



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

JUNE EWS PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of June was characterised by hot, windy and dry condition across the livelihood zone with an exemption of areas in the high attitude zones that received light off seasonal showers.
- Dry weather conditions coupled with warmer than normal day time exacerbated the deterioration of the vegetation condition. Forage is currently poor across the livelihood zones.

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 47 percent to the LTA of 6.4 litres.
- Return distances to water sources for households use and from watering points for livestock increased by eight and nine percent respectively.
- Percent of children at risk of malnutrition was 1.3 percent, nine percent higher compared to the long-term average.
- Household employed consumption based coping mechanisms more frequently during the month under review compared to last month.

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 (%)	46	90-110% of LTA
VCI	48.12	>35
Forage condition	Poor	Fair
Production indicators	Value	Normal
Livestock Body Condition	Fair - Poor	Good
Milk Production	3.4 Lts	6.4 litres
Access Indicators	Value	Normal
Terms of Trade (ToT)	45	98
Milk Consumption	1.3 Lts	1.3litres
Return distance to water sources for household use	2.7 Km	1.2 Km
Return distance to water sources from grazing field.	3.6 Km	1.9 Km
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	1.3	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 June was characterised by hot, windy and dry conditions across the livelihood zones.
- However, light off seasonal showers were recorded in the high attitude areas bordering Mt Kenya and the Aberdare ranges.

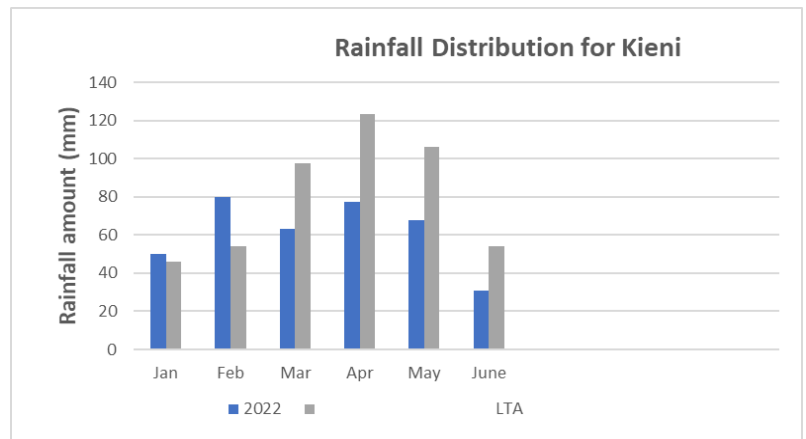


Figure 1: Rainfall distribution for Kieni

- Amounts received was 30.94mm which was below the long-term average of 57.02mm.
- Recorded amounts did not have any impact on crop and livestock production.

1.2 TEMPERATURES

1.2.1 LAND SURFACE TEMPERATURES (LST)

- Figure 2, indicates that the day time temperatures were warmer than normal at 25.72 degree Celsius compared to the long-term average of 23.37 degree Celsius.

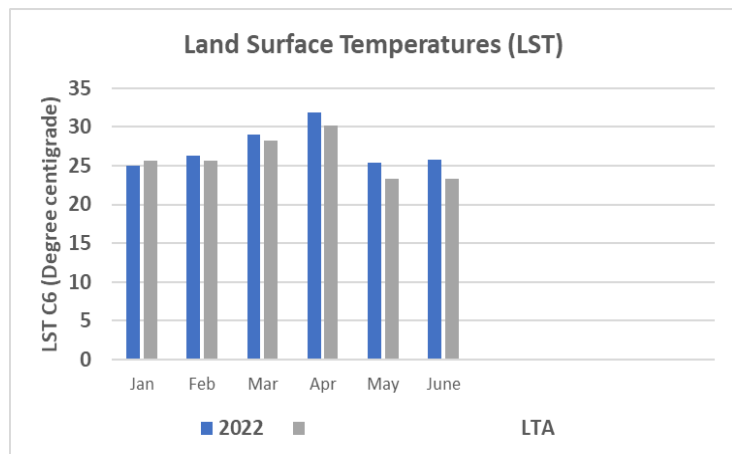


Figure 2: Land Surface Temperatures

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 VEGETATION CONDITION INDEX(VCI)

- Due to the harsh weather conditions experienced in June coupled with high surface land temperatures depletion of vegetation was notable across the livelihood zones. The vegetation condition of 48.12 was below the long-term average as shown in figure 3 (b) below. However, the observed greenness mostly consists of unpalatable species and vegetation canopy associated with the region proximity to Mt Kenya and Aberdare forests.

