



A Vision 2030 Flagship Project



**National Drought Management Authority
NYERI (KIENI) COUNTY
DROUGHT EARLY WARNING BULLETIN FOR MAY 2022**

MAY EWS PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of May was characterised by hot, windy and dry condition across the livelihood zone with an exemption high attitude zones that experience favourable micro environmental conditions.
- Pasture and browse
- condition was poor across the livelihood zones with an exception of Kabaruru ward and some pockets in upper Endarasha/Mwiyogo ward bordering the highlands.
- The long dry spells experienced in Kieni, have led to a fourth season failure back-to-back, as crops were lost at the critical stage of development.

Socio Economic Indicators (Impact Indicators)

- Livestock body condition for all species was poor to fair, as pasture quality and quantity was poor.
- The month's milk production was lower by 39 percent to the LTA of 6.4 litres.
- Return distances to water sources for households use and from watering points for livestock increased by 24 and 15 percent respectively.
- Percent of children at risk of malnutrition was one percent, nine percent lower compared to the long-term

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Alert	Deteriorating
Marginal Mixed Farming	Alert	Deteriorating
County	Alert	Deteriorating
Biophysical Indicators	Value	Normal Range/Value
Rainfall (%)	68	90-110% of LTA
VCI	45.06	>35
Forage condition	Poor	Fair
Production indicators	Value	Normal
Livestock Body Condition	Fair - Poor	Good
Milk Production	3.9 Lts	6.4 litres
Access Indicators	Value	Normal
Terms of Trade (ToT)	56	113
Milk Consumption	1.3 Lts	1.2litres
Return distance to water sources for household use	2.5 Km	1.1 Km
Return distance to water sources from grazing field.	3.3 Km	1.4 Km
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	1.0	1.1

SEASONAL CALENDER

<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 (Sept) 	<ul style="list-style-type: none"> ▪ Short rains ▪ Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

□ The month of May was characterised by hot and dry conditions across the livelihood zones with an exemption of areas bordering Mt Kenya and Aberdare ranges that continued to enjoy favourable micro environmental conditions within the two water towers.

□ Received rainfall amounted to 68 percent of normal, poorly distributed both in time and in space.

□ In Lower zones, received rainfall was insignificant to have any impact on crop and or livestock production.

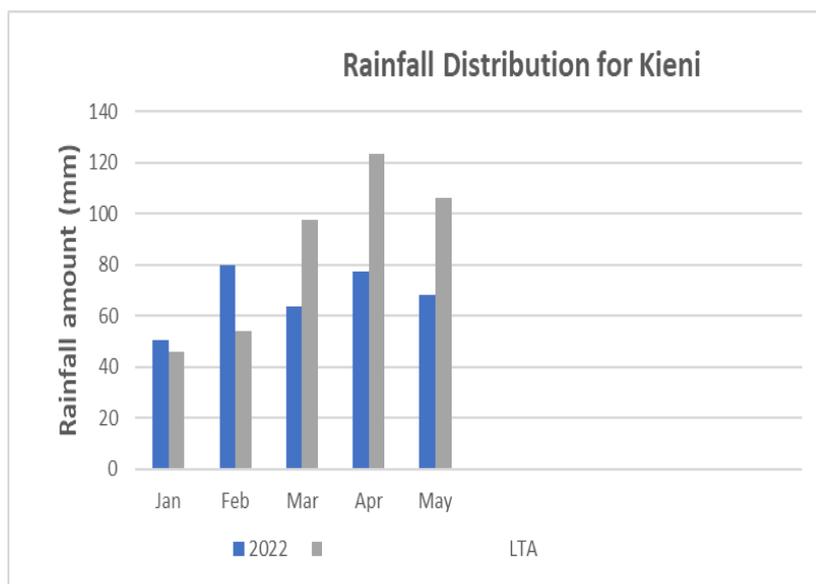


Figure 1: Rainfall distribution for Kieni

1.2 TEMPERATURES

1.2.1 LAND SURFACE TEMPERATURES (LST)

□ Figure 2 indicates of higher-than-normal daytime temperature of 25.3 degree Celsius as compared to long-term average temperatures of 23.28 degree Celsius.

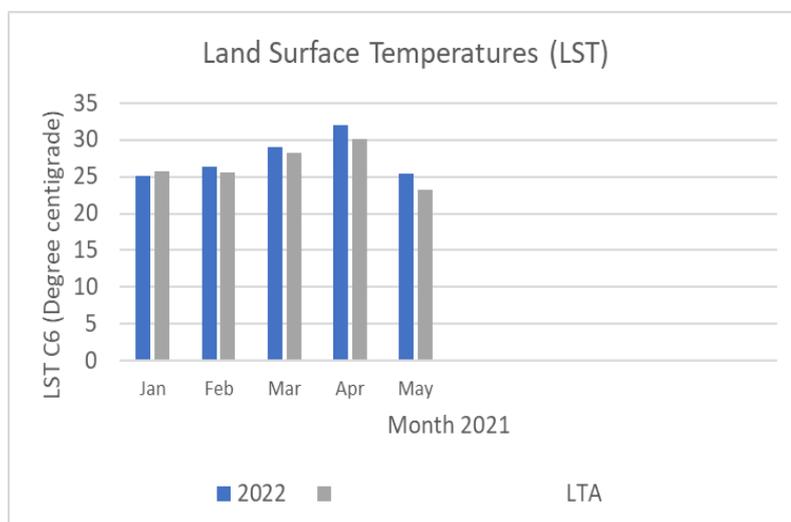


Figure 2: land surface temperatures for Kieni

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 VEGETATION CONDITION INDEX(VCI)

- Poor MAM rains performance, coupled with ongoing dry weather conditions hindered optimal pasture regenerations resulting in early depletion of both natural and cultivated vegetation is earlier than expected in both Mixed Farming and Marginal Mixed Farming Livelihood Zone. However, observed greenness mostly consist of unpalatable species and vegetation canopy associated with the region proximity to Mt Kenya and Aberdare forests. The vegetation condition for Kieni was normal and recorded 3-months VCI of 45.06 across the livelihood zones as shown in figure 3(a, b) below.
- High daytime temperatures prevalent during the month affected vegetation along Kieni lower zones, with an exception of Kabaru ward and upper Mwiyo/ Endarasha ward that touch on the highlands. Further, competition over pastures between locals and immigrant herders further worsened the situation.

