National Drought Management Authority
NYERI (KIENI) COUNTY
DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2019

NDMA

A Vision 2030 Flagship Project

KENYA VISION 2030

SEPTEMBER 2019 EWS PHASE

Drought Status: ALERT

Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of September was characterised by dry, hot and windy weather conditions. However, offseason rains were received in some pockets in Gakawa and Mugunda ward. The rains were received for an average of three to five days.
- Pasture and browse deteriorated in the month under review compared to the previous month. Pasture conditions were poor in both livelihood zones.
- The water levels were very low due to minimal recharge of the water sources. Water rationing by major water projects has intensified.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Livestock body condition was fair to poor in both livelihood zones
- Milk production decreased compared to the previous month.

Access indicators

- Milk consumption dropped compared to the last month.
- Household distances to water sources increased compared to the previous month.
- Food prices increased compared to the previous month.

Utilization Indicators

- 2.1 percent of under-fives monitored were at risk of malnutrition during the month under review.
- Coping strategy Index increased 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 (% of Normal)	-%	80%-120%
VCI-3Month	70.07	35-50
Forage	poor	Fair-poor
Production indicators	**Value**	**Normal**
Livestock Body Condition	Fair-poor	Fair
Milk Production	4.4 litres	4.9 litres
Livestock Migration Pattern	No migration	No Migration
Access Indicators	**Value**	**Normal**
Milk Consumption	1.4	1.3
Distance to water sources	1.1	1.5
Utilization indicators	**Value**	**Normal**
Nutrition Status, MUAC (% at risk of malnutrition)	2.1	1.6
Coping Strategy Index (CSI)	5.15	<5.0

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

1.0 CLIMATIC CONDITIONS
1.1 RAINFALL PERFORMANCE

 The month of September was generally dry. However, offseason rains were received in some localised areas in Gakawa and Mugunda wards. Better amounts were received in high attitude areas compared to lower areas that recorded light showers. The rains were received for an average of three to five days.

 During the first and second dekad Nyeri County received 16mm and 7.7mm compared to the long term

Figure 1: Presentation of the rainfall trend 2019

average 13.6mm and 12.7mm respectively. However, these amounts are not a representation of quantities received in Kieni.

2.0 IMPACTS ON VEGETATION AND WATER
2.1 VEGETATION CONDITION
2.1.1 Vegetation Condition Index (3 Monthly VCI)

 The vegetation condition deteriorated during the month of September compared to the previous month as show in figure 2b. This was attributed to inadequate precipitation. The VCI stood at 70.07 a six percent reduction compared to the month of August. However, the vegetation greenness was still above the long term average as shown in figure 2 (a).
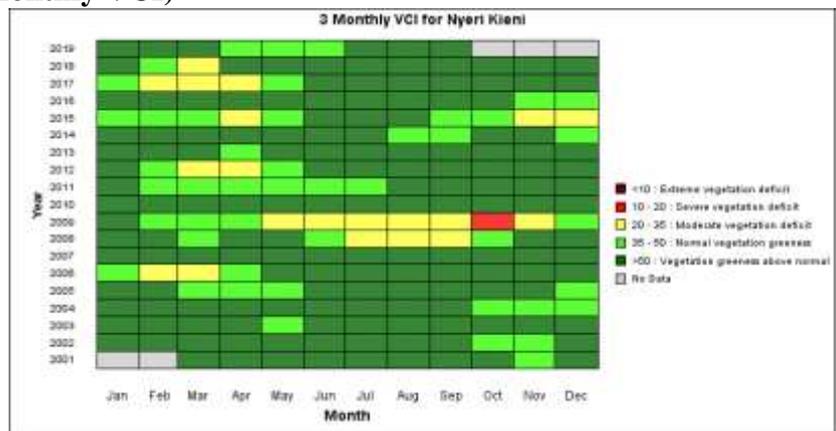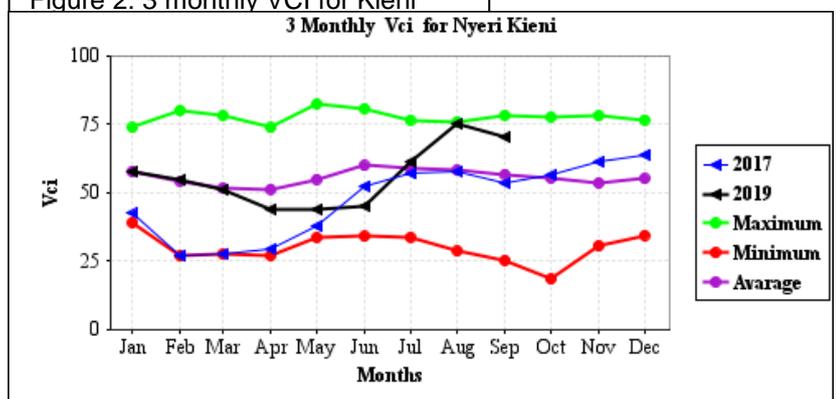

