National Drought Management Authority
(NYERI) COUNTY
DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2020

FEBRUARY EWS PHASE

Drought Situation & EW Phase Classification

Biophysical Indicators

- Off season rains continued being realised for the better part February with an average of five to six rainy days. Amounts received averaged 144 percent of normal. Temporal and spatial distribution was equally good.
- Above normal vegetation condition continued to be recorded as a result of ongoing offseason rains.
- Water availability and utilization is good as households were still harvesting rain water and open water sources were full to capacity.

Socio Economic Indicators (Impact Indicators)

- Livestock body condition and health was good.
- Harvesting of green maize and dry beans was ongoing.
- Milk production was above the long term average while consumption was within long term average.
- Distances to water sources for households' use dropped by 17 percent from last month.
- Terms of trade ratio was above the long term average.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Stable
Agro pastoral	Normal	Stable
Biophysical Indicators	**Value**	**Normal Range/Value**
Rainfall (%)	144	90-110% of LTA
VCI	74.53	>35
Forage condition	Good	Good
Production indicators	**Value**	**Normal**
Crop Condition(specify crop)	Good	Good
Livestock Body Condition	Good	Good
Milk Production	7.2	5.2 litres
Access Indicators	**Value**	**Normal**
Terms of Trade (ToT)	104	88
Milk Consumption	1.7 litres	1.7 litres
Return distance to water sources for household use	0.5 Km	1.8 Km
Return distance to water sources from grazing field.	0.8 Km	2.1 Km
Utilization indicators	**Value**	**Normal**
Nutrition Status, MUAC (% at risk of malnutrition)	0	1.2
Coping Strategy Index	5.39	0.0

▪ 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 (Sept)			▪ Short rains ▪ Planting/weeding		
Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- Offseason rains continued into the month of February, contrary to the norm, normally February is a dry month.
- Amounts received were above normal, averaging 144 percent of the normal rains. The bulk of the amounts, were received in dekad one of February.
- Rainy days averaged between five and six days. Temporal and spatial distribution was good in both livelihood zones.

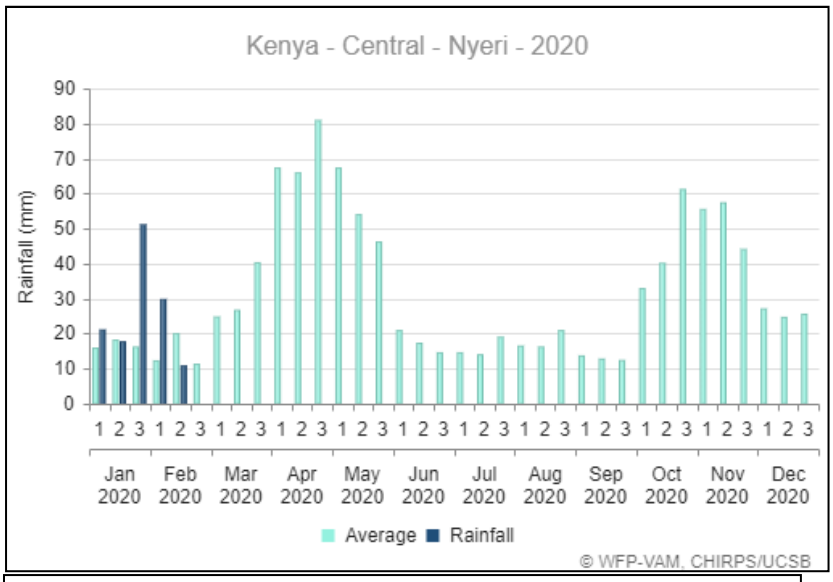

Figure 1: Presentation of the rainfall performance of February

- The rains impacted positively on water resources, livestock and crop production.
- Generally, Nyeri County received 29.7 mm and 10.7 mm in the first and second dekad compared to the Long Term Average of 12.2 and 19.9 respectively as shown in figure 1.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 VEGETATION CONDITION INDEX(VCI)

- The offseason rains, sustained the good vegetation condition across the livelihood zones. The 3 monthly vegetation condition index is 74.53 indicative of above normal vegetation greenness as shown in figure 2 (a) and 2 (b) below. The vegetation condition is expected to remain stable past the March-April-May (MAM) rains.