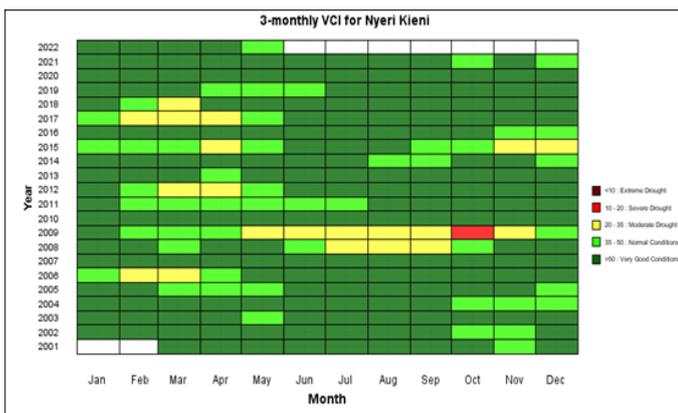


Figure 3 (a): 3 monthly VCI for Kieni

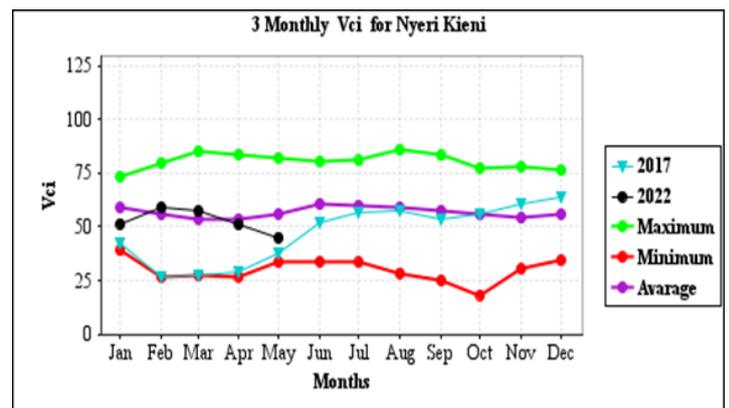


Figure 3 (b): 3 monthly VCI for Kieni

2.1.1 Pasture

- Pasture condition was poor across all the livelihood zones with an exception of the areas bordering Mt Kenya and the Aberdare ranges whereby pasture condition was favourable.
- Compared to a similar period normally, forage levels are still much lower.

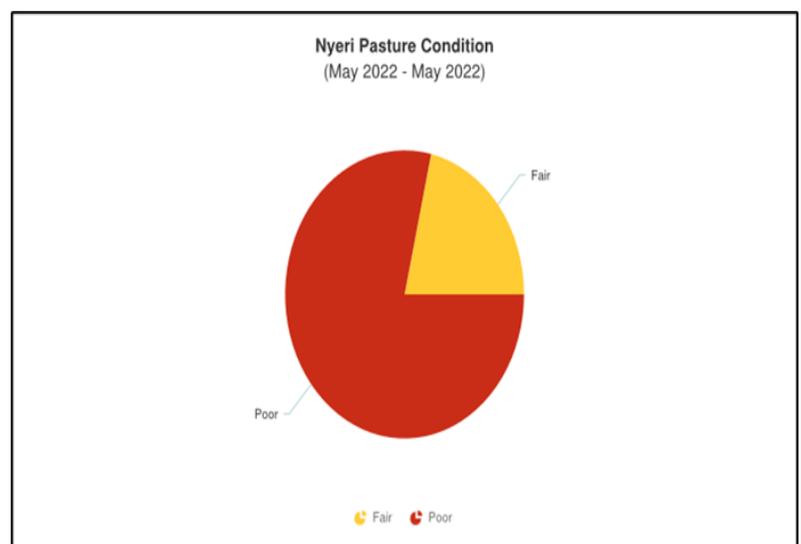


Figure 4 (a): presentation of pasture condition for Nyeri (Kieni) County

- The MAM rains assisted in slight but incomplete regeneration of the grazing field, hence grazers both local and in-migrant are forced to continue grazing at gazetted forest zones under the community forest associations (CFA).
- Areas that are highly depleted of natural pastures are Karemeno, Lamuria, lower Mwiyo, Muthuni and Labura in Kieni West Sub County, and Thungari, Gathiuru and Rongai in Kieni East Sub County.

2.1.2 Browse

- Browse condition was also poor as observed in figure 4(b).
- Sixty four percent of available browse was poor while 35 percent was fair.
- The poor performance of the MAM season will have a negative impact to conventional browse performance trends.