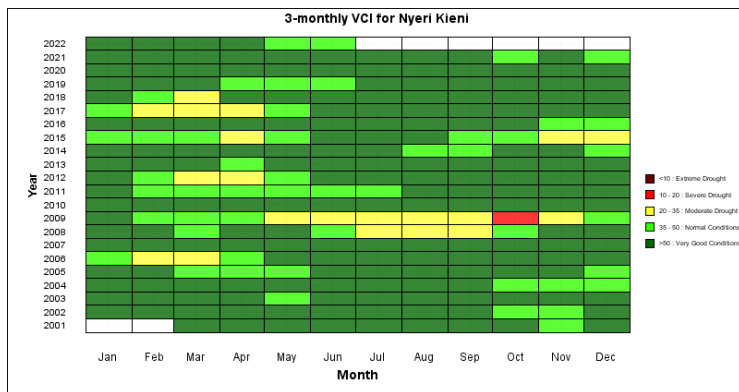


Figure 3 (a): 3 monthly VCI for Kieni

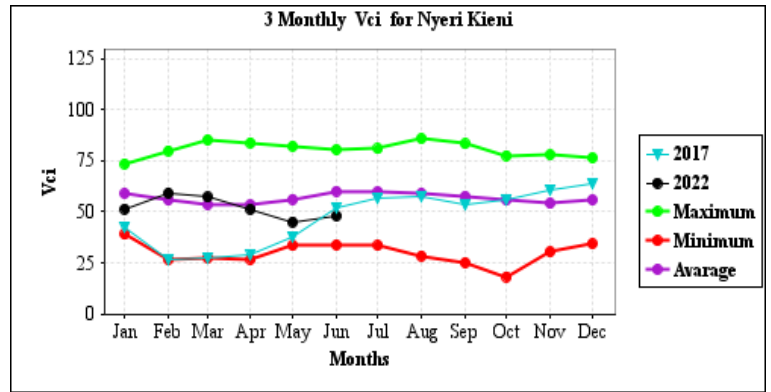


Figure 3 (b): 3 monthly VCI for Kieni

2.1.1 Pasture

- Pasture condition deteriorated during the month under review compared to the previous month.

- The situation was poor across the livelihood zones with an exception of areas bordering Mt Kenya and the Aberdare

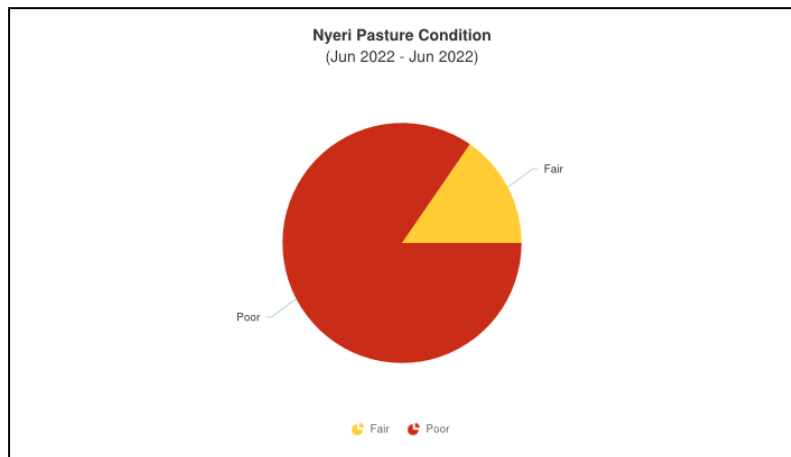


Figure 4 (a): presentation of pasture condition for Nyeri (Kieni) County

ranges where pasture condition was fair. Compared to a similar period normally, forage levels are still much lower.

- The slight gain witnessed due to the March-April-May rains has been eroded due to the frequent frost attacks, high land surface temperatures and immigrants' herds from the neighbouring counties.

- Most of the grazing fields are bare 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, Muthuini and Labura in Kieni West Sub County, and Thungari, Gathiuru and Rongai in Kieni East Sub County.

2.1.2 Browse

- The browse condition also deteriorated during the month under review compared to the previous month.
- Seventy percent of available browse was poor while 30 percent was fair as observed in figure 4(b).
- Browse is likely to deteriorate further given that the next rainy season is expected by mid-October.