Figure 2: 3 monthly VCI for Kieni

Figure 2b: 3 monthly VCI for Kieni

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2.1.2 Pasture

☐ Pasture conditions deteriorated during the month under review compared to the previous month. This is attributed dry weather conditions coupled with frost bites and strong winds that were blowing away straws. Sixty percent of the pastures were reported to be fair while 40 percent poor.

☐ The available pastures are expected to last for less than a month in both livelihood zones.
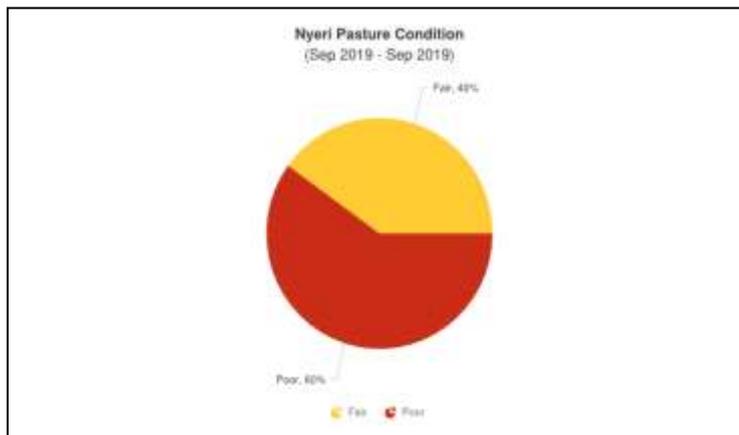
Figure 3: Pasture condition for Nyeri County

2.1.3 Browse

☐ From our monthly monitoring 20 percent of the household interviewed indicated browse was good, 30 percent fair and 50 percent poor. Browse deteriorated during the month of September compared to the previous month. This was attributed lack of precipitation

☐ Compared to the same time last year the current situation was normal.

☐ The available browse is expected to last for two months in mixed farming livelihood zones and one month in Marginal mixed livelihood zones.
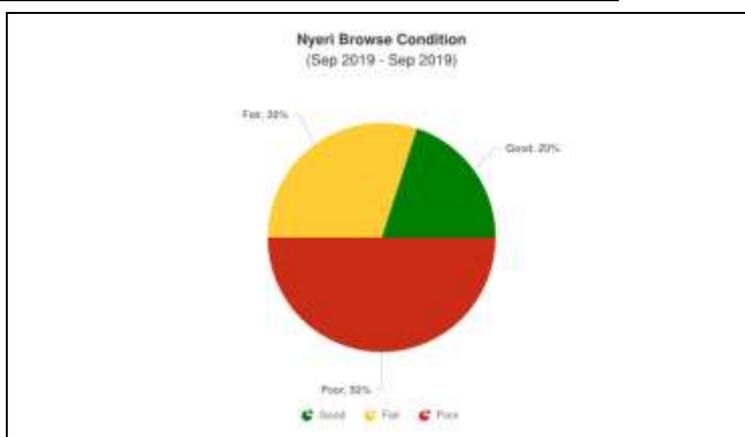
Figure 1: Browse conditions in Nyeri (Kieni)

2.2 WATER RESOURCE
2.2.1 Sources

☐ The main sources of water in September were rivers (55.6 percent), pans and dams (41.4 percent), and springs (27.8 percent) as shown in figure 5.