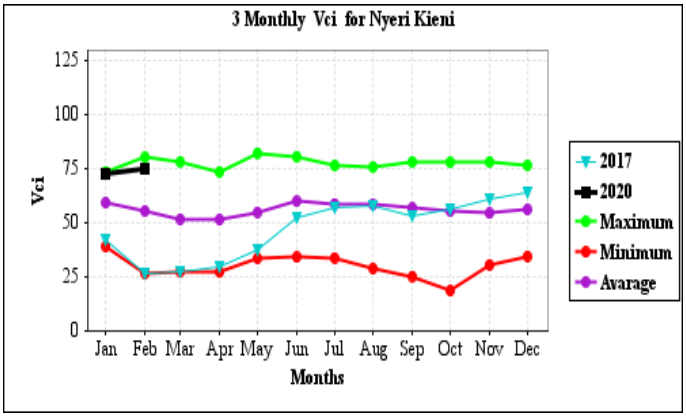

Figure 2(a): Presentation of the Vegetation Condition Index (VCI)

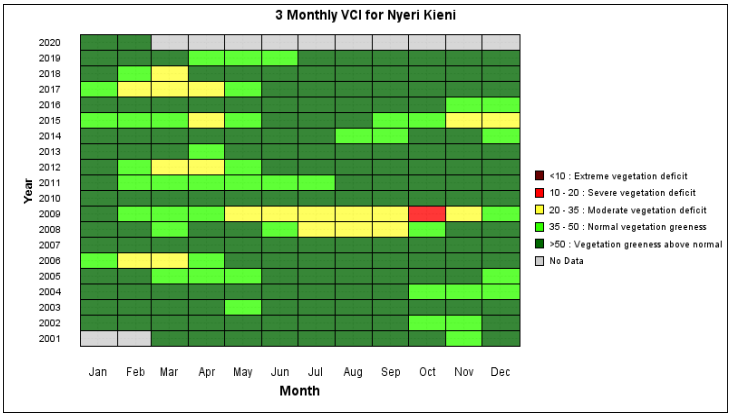

Figure 2 (b): Presentation of 3 monthly VCI for Kieni

2.1.2 Pasture

- Pasture condition was good and above normal thresholds across the livelihood zones at this time of the year (Figure 3a). Performance of both natural and cultivated pasture performed relatively well owing to ongoing offseason rains.
- Available pastures are expected to last past the long rains of March-April-May rainy season.

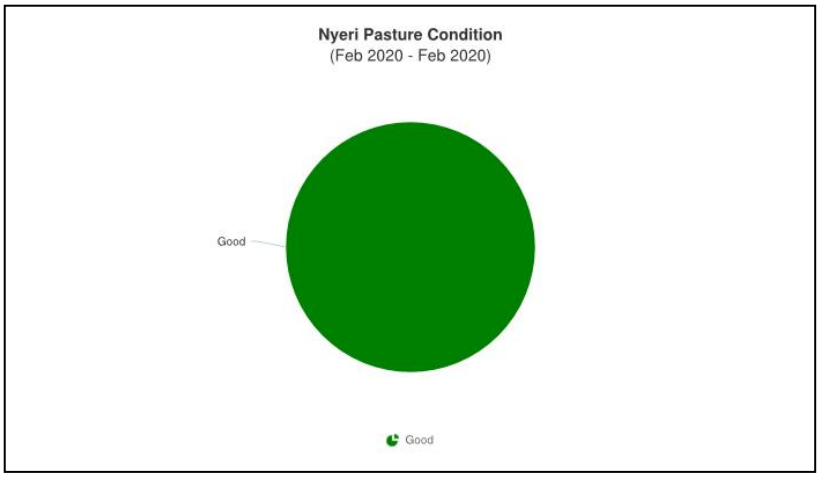

Figure 3(a): presentation of pasture condition for Nyeri (Kieni)

2.1.3 Browse

- Browse condition equally remained good across the livelihood zones, attributed to ongoing off season rains in the region.
- The current condition is above normal at this time of the year and is expected to remain stable past the MAM rains.

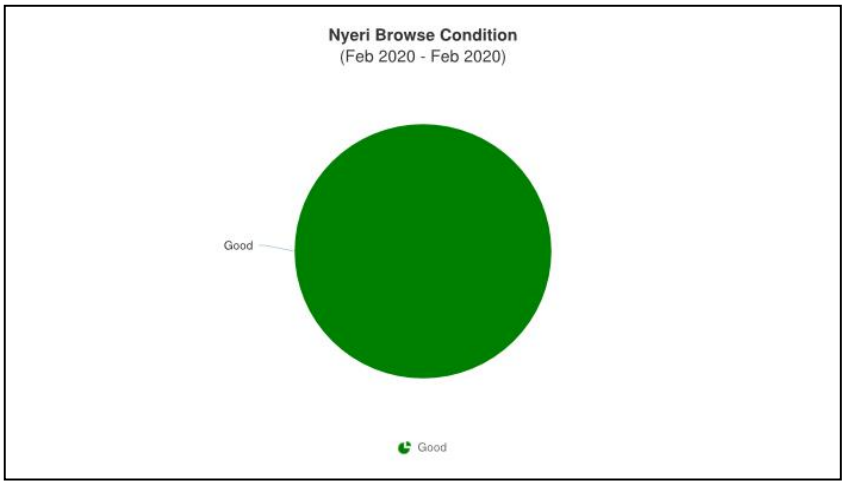

Figure 3(b): presentation of browse condition for Nyeri (Kieni) County

2.2 WATER RESOURCE

2.2.1 Sources

- The main sources of water for Kieni were rivers at 71 percent, pans and dams at 27 percent and springs at three percent as shown in figure 4.
- Access to water remained satisfactory across the livelihood zones. The current situation is above normal at this time of the year, attributed to ongoing offseason rains.
- Rivers were flowing at above normal flows while open water sources are full to capacity.