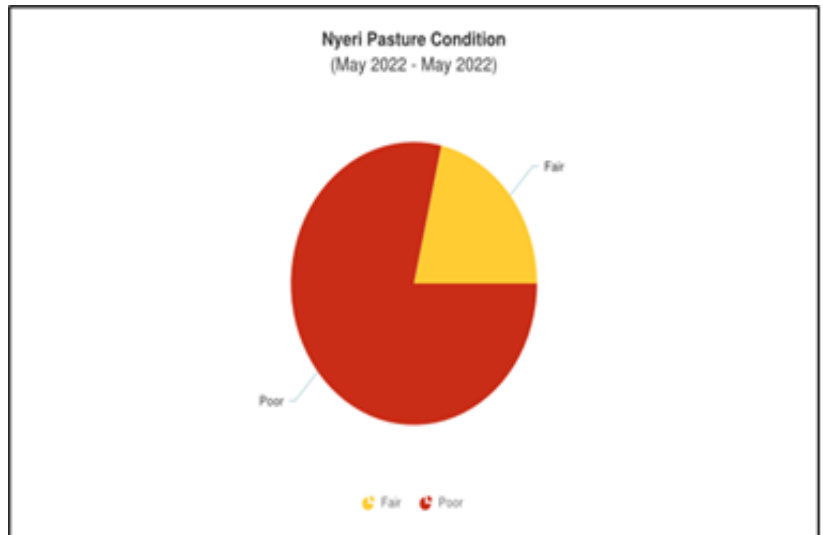


Figure 4 (b): presentation of browse condition for Nyeri (Kieni) County

2.2 WATER RESOURCE

2.2.1 Sources

- Rivers remained the main source of water in Kieni at 54.2 per cent, followed by boreholes at 25 percent, pans and dams at 12.5 percent and springs at 8.3 per cent.
- Access to water deteriorated during the month under review

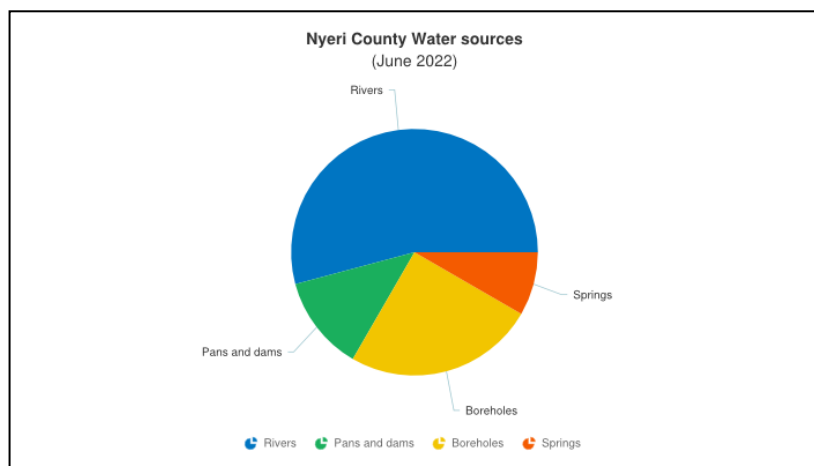


Figure 5: Shows main water sources for Kieni

compared to the previous months. Rivers are flowing at the minimum base level while majority of the open water sources have dried up. Water rationing by the various water projects has intensified with households receiving water twice in a fortnight. The situation is likely to deteriorate further given that the next rainy season is expected in Mid-October.

2.2.1 Household access and Utilization

- The average return distance from the homestead to water sources increase by eight percent from 2.5 Km in May to 2.7 Km in June.
- The increase is ascribed 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.