☐ The water levels were very low due to minimal recharge of the water sources. However, open water sources in Gakawa were about 80 percent full attributed to the off season rains that were received.

Figure 5: Main water sources in Nyeri (Kieni)

☐ Water rationing for households that relied on piped water was reported, these households were receiving water once in a fortnight.

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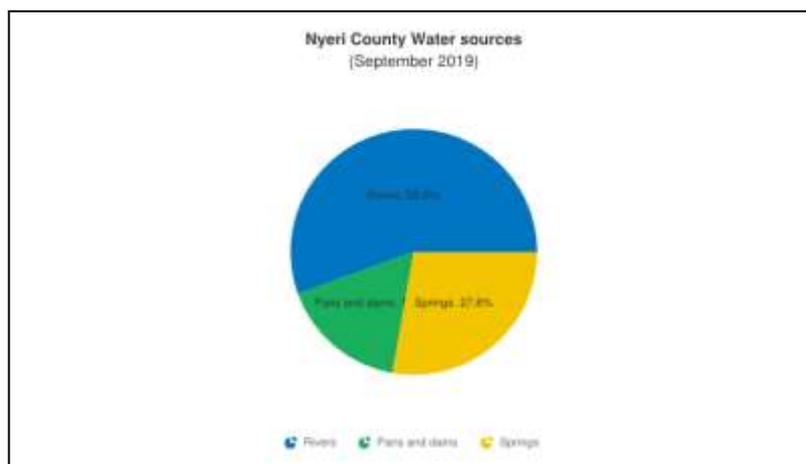### 2.2.2 Household access and Utilization

☐ Distances from the household to water sources increased by 10 percent from one Km in August to 1.1 Km in September. This could be attributed to lack of recharge of water sources due to lack of precipitation.

☐ Registered distances were lower by 26 percent compared to the 2014-2018 long term averages of 1.5 Km as shown in figure 6.
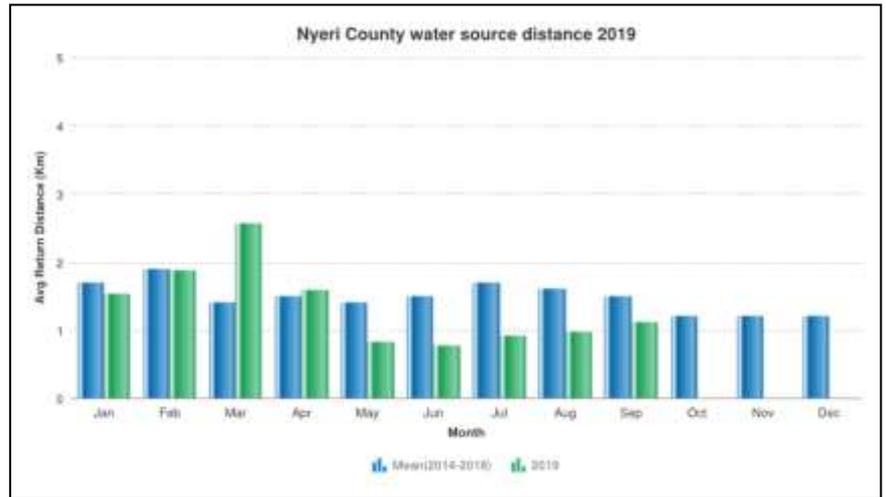

Figure 6: Household access to water

2.2.3 Livestock access

☐ Average return distance from grazing field to watering points increased by 16 percent from 1.9 Km in August to 2.2 Km in September. This could be attributed to drying up of the open water sorces near the homesteads.