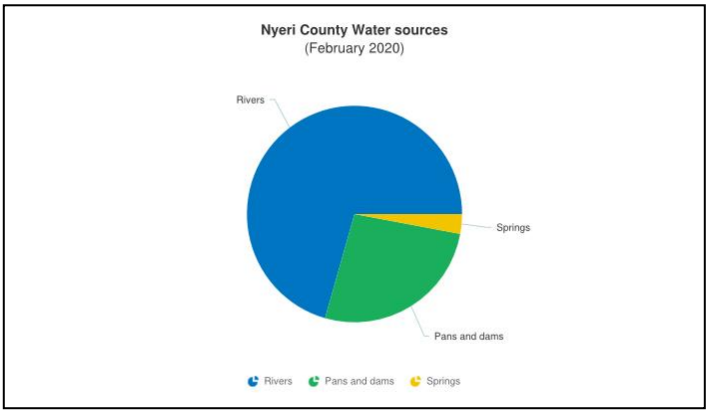

Figure 4: Shows main water sources for Kieni

- Trekking distances to water sources for both livestock and household use are nominal as households were still harvesting rain water.

2.2.2 Household access and Utilization

- Distances from the household to water sources were minimal as households supplies were steady on the piped water system whereas ground structures have equally impounded adequate water from surface runoffs.
- Distance from the household to water sources dropped by 17 percent from 0.6 Km in Janury to 0.5 Km in February.
- The month's distances were lower by 78 percent compared to the 2015-2019 long term average of 1.8 Km.

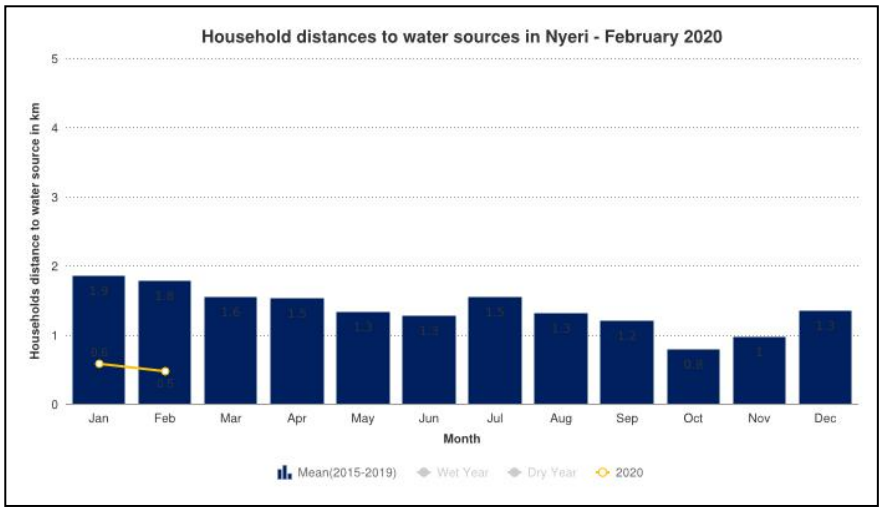

Figure 5: presentation of average return distances

2.2.3 Livestock access

- The average distances from the households to water sources stood at 0.8 Km which was quite comparable to 0.7 Km last month.
- Recorded distances were below the 2015-2019 long term average of 2.1 by 72 percent as shown in figure 6.