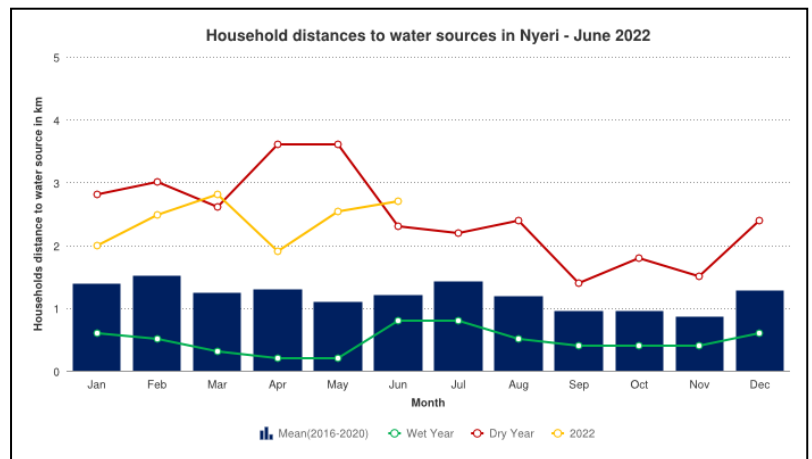


Figure 6: presentation of average household distances

- The recorded distances during the month under review was higher by 125 percent compared to the Long- Term average (LTA) of 1.2 Km as shown in figure 6.
- Compared to the registered distances during the wet and the dry years at such a time of the year, the current household distance was longer by 238 percent and 17 percent respectively.
- Household return distance to water sources is expected to increase further due to the below performance of the MAM rains and given that the next seasonal is expected in mid-October.

2.2.2 Livestock access

- Access to water for livestock use deteriorated during the month under review compared to the previous month. The average return trekking distance for livestock to water sources from grazing areas was 3.6 Km which depicts a nine percent increase from 3.3 Km recorded in the previous month. This is attributed to drying up of water sources near the grazing fields.

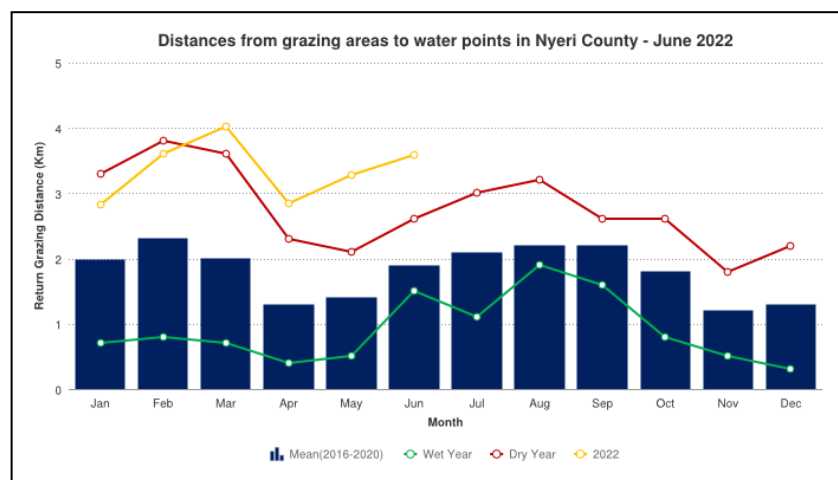


Figure 7: presentation of average grazing distances to water

- Registered distances were higher by 90 percent compared LTA of 1.9 Km as shown in figure 7.
- The longest grazing distances were recorded in Marginal Mixed Farming livelihood zones at 3Km compared to 0.6Km in the Mixed Farming Livelihood Zones.
- Compared to the registered distances during the wet and the dry years at such a time of the year, the current household distance was longer by 140 percent and 39 percent respectively.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The livestock body condition deteriorated during the month under review compared to the previous month attributed to poor pastures and increased distances in search of water and pastures. The body condition for cattle ranges from fair to poor across the livelihood zones, while small stocks were of fair body condition.

3.1.2 Livestock diseases

- Confirmed cases of Foot and Mouth Diseases (FMD) were reported in Kabaruru ward and Gakawa ward 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 dropped by 13 percent from 3.9 litres in May to 3.4 litres in June, owing to the poor pasture conditions and increased distances in search of water and pastures.