☐ Recorded distances were lower by 33 percent compared to the 2014-2018 long term average of three Km as shown in figure 7.
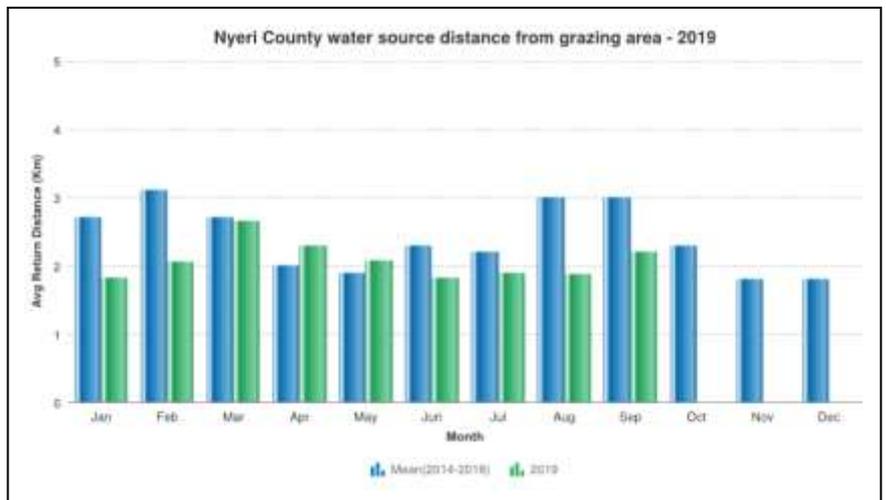

Figure 7: Average livestock return distances from the grazing area

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3.0 PRODUCTION INDICATORS
3.1 LIVESTOCK PRODUCTION
3.1.1 Livestock Body Condition
☐ Body condition for shoats was good to fair.
☐ Body condition for cattle was fair to poor across the livelihood zones.
☐ Livestock body condition deteriorated during the month under review compared to the previous month. This could be attributed to diminished forage and the increased trekking distances to the available water sources

3.1.2 Livestock Diseases
☐ No contagious livestock disease outbreaks were reported during the month under review.

3.1.3 Milk Production
☐ Milk production decreased by six percent from 4.7 litres in August to 4.4 litres in September. This is attributed to deteriorating pasture conditions.
☐ Compared to 2014-2018 long term average of 4.9 litres, the months production was lower by 10 percent as shown in figure 8.
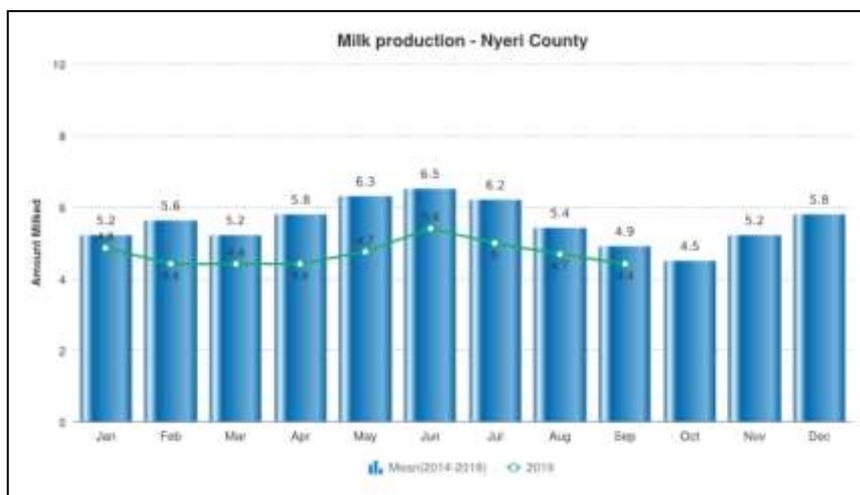
Figure 8: Average household Milk production for Nyeri (Kieni)

3.2 RAIN-FED CROP PRODUCTION (Where applicable)
3.2.1 Stage and Condition of food Crops
☐ Majority of the undertaking land preparation and dry planting in readiness for the October-November-December (OND) rains. At least 70 percent, 60 percent, 30 percent and 40 percent of the target area in Kieni east and west has been planted with potatoes, wheat, Maize and beans respectively.
☐ The major challenges noted were the high cost of land preparation, high cost of farm inputs and unreliable incomes occasioned by consecutive crop failures.