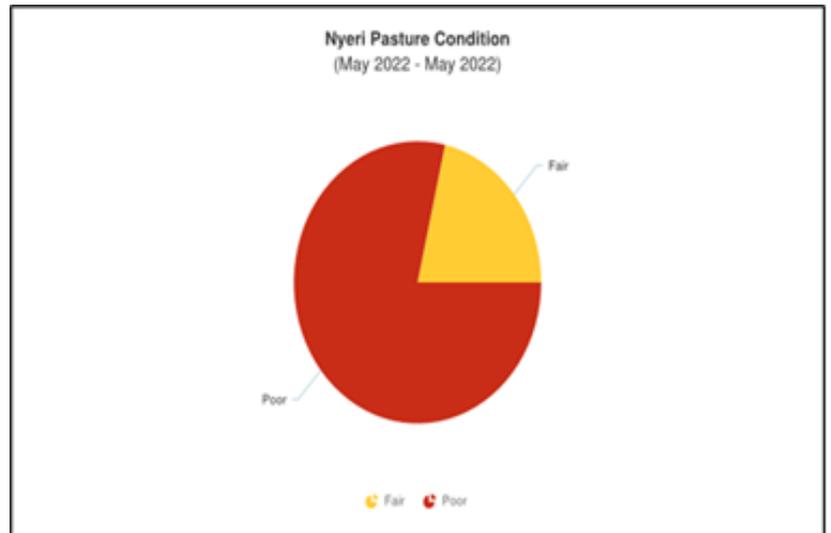


Figure 4 (b): presentation of browse condition for Nyeri (Kieni) County

2.2 WATER RESOURCE

2.2.1 Sources

- Rivers remained the main source of water in Kieni at 58.4 per cent, followed by boreholes at 25 percent, pans and dams at 12.5 percent and springs at 4.2 per cent. Water access at high altitude zones of Kabaru, Endarasha and Amboni was good, compared to lower zones, due to their proximity to water catchment zones.

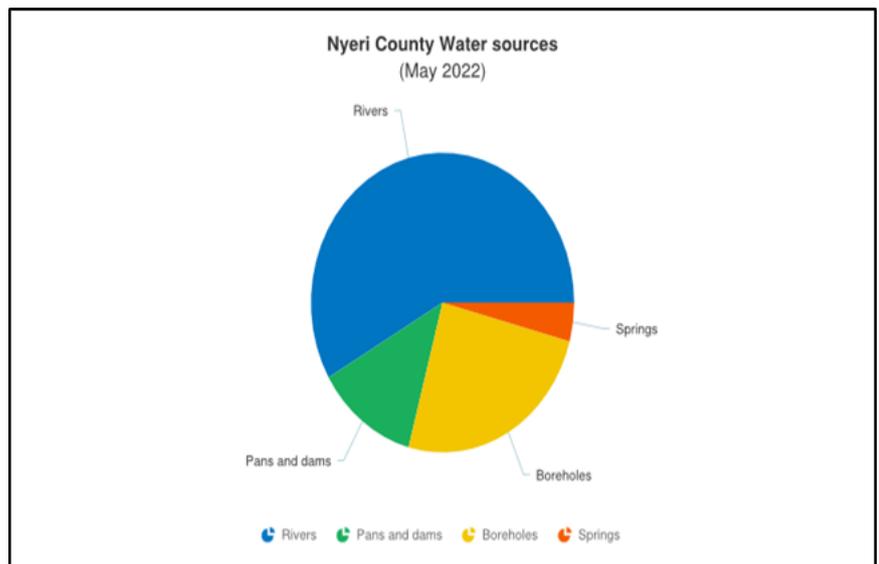


Figure 5: Shows main water sources for Kieni

- Access to water deteriorated during the month under review compared to the previous months. Recharge of water sources was poor, with rivers flowing at below normal flows following the season poor performance.

2.2.1 Household access and Utilization

- The average return distance from the homestead to water sources increase by 24 percent from 1.9 Km in April to 2.5 Km in May.
- The increase is attributed to the fact that majority of the open water sources near the homestead have dried up and rationing of piped water by the various water projects has intensified.
- The recorded distances during the month under review was lower by 127 percent compared to the Long- Term average (LTA) of 1.1 Km as shown in figure 6.

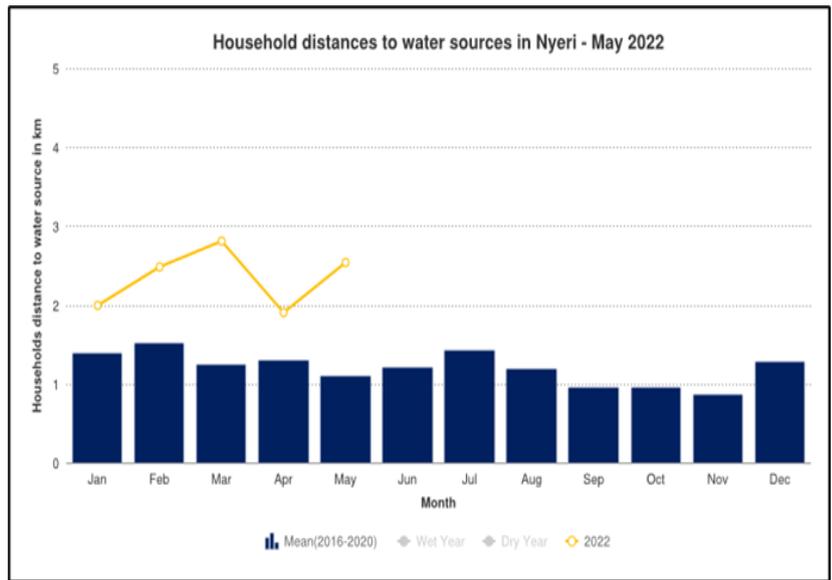


Figure 6: presentation of average household distances to water sources in Nyeri - May 2022. The recorded distances during the month under review was lower by 127 percent compared to the Long- Term average (LTA) of 1.1 Km as shown in figure 6.