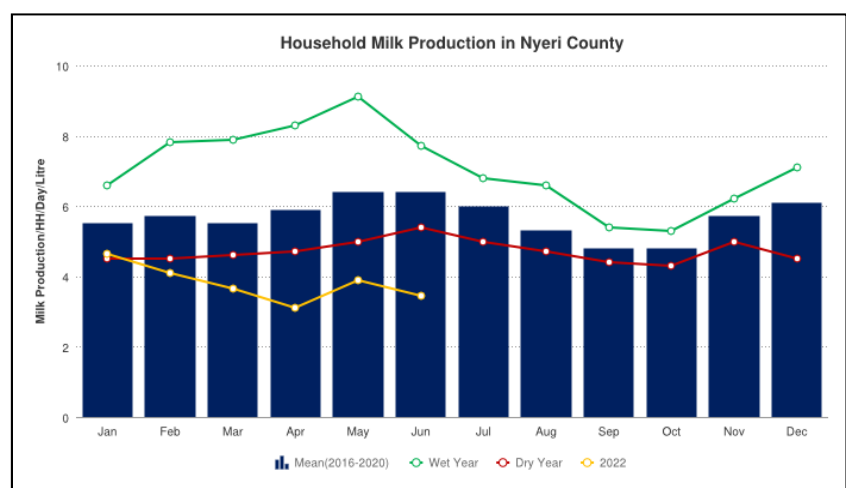


Figure 9: Presentation of average milk production in Nyeri (Kieni)

- The month's production was lower by 47 percent compared to the LTA of 6.4 litres as shown in figure 9.
- Compared to the registered production during the wet and dry season over the years the months production was lower by 56 percent and 37 percent respectively.

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 23,166 in June which is quite comparable to Ksh 23,142 in May.
- In comparison to the three-year short-term average of Ksh 27,557, the current cattle price is lower by 16 percent, as indicated in figure 10.

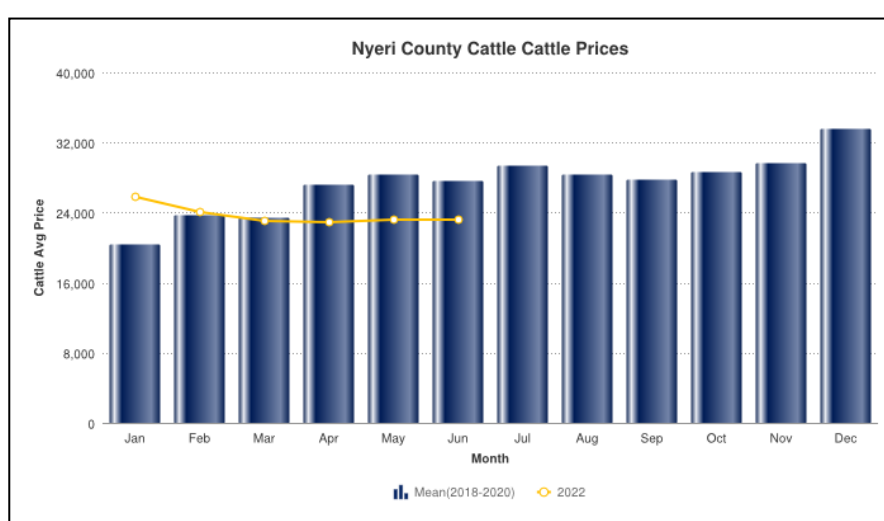


Figure 10: Outline average price trends for cattle

- There were variations of prices between the two major livelihood ones. A mature four-year-old cattle sold for Ksh 26,000 in Mixed Farming Livelihood zones compared to Ksh 20,000 recorded in Marginal Mixed Farming Livelihood zones.

4.1.2 Sheep prices

- A mature two-year-old sheep retailed for 3,167 in June similar to previous month. Sheep prices were higher in the Mixed Farming Livelihoods Zones

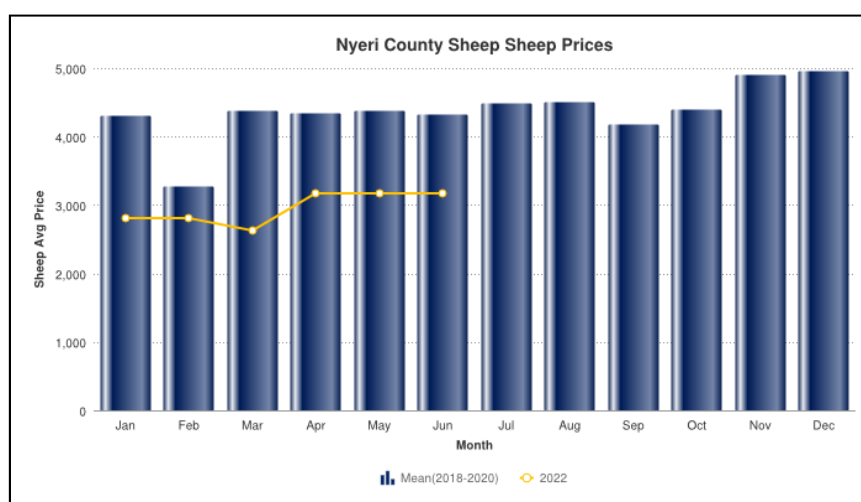


Figure 11: Outline average price trends for sheep

compared to the Marginal Mixed Farming Livelihood zones.

