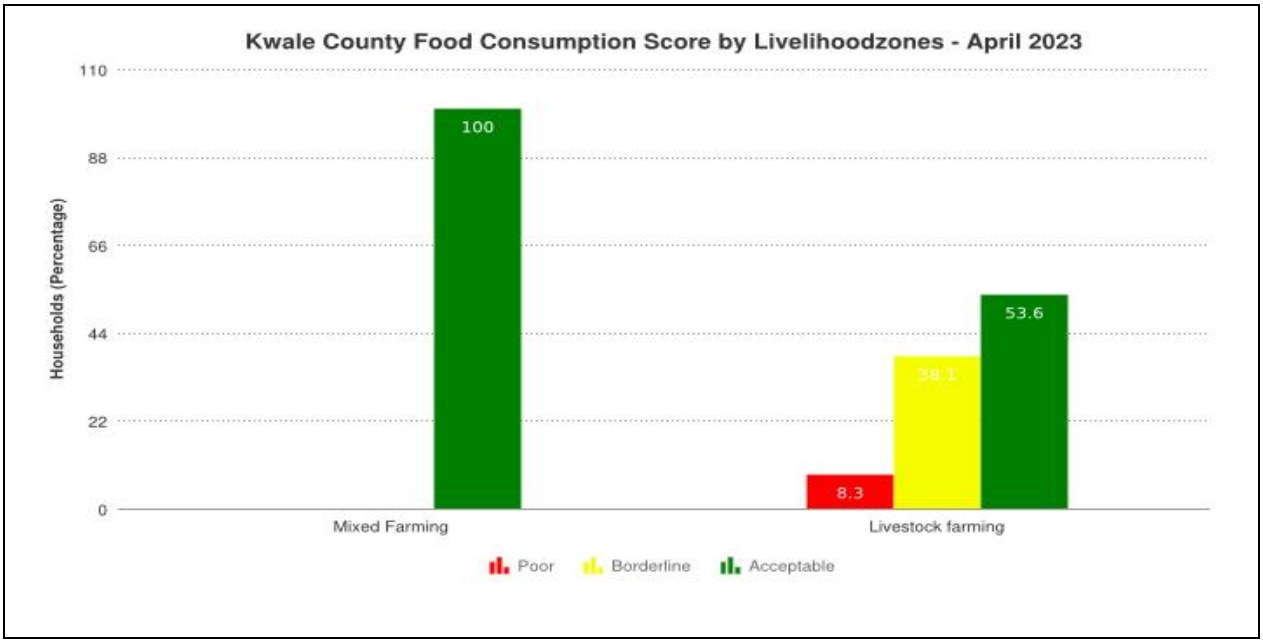
- The average household milk consumption was approximated at 3.2 litres in April having increased by a 45.5 percent margin from 2.2 litres recorded in March.
- The increase in consumption could have been occasioned by the increase in milk production during the month.
- The current milk consumption was within seasonal ranges in comparison to 3.3 litres recorded in the 2018-2022 LTA as shown in the graph below.