2.2.2 Livestock access

- Access to water for livestock use deteriorated during the month under review compared to the previous month. In May, livestock trekked for an average return distance of 3.3 Km compared to 2.8 Km in April , a 15 percent increase.
- Registered distances were lower by 135 percent compared LTA of 1.4 Km as shown in figure 7.

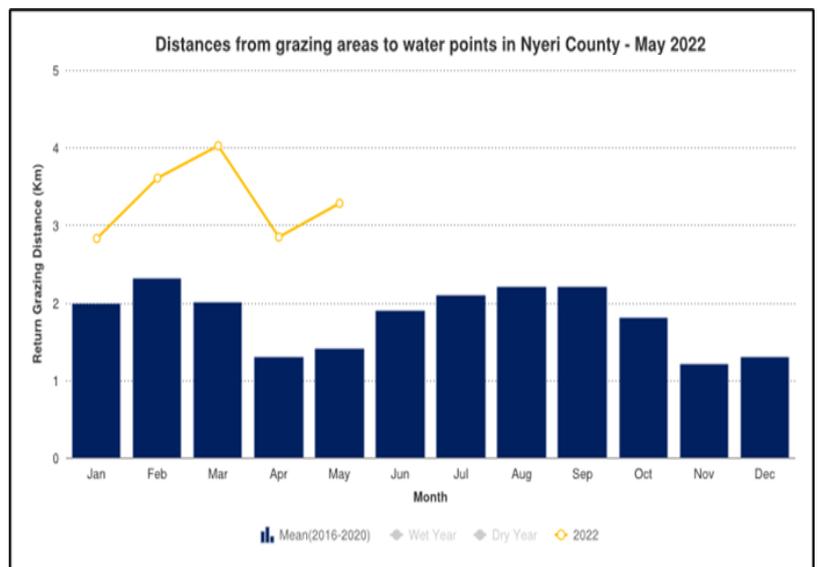


Figure 7: presentation of average grazing distances to water points in Nyeri County - May 2022. Registered distances were lower by 135 percent compared LTA of 1.4 Km as shown in figure 7.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The body condition for cattle ranges from fair to poor across the livelihood zones, and attributed to poor pasture regeneration following the poor performance of the MAM rains.
- Small stocks were of fair body conditions though exhibiting signs of worm infestation particularly in the lower zones.

3.1.2 Livestock diseases

- Confirmed cases of Foot and Mouth Diseases (FMD) were reported in Thegu in Kieni East Sub County. Also, confirmed cases of Lumpy Skin Disease (LSD) were reported in Gakawa ward in Kieni East Sub County.

3.1.3 Milk Production

- The average household milk production increased by 20 percent from 3.1 litres in April to 3.9 litres in May. Increase in milk production was reported in the high attitude areas bordering Mt Kenya and the Aberdare ranges that have favourable climatic conditions.
- The month's production was lower by 39 percent compared to the LTA of 6.4 litres as shown in figure 9.

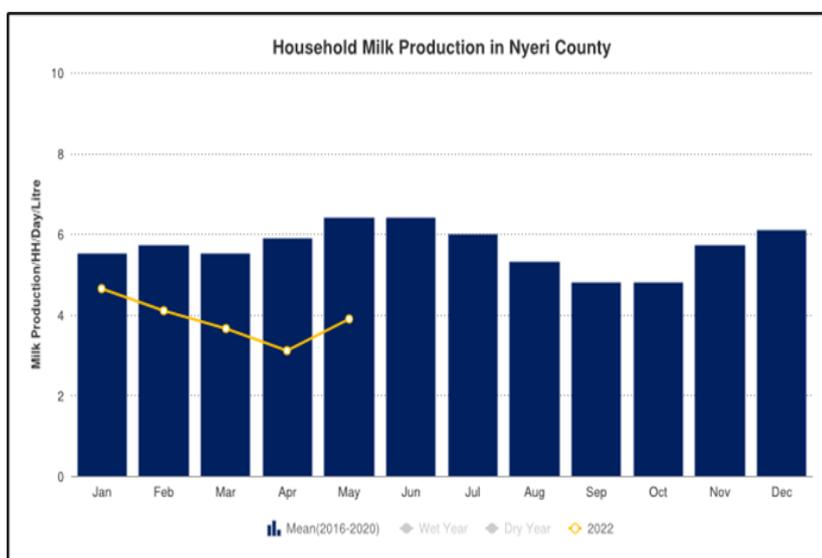


Figure 9: Presentation of average milk production in Nyeri (Kieni)

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and condition of food crops

- Apart from pockets along the highlands of Kabaru, Narumoru-Kiamathaga and Endarasha where little production is ongoing, the rest of Kieni have registered season failure occasioned by poor MAM season performance. Parcels earlier put under crop production are either abandoned or opened up to animals for grazing as the season prospects dimmed with drying up of cultivated crops across board. According to the department of agriculture, the MAM season has failed in the county and thus classified as such a fourth season failure in row.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Price

- The price of a mature four-year-old bull, retailed at Ksh 23,142 in May compared to Ksh 22,928 in April.
- Reported prices was also less by 18 percent, to the 2018-2020 short-term average of Ksh 28,300, as indicated in figure 10.