- Reported prices were below the 2018-2020 short-term average of Ksh 4,318 by 27 percent.

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

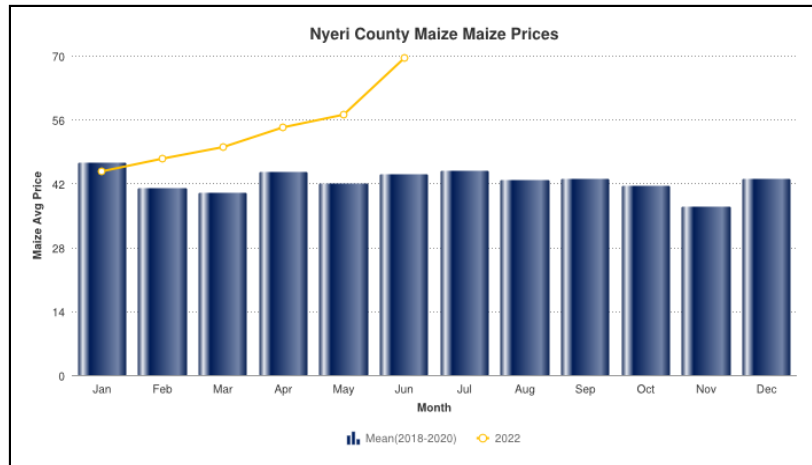


Figure 12: Outlines average price trends for Maize

Ksh 70 in June, 22 percent more from Ksh 57 the previous month.

- The month's price was higher by 59 percent compared to the STA of Ksh 44. Currently traders are sourcing for the commodity from neighbouring counties.

4.2.2 Beans

- During the month under review, a kilogram of beans retailed for Kshs 136; depicting an increase of 21 percent from Kshs 112.9 recorded in the previous month.

Compared to the STA of Ksh 89, the month's price was higher by 54 percent.

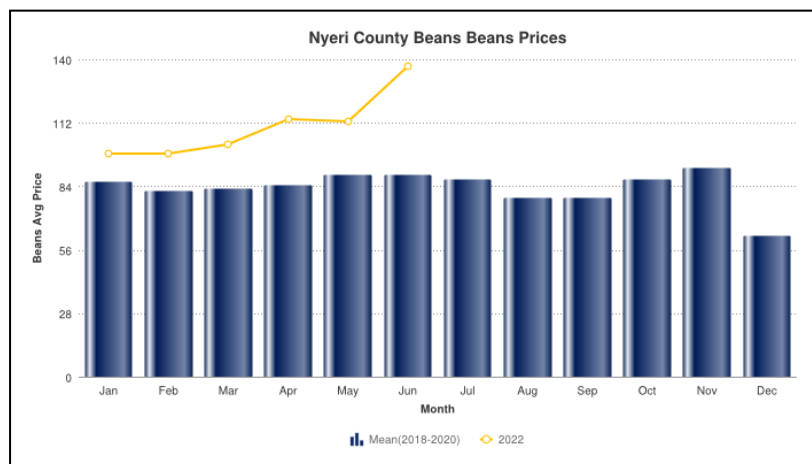


Figure 13: Outlines average price trends for Beans

4.2.3 Livestock Price Ratio/Terms of Trade

□ The escalating cereal prices and low livestock prices in the market have led to unfavourable purchasing power for the households. The current average term of trade was 45 which means a household can only purchase 45 kilograms of maize in exchange of income obtained by selling one goat.

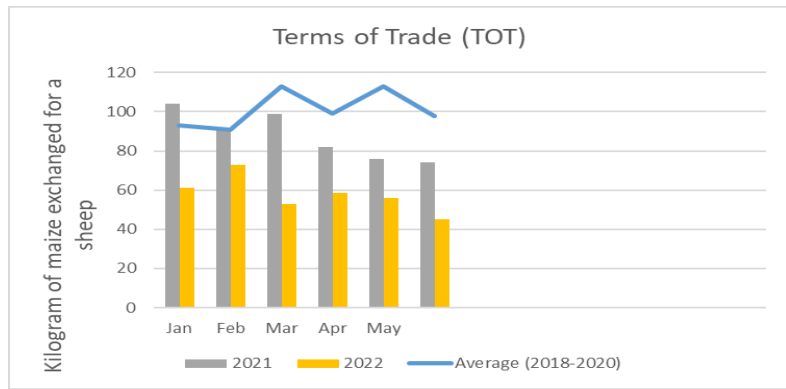


Figure 14: Outlines terms of trade in Kieni

household can only purchase 45 kilograms of maize in exchange of income obtained by selling one goat.