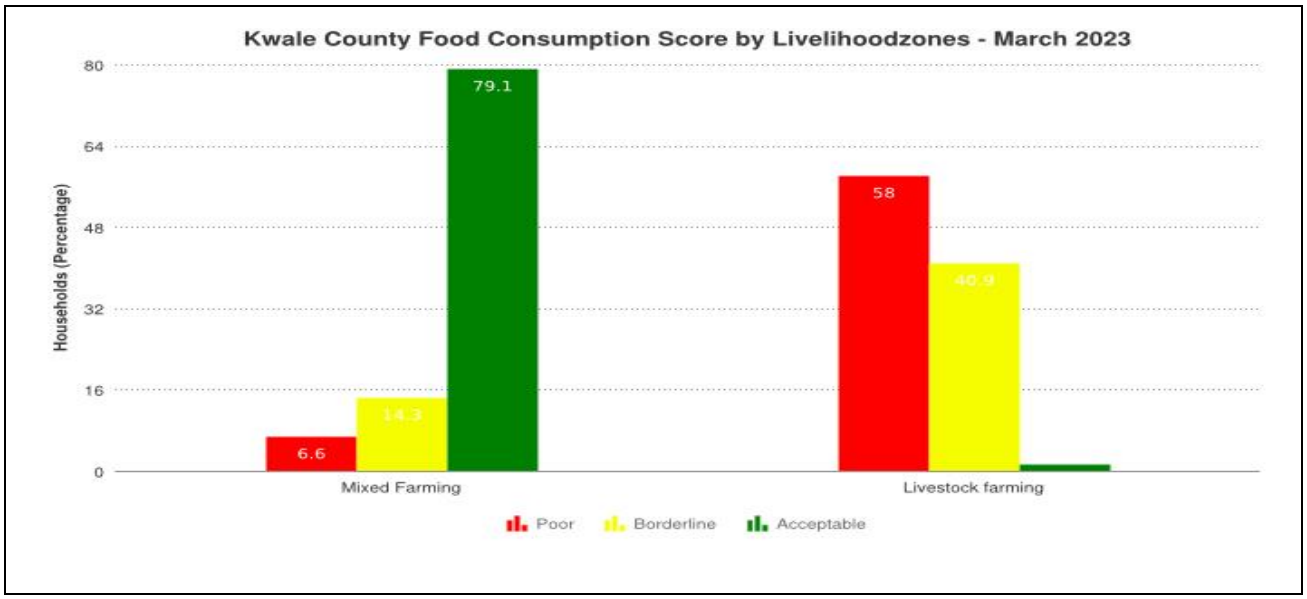


5.2 FOOD CONSUMPTION

5.2.1 Food consumption score

- The county food consumption score was estimated at 36.8 having maintained a stable trend in comparison with 32.0 recorded in March.
- The highest score was recorded in the mixed farming livelihood zone at 48.5 having maintained a stable trend in comparison with 45.8 recorded in last month.
- The least score was recorded in the livestock farming livelihood zone at 24.1 having increased by a 32.1 percent margin compared with 18.24 recorded last month.
- The implication in the score was therefore that patterns in dietary diversity, food frequency and nutritional value of food had remained relatively stable at county level during the month.
- In addition, the pattern had remained fairly stable in the mixed farming livelihood zone but slightly improved in the mixed farming livelihood zone.
- The following graphs illustrate the change in food consumption patterns at livelihood zone level.





5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The mid-upper arm circumference (MUAC) method was used to determine the proportion of children aged below five years who were at risk of malnutrition in April.
- The proportion was estimated at 2.0 percent for April having increased by a 41.1 percent margin in comparison with 3.4 percent recorded last month.
- The implication was therefore that the proportion of children at risk aged below five years had reduced hence the nutritional status for this age cohort had improved compared with March.
- The improvement could be attributed to increased milk consumption at household level.

5.4 COPING STRATEGY INDEX

- The reduced coping strategy index (rCSI) averaged 15.3 in April having maintained a stable trend compared with 14.85 in March.
- The highest index was posted in the livestock farming livelihood zone at 15.5 having maintained a stable trend compared with 15.2 recorded in March.
- The lowest index was posted in the mixed farming livelihood zone at 15.1 this month having also maintained a stable trend compared with 14.5 last month.
- The implication was therefore that households had neither significantly increased nor decreased the frequency and/or severity of the consumption-based coping strategies employed this month to mitigate food consumption gaps.

6.0 ON-GOING INTERVENTIONS

6.1 FOOD ASSISTANCE

- The National Steering Committee on Drought Response (NASCODR) distributed several food commodities to Samburu Sub-county in April as follows:

Location	No. of beneficiaries (households)
Silaloni	1240
Kinagoni	1240
Maji ya Chumvi	1230

Each beneficiary received

- 1-8kg packet of rice
- 1- 3kg packet of porridge
- 1-3kg packet of green grams
- 1-kg of cooking fat
- 1-kg of salt
- 6-kilogram of maize fluor

6.2 NON-FOOD ASSISTANCE

- UNICEF supported the out-patient therapeutic program (OTP) for children aged below five years who had severe acute malnutrition.
- World Food Program supported malnourished children aged below five years and lactating mothers with corn soya blend (CSB) in all health facilities in the county.

7.0 EMERGING ISSUES

7.1 Migration/conflict/displacement

- There were no cases of migration, conflict or displacement during the month.

8.0 RECOMMENDATIONS

- Enhancement and scaling up of cash transfer programs to hotspots in food access and availability by partners such as World Vision, Plan International and World Food Program. Hotspots are found in Kasemeni, Mwavumbo, Samburu/Chengoni and McKinnon Road Wards in Samburu Sub-county, Kinango, Ndavaya and Puma Wards in Kinango Sub-county and Mwereni Ward in Lunga Lunga Sub-county.
- Continued provision of relief food to the population requiring food assistance to cushion them from hunger.
- Review of the Kwale County drought contingency plan.
- Rehabilitation of strategic dams and boreholes to ease water accessibility in the livestock farming livelihood zone.
- Support farmers with subsidised farm inputs and drought-tolerant certified seeds in order for them to take advantage of the on-going long rains season.
- Support to pasture establishment and conservation in Lunga Lunga Sub-county (Mwereni Ward) and Matuga Sub-county.