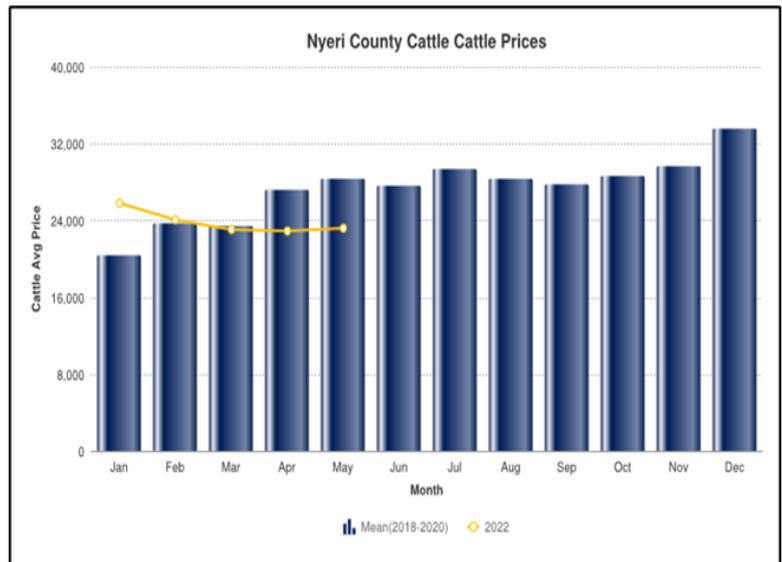


Figure 10: Outline average price trends for cattle

4.1.2 Sheep prices

- A mature two-year-old sheep retailed for 3,178 in May similar to previous month. Sheep prices were higher in the Mixed Farming Livelihoods Zones compared to the Marginal Mixed Farming Livelihood zones.
- Reported prices were below the 2018-2020 short-term average of Ksh 4,380 by 27 percent.

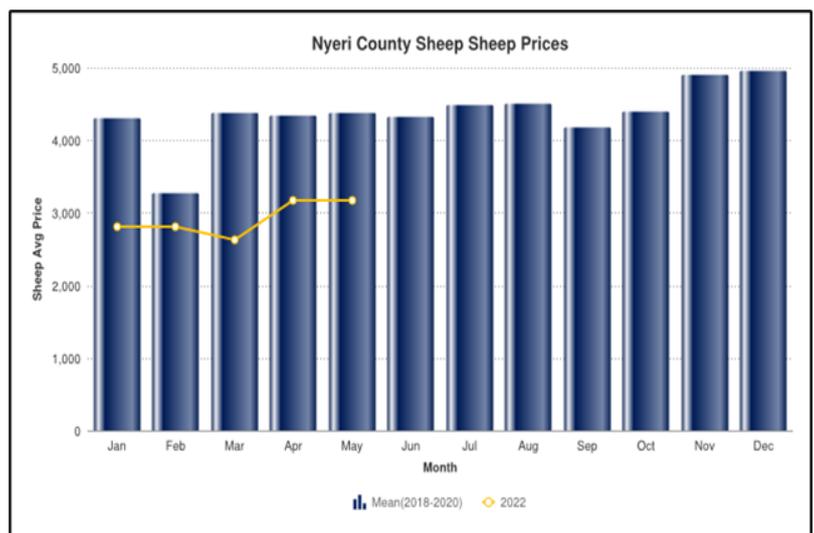


Figure 11: Outline average price trends for sheep

4.2 CROP PRICES

4.2.1 Maize

- Kieni population is at present dependent on markets for food supplies following four consecutive season failures in terms of food production. As a result, commodity prices are on the rise with a kilogram of maize retailing for Ksh 57.1 in May, five

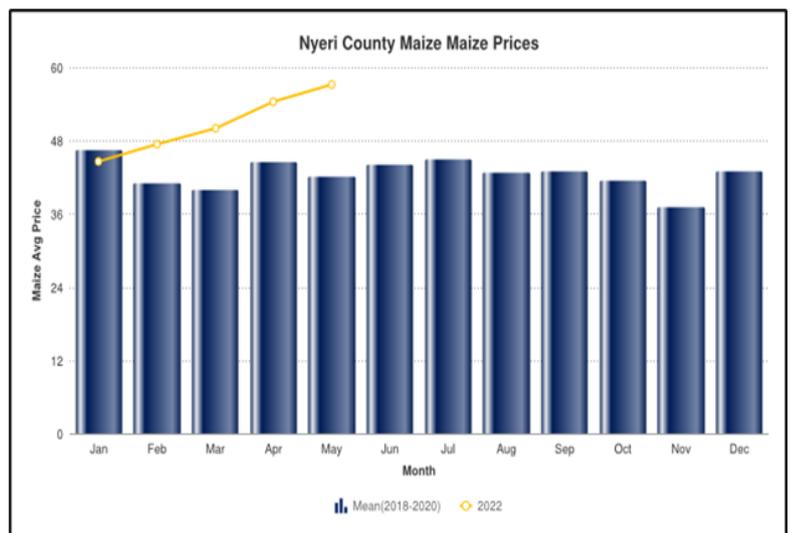


Figure 12: Outlines average price trends for Maize

percent more from Ksh 54.3 the previous month.

- The month’s price was higher by 36 percent to the STA of Ksh 42. Currently traders are sourcing for the commodity from neighbouring counties.

4.2.2 Beans

- A kilo of beans retailed for Ksh 112.9 in May a drop from 113.6 last month.

During the month under review, beans prices were above the STA of Ksh 89 by 21 percent, attributed to overreliance on market.

Currently, local traders are sourcing for beans stocks from as far as Busia County.