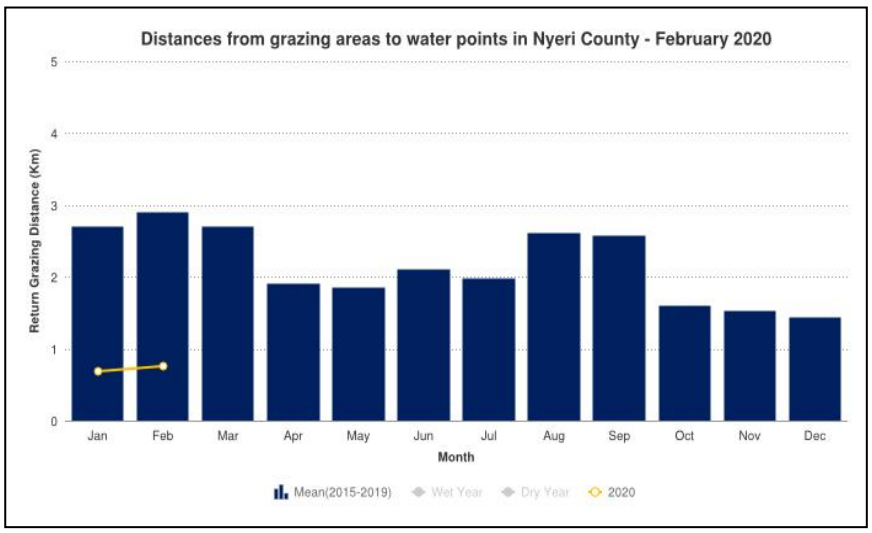

Figure 6: presentation of average grazing distances to water

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Body condition for all the three livestock species (Cattle, Sheep and goats) is good across both livelihood zones. This can be attributed to adequate pastures, browse and other feed resources like Napier which performed relatively well through the season under review.
- Body condition for all livestock species is expected to remain stable as we approach the MAM rains.

3.1.2 Livestock diseases

- Over 30 sheep have died of Pestes des Petits Ruminants (PPR) in Thungari, Thegu ward. Cases of Foot and Mouth Disease (FMD) and Sheep and goat pox were reported in Thegu and Naromoru wards in Kieni East. Lumpy Skin Disease (LSD) was also reported in Mwiyogo/ Endarasha and Mweiga in Kieni West and in Thungari, Thegu ward of Kieni East.

3.1.3 Milk Production

- Milk production increased by nine percent from 6.6 litres in January to 7.2 litres in February, as a result of adequate and quality livestock feeds, reduced distances to water sources and good livestock body conditions and health.
- The month's production was higher by 39 percent compared to the 2015-2019 LTA of 5.2 as shown in figure 7.
- Production was higher in the marginal mixed farming livelihood zones of 3.8 litres compared to 3.4 litres in mixed farming livelihood zones.

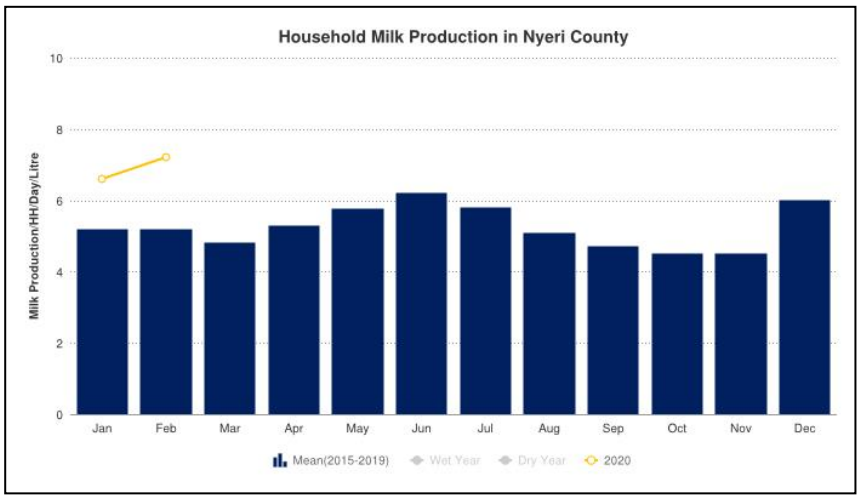

Figure 7: Presentation of average milk production for the region

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- Due to the offseason rains realised in February, maize crops at the farms were of good condition. Maize was at dough hardening stage and harvesting of green maize was ongoing. Expected Production for maize will be above average. However, the current situation is not normal compared to similar period last year. Piece meal harvesting of dry beans was ongoing.
- Clearing of farms and land preparation was ongoing in readiness to the March-April-May rains.

4.0 MARKET PERFORMANCE

4.1LIVESTOCK MARKETING

4.1.1 Cattle Price

- Livestock prices were on an upward trend.
- A mature four-year-old bull retailed for Ksh 36,250 in February from Ksh 33,714 in January, an eight percent increase.
- Compared to the 2017-2019 short term averages of Ksh 16,650 reported prices were higher by 102 percent, as indicated in figure 8. The prices are expected to remain stable past the approaching MAM rainy season.