□ Household terms of trade have been unfavourable and below the three-year average since the beginning of the year with current average ToT being below the STA by 54 percent at similar time of the year.

FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

□ Milk consumption stood at 1.3 litres similar to the previous month.

□ 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.

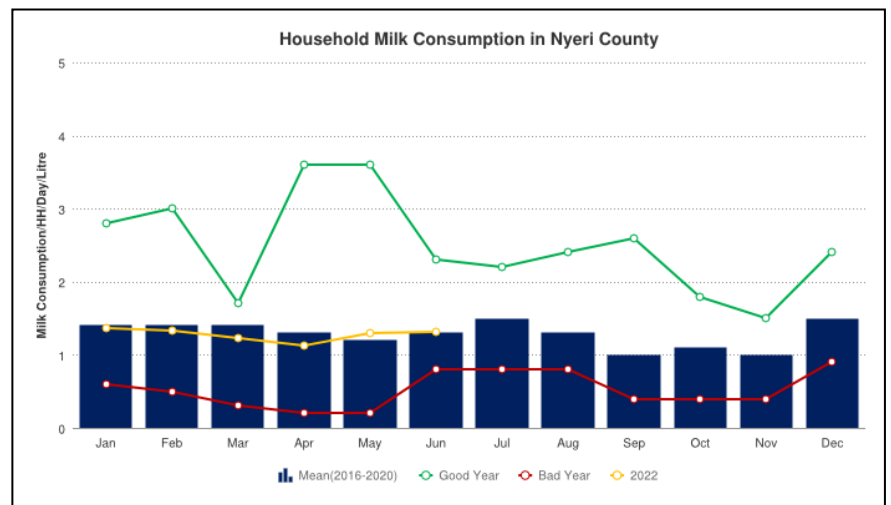


Figure 15: Outlines milk consumption for the county

□ Compared to the 2018-2020 Short term average of 1.3 litres, the month's consumption was within the normal threshold as shown in figure 15.

5.2 FOOD CONSUMPTION SCORE

- The food consumption score deteriorated during the month of June compared to the previous month, attributable to poor dietary, lack of income from agricultural waged labour, escalating food prices and lack or inadequate food stock at the household level.
- Proportion of households with Poor, borderline and acceptable food consumption score in the

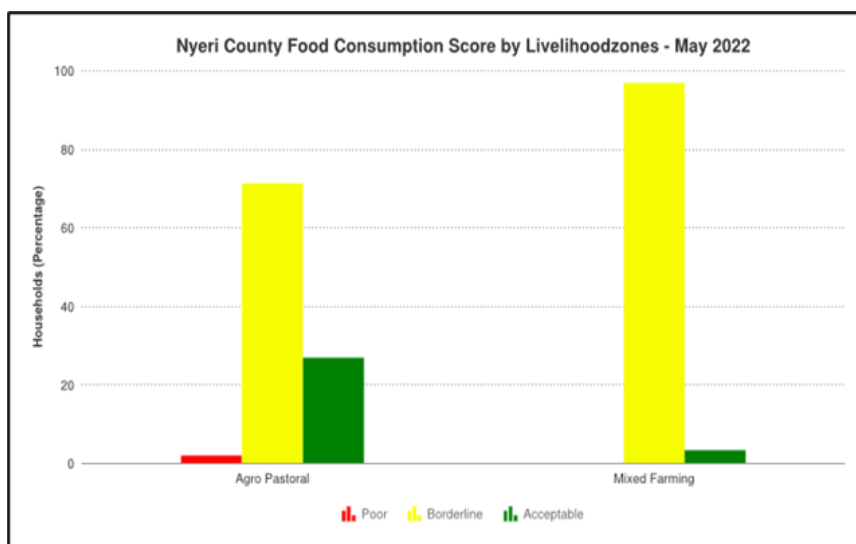


Figure 16: Presentation of food consumption score by livelihood zones

sampled population was one percent, 82 percent and 17 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.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The prevalence of children at risk of malnutrition based on MUAC data is high attributable to poor dietary diversity, low milk consumption and lack/inadequate food stock at the household level. The current