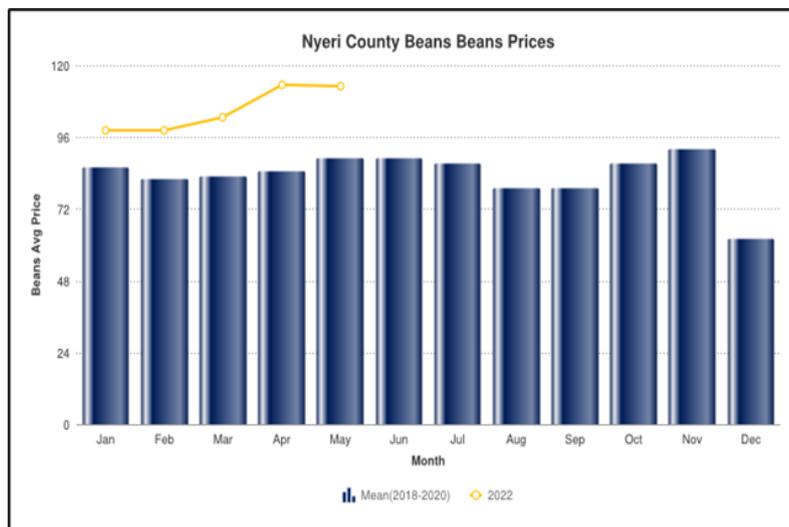


Figure 13: Outlines average price trends for Beans

4.2.3 Livestock Price Ratio/Terms of Trade

- Terms of trade ratio have been low since December compared to 2018-2020 short-term averages. Low TOT to normal is attributable to slow recovery of both commodity and livestock markets occasioned by the region’s macro environmental performances and patterns.

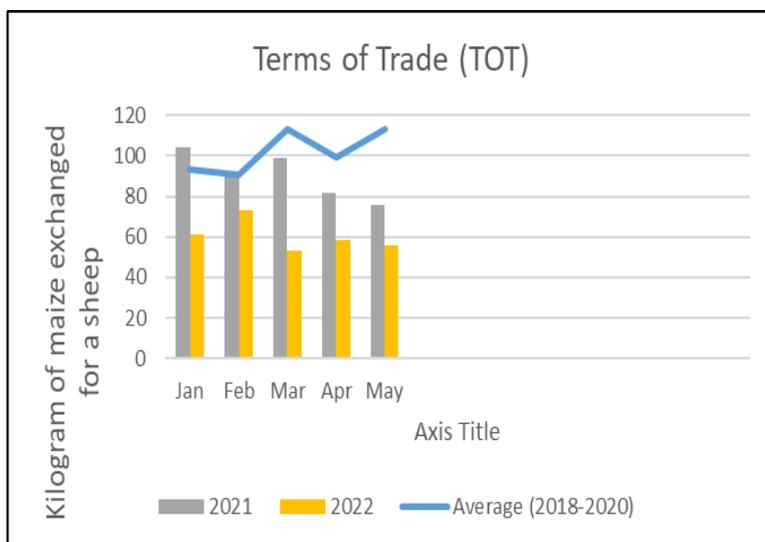


Figure 14: Outlines terms of trade in Kiari

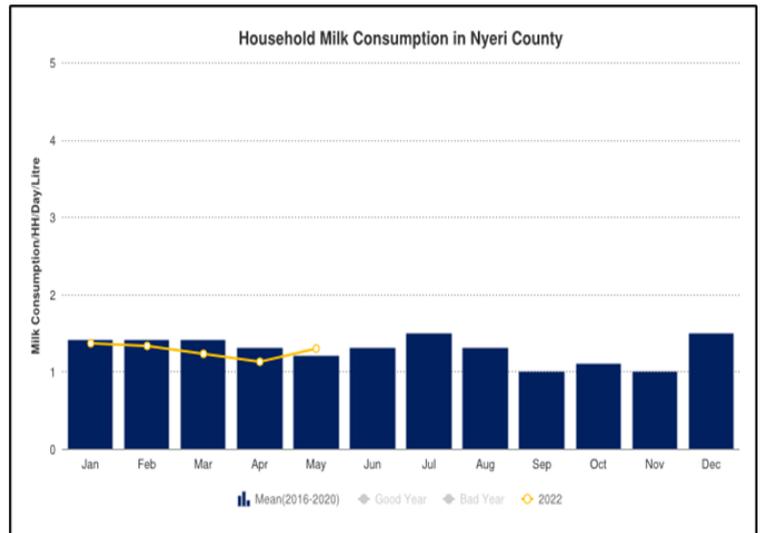
- In the month of May, a mature sheep was equivalent to 56 kilograms of maize down from 58 kilograms reported the previous month.

- The month’s TOT was lower by 50 percent compared to the 2018-2020 short term average of 113 Kgs as outlined in figure 14.

FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- Milk consumption increased from 1.2 litres in April to 1.3 litres in May.
- Households in Marginal Mixed Farming livelihood zones consumed more milk at 0.9 litres a day compared to 0.4 litres in Mixed Farming Livelihood zones.
- Compared to the 2018-2020 Short term average for April at 1.2 litres, the month's



consumption was within acceptable threshold as shown in figure 15.

Figure 15: Outlines milk consumption for the county

5.2 FOOD CONSUMPTION SCORE

- The food consumption score in the month of May decreased from previous month.
- Proportion of households with borderline and acceptable, food consumption score in the sampled population was 71 percent and 27 percent respectively, compared to the previous month whereby 31 percent and 80 percent of the households had acceptable and borderline food consumption scores as shown in figure 16.