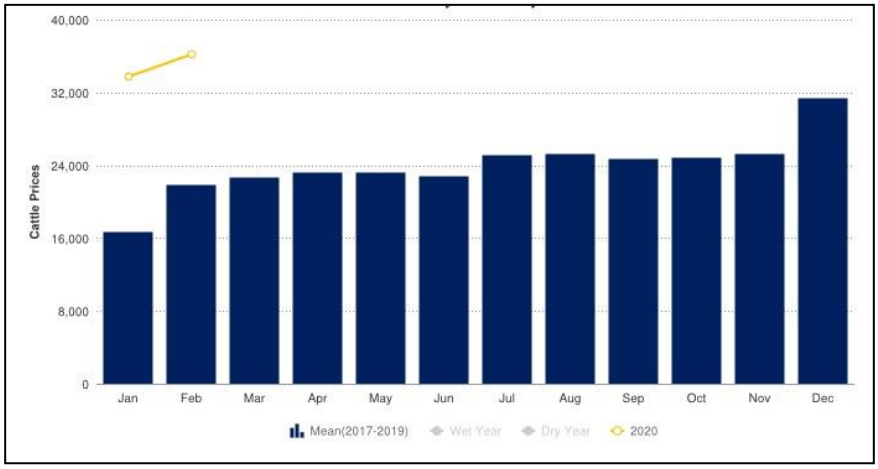

Figure 8: Outline average price trends for cattle

4.1.2 Sheep prices

- A two-year-old medium size Sheep sold for Ksh 4,550 in February from Ksh 4,250 in January, a seven percent increase.
- The month's prices were higher by 44 percent, compared to the 2017-2019 short term averages of Ksh 3,167 as shown in figure 9.

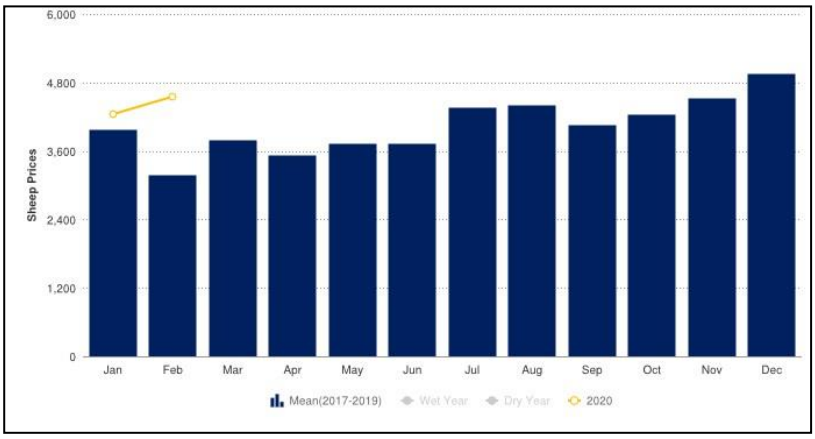

Figure 9: Outlines average price trends for sheep.

4.2 CROP PRICES

4.2.1 Maize

- A kilo of maize grain sold for Ksh 45 in February from Ksh 47 last month, registering four percent drop.
- Decrease in prices could be attributed to ongoing harvesting of the OND season yields.
- Compared to the short term averages of Ksh 42, the registered price was higher by seven percent as shown in figure 10.

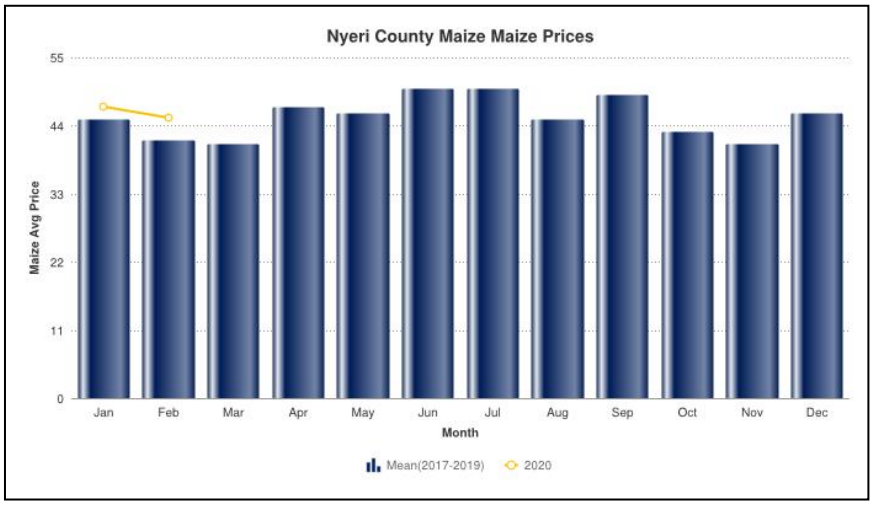

Figure 10: Outlines average price trends for Maize

4.2.2 Beans

- A kilo of Beans grain retailed for Ksh 90 in February from Ksh 89 in January.
- The month's price was higher by eight percent compared to the 2017-2019 short term average of Ksh 83 which is attributed to overreliance on market for food supplies. Traders are importing food commodities from neighbouring counties of Laikipia and Nakuru and beyond. In Kieni, beans farming was affected by excessive moisture and water logging following the continued offseason rains impacting on households season projections.