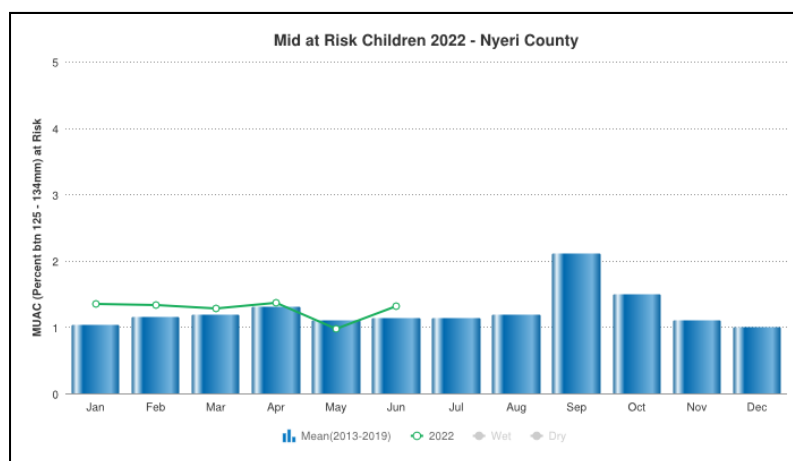


Figure 17: Presentation of nutrition status of children below five years

malnutrition rates for children at risk stands at 1.3 percent compared to one percent reported in the month May 2022 based on family MUAC data from sentinel sites.

- The number at risk was higher compared to LTA by 9 percent as shown in figure 17

5.4 COPING STRATEGIES

5.4.1 Reduced Coping Strategy Index (rCSI)

- The average coping strategy index is at 9.14 in June an indicator that households continued to employ consumption based coping mechanisms more frequently during the month under review.

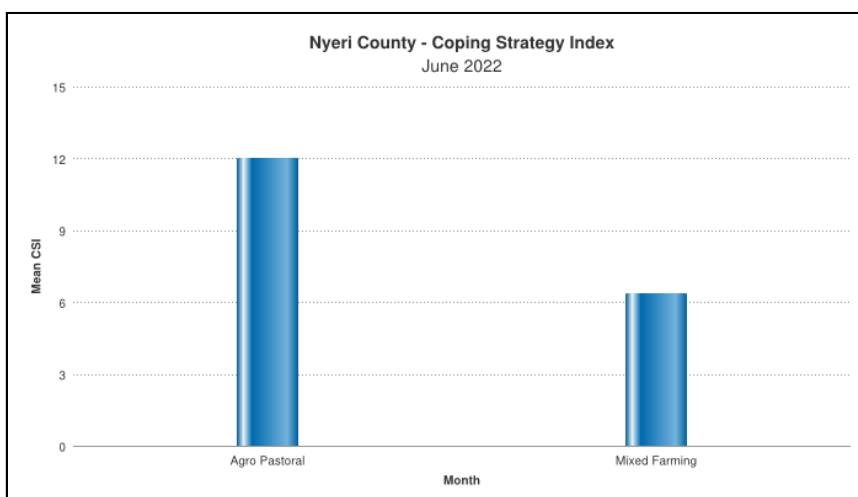


Figure 18: Presentation of the CSI for Kieni by livelihood zones

- 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.
- Households in Marginal Mixed Farming livelihood zones registered a higher index of 6.4 compared to those in the Mixed Farming Livelihood zones who recorded an index of 12. 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

- About 3000 heads of cattle from Laikipia and Samburu Counties have already migrated into Kieni through Gakawa into Mt. Kenya forest, Naromoru, Thegu and through Solio and Lamuria into Kabati and Mvihoko in Kieni West. Competition of the available water and pasture resources is stiff.

6.2 Food Security Prognosis

- According to the Kenya Meteorology outlook for June-July-August, Kieni is likely to remain dry in the months of July and August. Daytime temperatures are expected to be warmer than the average for the season.
- Forage and water resources are likely to deteriorate further resulting to a decline in livestock productivity. Consequently, the livestock prices are likely to remain below normal.

- Due to a decline in the TOT coupled with lack of income from agricultural casual labour the households' purchasing power is likely to erode further.
- 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. Food market prices are likely to increase further in the next three months.
- 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