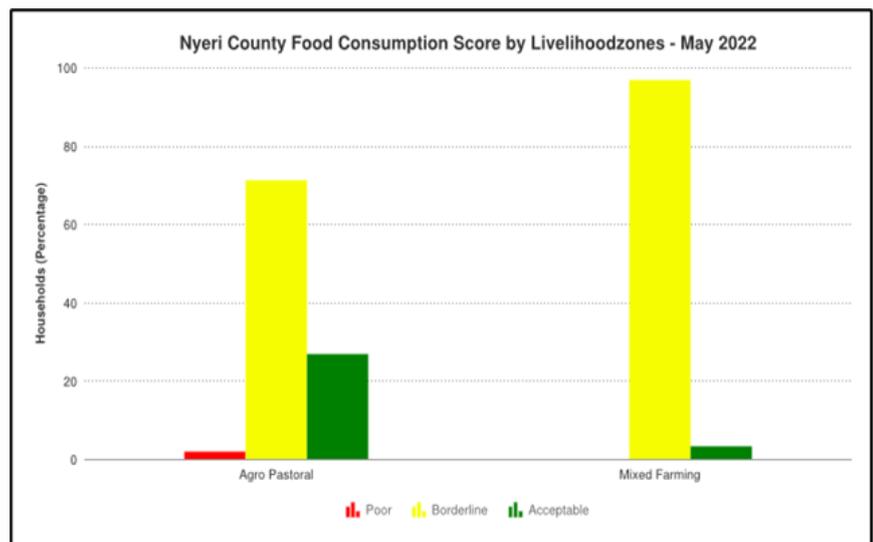


Figure 16: Presentation of food consumption score by livelihood zones

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The percentage of children at risk of malnutrition in the month of May dropped to 1.0 from 1.4 percent the previous month. This is attributed to increase in milk production and consumption at the household level.
- The number at risk was lower compared LTA by 9 percent as shown in figure 17

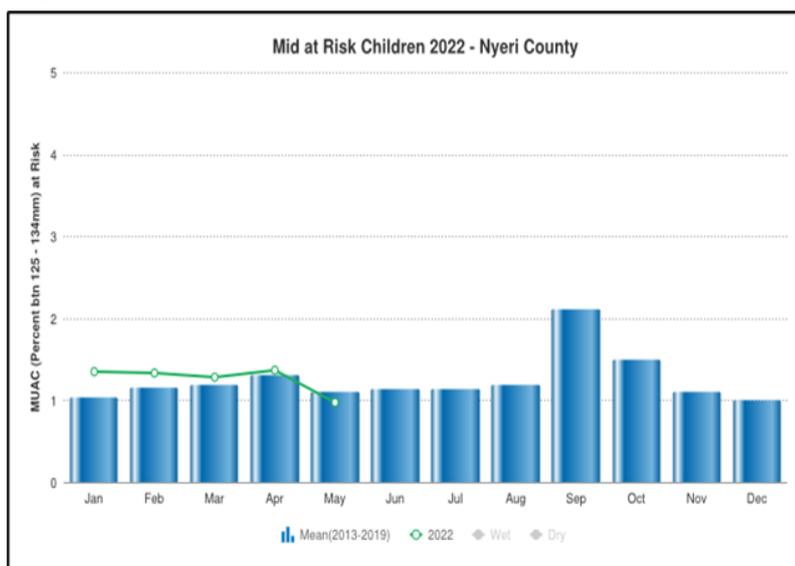


Figure 17: Presentation of nutrition status of children below five years

5.4 COPING STRATEGIES

5.4.1 Reduced Coping Strategy Index (rCSI)

- The average coping strategy index is at 8.93 in May an indicator that households continued to employ consumption based coping mechanisms more frequently during the month under review.
- This was largely due to nil or inadequate food stocks at the household level, reduced incomes from casual engagements or unavailability thereof as well as loss of income sources.

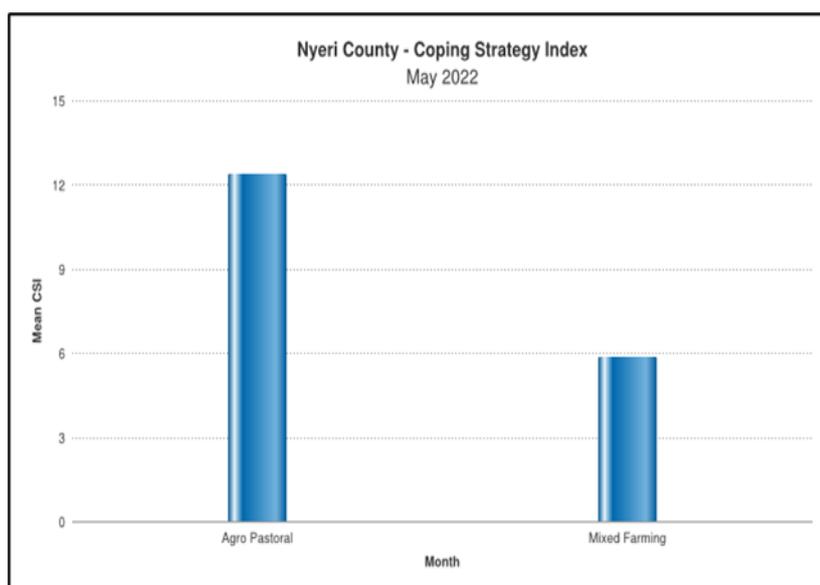


Figure 18: Presentation of the CSI for Kieni by livelihood zones

- Households in Marginal Mixed Farming livelihood zones registered a higher index of 12.4 compared to those in the Mixed Farming Livelihood zones who recorded an index of 5.9. Higher rCSI recorded in the Marginal Mixed Farming livelihood could be attributed to low purchasing power occasioned to reduced livelihood diversity as compared to the latter.