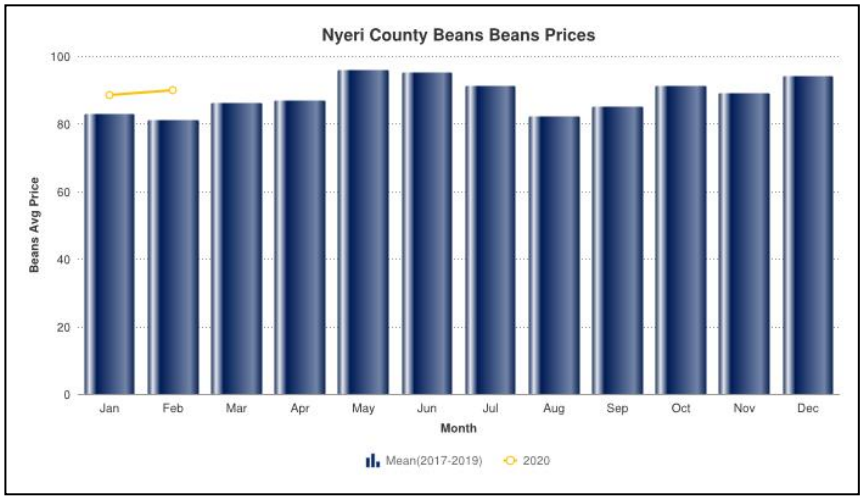

Figure 11: Outlines average price trends for Beans

4.2.3 Livestock Price Ratio/Terms of Trade

- Terms of trade ratio registered a significant improvement attributed to the increase farm gate livestock value in relation to dropping food commodity prices.
- A kilo of sheep was equivalent to 104 kilograms of maize accounting for 16 percent rise from last month value of 90 kilograms.

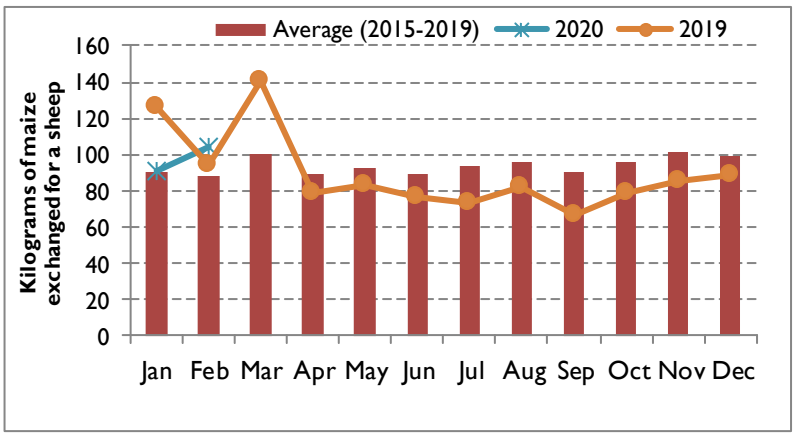

Figure 12: Outlines terms of trade in Kieni

- Compared to the 2017-2019 short term average of 88 current TOT was higher by 18 percent as outlined in figure 12. With the projected increase in sheep prices and drop in maize prices, the terms of trade are expected to improve further in the coming days thus favourable households' purchasing power

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- Milk consumption at the household level increased from 1.6 litres in January to 1.7 litres in February.
- Improved consumption was registered in marginal mixed farming zones at 1.8 litres per day, as compared to 1.6 litres in mixed farming livelihood zones.
- Sales of the remainder to co-operatives operating in the region was evident.
- Compared to the 2015-2019 short term average of 1.7 litres, the month's consumption was within the threshold as shown in figure 13.