6.0 EMERGING ISSUES

6.1 Migration

- In the month of May, about 1,000 herds of cattle migrated into Kieni East from the Laikipia and Samburu Counties. Presently, Kieni East and Kieni West sub counties are a host to about 5,000 heads of cattle and 1,000 shoats.

6.2 Food Security Prognosis

- Kenya Meteorology outlook for June-July-August, indicated that Kieni East and Kieni West sub-Counties are expected to be generally dry. Temperatures are expected to be warmer than the average for the season.
- Livestock prices are likely to remain below normal in the next three months due to poor body conditions driven by below average forage condition.
- Food market prices are likely to continue increasing for the next three months.
- Low acreage in area planted for maize and beans coupled with the poor performance of the MAM rains is likely to result into dismal crop yields in the Marginal Mixed and Mixed Farming Livelihood zones.
- Prevalence of children at risk of malnutrition is likely to increase further as adverse drought effects impact negatively on households.
- Resource based conflict between locals and immigrant herders is projected to occur due to competition over the scarce forage and water resources.

ANNEX

CURRENT INTERVENTION MEASURES (ACTION)

FOOD AID

- There were no on-going food interventions during the month under review.

NON-FOOD INTERVENTIONS

WATER SECTOR				
NO	INTERVENTION	WARD	IMPLEMENTERS	COST
1.	Solarization and pipeline distribution of Gatuanyaga borehole for livelihood diversification by NDMA, which is 90 per cent, complete	Gakawa	NDMA	6.5M
2.	Equipping of Gitwe and Kaaga boreholes (installation of Pumps and solars)	Naromoru/ Kiamathaga ward Gakawa	CGN	5.5M
3.	Provision of pipes and accessories for Guraga, burguret and Lusoi/Warazo dams	Gakawa Thegu	CGN	40M
4.	Equipping of Kids alive borehole	Naromoru/Kiamathaga	UTaNRMP	20M
5.	Drilling and equipping of Rongai village borehole	Naromoru/Kiamathaga	SIVAP	5M
6.	Water trucking in baraka estate and Burguret Secondary School.	Thegu Gakawa	TWWDA	2M
7.	Provision of dam liner for Kairi water project	Kabaru	UTaNRMP	6.5M
8.	Construction of 880 water pans at the household level	Naromoru/Kiamathaga	SIVAP	100M

LIVESTOCK SECTOR				
1.	1800 households supported with one-month old KALRO improved chicks	Naromoru, Mugunda, Thegu, Gakawa Mweiga, Kabaru, Endarasha & Gatarakwa	DoALF	5.2M
2.	1,300 households Supported with one month old improved kienyeji chicks	Gakawa, Gatarakwa, Mugunda & Thegu	KCSAP	4.1M
3.	100 households Support with egg incubators	Gakawa & Gatarakwa	KCSAP	160K
4.	500 households Supported with 1000Kg feed mixers, pelletizing machine	Endarasha/Mwiyogo, Gakawa, Thegu and Mugunda	ASDSP, CSA – FAO & KCSAP	2.4M
5.	8,000 heads of cattle vaccinated against FMD, Blanthamax	All wards	DoALF - Vet	640K
6.	1000 dairy farmers provided subsidized A.I services	All wards	Vet - DoALF & ASDSP II	200K
AGRICULTURE SECTOR				
1.	Construction of 225 cubic meters water tank.	Thegu	CGN	8M
2.	Construction of 664 water harvesting ponds	Naromoru /Kiamathaga	National Government	68M

RECOMMENDED INTERVENTIONS

WATER SECTOR				
NO	INTERVENTON	WARD	IMPLEMENTORS	COST
1.	Upscale water trucking	All wards in Kieni East and Kieni West	NDMA TWWDA CGN	50M
2.	Equipping of deserted dams	Thegu	UTaNRMP	15M

	i.e Kamwihihuria and Ebenezer Dam	Gakawa	CGN NDMA	
1.3.	Protection of water catchment areas	Kieni East and Kieni West	CGN WRA	20M
LIVESTOCK SECTOR				
1.	Provision of supplementary feeds for over 50,000 vulnerable livestock	All wards	CGN NDMA	50M
2.	Support the District peace committees in conflicts management arising from resource-based competition over water and pastures in hot spots areas.	Gatarakwa Gakawa Naromoru/Kiamataga Mugunda	National Government NDMA	2M
3.	Upscale on livestock vaccination against trade sensitive diseases.	All wards	DoALF - Vet	10M
4.	Livestock disease surveillance and deworming	All wards	DoALF - Vet	5M
AGRICULTURE SECTOR				
1.	Undertake a rapid assessment to determine the drought status and mitigation requirements	All wards	NDMA	1M
2.	Provision of relief food/cash transfer targeting the vulnerable households affected by drought. Approximately 49,425 persons are in urgent need of food aid	All wards	NDMA Special programs	100M
3.	Construction of booster tanks	All wards	NDMA	15M

	to increase pressure		UTaNRMP	
4.	Subsidise pond and dam liners	ALL ward	CGN National Government	100M
5.	Pipping (KM)of supplemental irrigation lines for efficient use of limited water.	All wards	CGN National Government NDMA	300M
6.	Subsidized irrigation infrastructure like drip kits to increase efficiency and effectiveness of off-season production.	ALL wards	National Government CGN	900M
7.	Sensitize and train farmers on importance of water metering to ensure efficiency of water projects	ALL wards	National Government CGN	80M