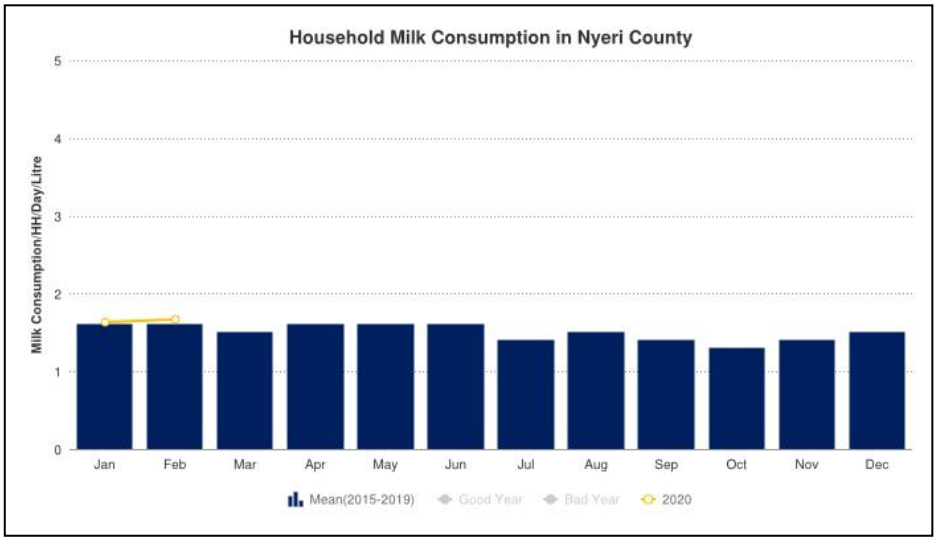

Figure 13: Outlines milk consumption for the county

5.2 FOOD CONSUMPTION SCORE

- The food consumption score for Kieni deteriorated during the month under review compared to the previous months. Proportion of households with poor, borderline and acceptable food consumption score in the sampled population was three percent, 44 percent and 53 percent respectively compared to 42 percent and 57 percent at borderline and acceptable respectively in January.

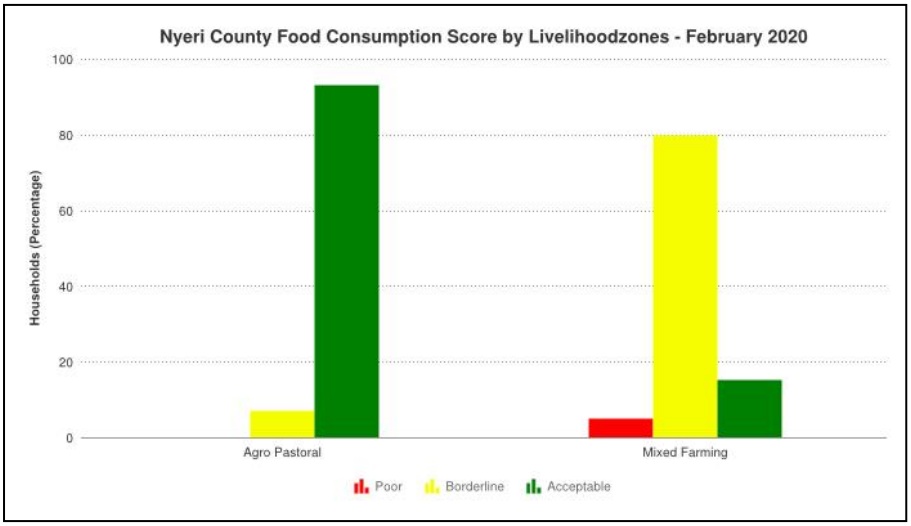

Figure 14: Presentation of food consumption score by livelihood zones

- The marginal mixed farming livelihood zones fared better, since 93 percent of the households had acceptable food consumption score compared to 15.3 percent in mixed farming livelihood zones, attributed to poor dietary diversity and low food stock at the household level. The household purchasing power was compromised, a cumulative effect from earlier four consecutive crop failure seasons.
- Percent of households at acceptable food consumption score in mixed farming livelihood zones dropped slightly by 10 percent.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- There were no reported cases of under-five children at risk of malnutrition during the month under review. This is attributed to availability of adequate milk at the household level, improved dietary diversity and access to health facilities.

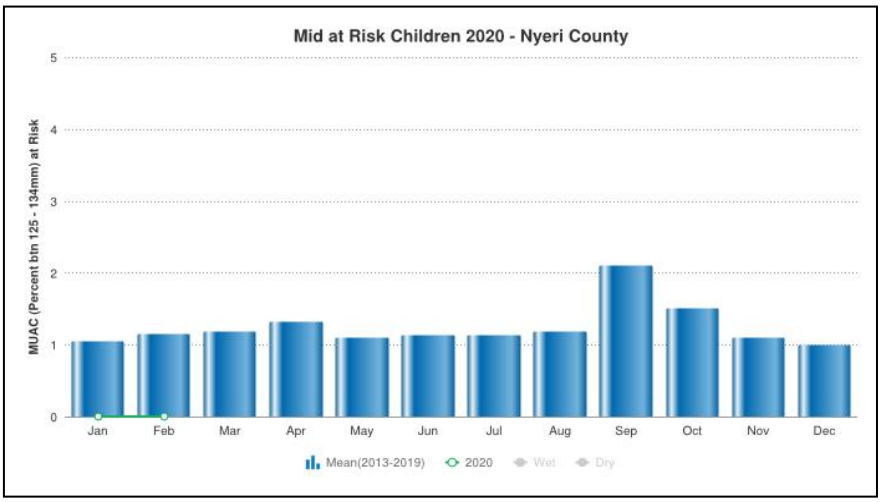

Figure 15: Presentation of nutrition status of children below five years

5.4 COPING STRATEGIES

- Coping Strategy Index (CSI) for the month of February stood at 5.39 which was comparable to 5.12 in the previous month.
- In Mixed farming livelihood zones the CSI stood at 3.9 same as was reported last month while in Marginal mixed farming livelihood zones the index stood at 6.9 in February which was quite comparable to 6.3 the previous month as indicated in figure 16.

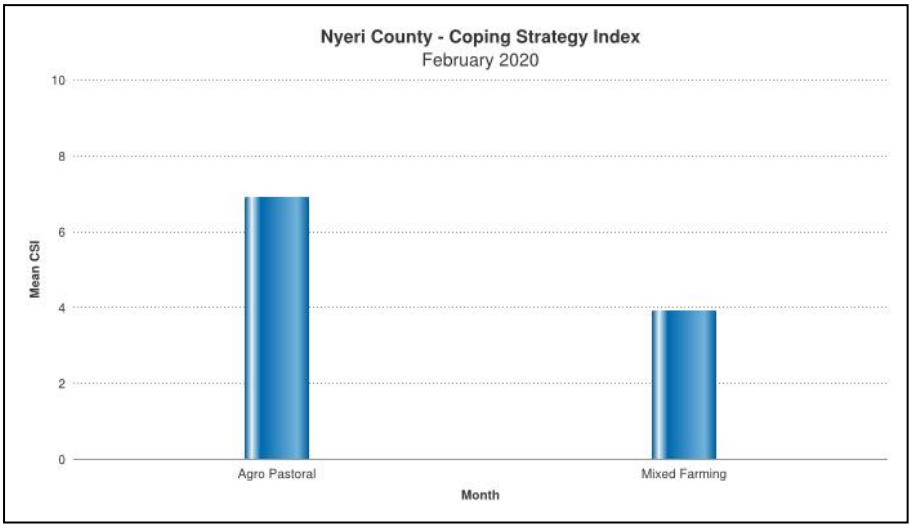

Figure 16: presentation of the region coping strategies

- The most common coping strategies being employed were reliance on less preferred food, restricting adult consumption for children to eat and reducing daily meals intake.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 NON-FOOD INTERVENTIONS

- Vaccination against FMD, LSD, Black quarter and rabies was ongoing, about 3000 livestock have been vaccinated so far in both Kieni East and Kieni West sub counties.
- Capacity building of Dairy cow and poultry groups on: feed formulation, financial management, Value addition, Waste management, Market linkage, Leadership and governance in Kieni East.
- Drilling of boreholes in Mapema, Kahuti Secondary, Gatwe in Kabaru, Thegu and Naromoru/Kiamathaga in Kieni East.
- Distilling of Mikumbuni dam in Kieni East Sub County.
- Equipping boreholes, pipeline extension, Construction of masonry tanks and desilting of water pans in Mweiga, Gararakwa, Endarasha/Mwiyogo and Mugunda in Kieni West Sub County.

6.2 FOOD AID

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

7. 0 EMERGING ISSUES

- Human-wildlife conflict was reported in areas bordering the mountains, attributed to the cold weather conditions in the forests forcing the Elephants to relocate to warmer grounds. Farmers at Kahurura and Gathiuru in Gakawa ward and Kabaru Ward in Kieni East are counting huge losses after marauding elephants invaded their farms leaving a trail of destruction on their crops.
- Desert Locust invasion was reported in Naromoru/Kiamathaga in Kieni East Sub County and Endarasha/Mwiyogo, Mugunda, Mweiga and Gatarakwa in Kieni West sub county. The impact on crops and forage is minimal, locusts pose a significant threat to ongoing cash crop production and the cereal production season that begins in March.

7.1 FOOD SECURITY PROGNOSIS

- According to Kenya Meteorological Department MAM 2020 forecast, central Kenya are among areas that will receive enhanced rainfall.
- Given the above projection maize productions, maize prices are likely to be below average in the next six months
- Due to the extended off-season rains since January and anticipated enhanced MAM rains in March will sustain access to adequate forage and water beyond the long rains season
- No market disruptions are expected to affect access to food in the markets. The Terms of Trade are expected to be favorable for livestock keepers as livestock prices are expected to stabilize further while food commodity prices will most likely reduce.

8. RECOMMENDATIONS

- Review of county drought contingency plans. (N.D.M.A).
- Sensitize households on water harvesting methods, modern irrigation technologies and storage harvesting (CGN).
- Vaccination and deworming of livestock FMD, LSD, Black quarter and rabies (CGN).
- Support preparedness activities to enhance resilience in communities and other livelihoods diversification activities. (NDMA)
- Support to ward level CP through scenario creation and simulation. (NDMA)
- Capacity building on post-harvest management. (NDMA)
- Provision of certified seeds and fertilizer to farmers (CGN).
- Sensitize farmers on soil fertility management (CGN).