4.0 MARKET PERFORMANCE
4.1 LIVESTOCK MARKETING
4.1.1 Cattle Prices

☐ Cattle prices decreased during the month under review compared to the previous month. This could be attributed to deteriorating livestock body conditions. A mature four-year-old bull sold for Ksh 26,750 in September from Ksh 27,083 in August.

☐ The month's price was higher by four percent compared to the 2016-2018 short term average of Ksh 25,683 as shown in figure 9.
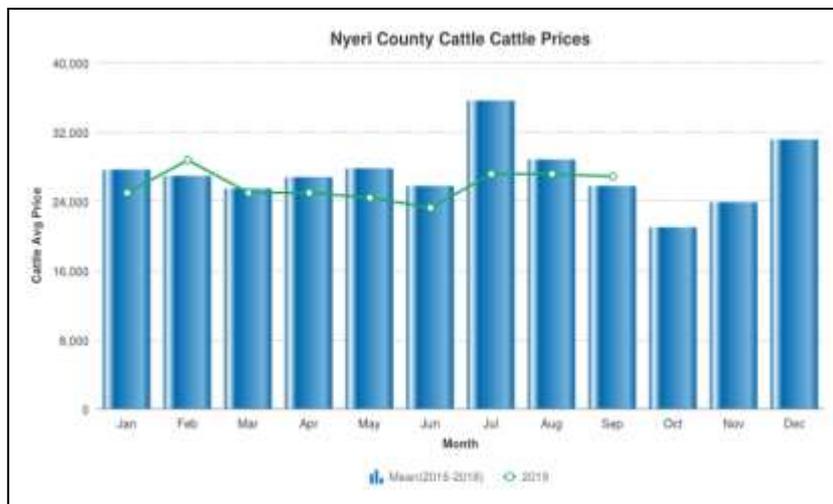
Figure 9: Average cattle prices for Nyeri

4.1.2 Sheep prices

☐ Sheep prices also decreased by 18 percent compared to the previous month. A medium size two-year-old sheep sold for Ksh 3500 in September from Ksh 4,273 August. The decrease could be attributed to deteriorating body conditions.

☐ The registered prices were lower by four percent compared to the 2016-2018 short term averages of Ksh 4,458 as shown in figure 10.
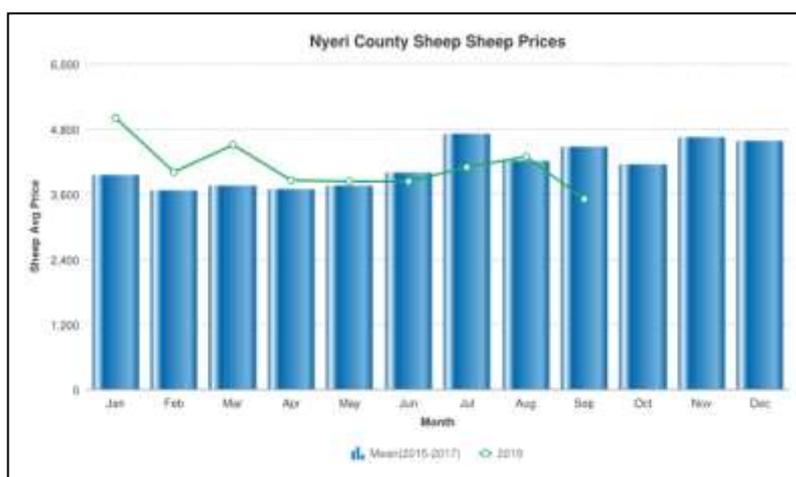
Figure 10: Average sheep prices for Nyeri

4.2 CROP PRICES
4.2.1 Maize prices

☐ Food prices were on an upward trend during the month under review. A kilo of maize sold for Ksh 53 in September from Ksh 51 in August. The increase could be attributed to over reliance of markets for supply since households had depleted their stocks.

☐ Prices increased by six percent and two percent in mixed farming livelihood zones and marginal mixed farming live livelihood zones to retail for Ksh 51 and Ksh in September from Ksh 48
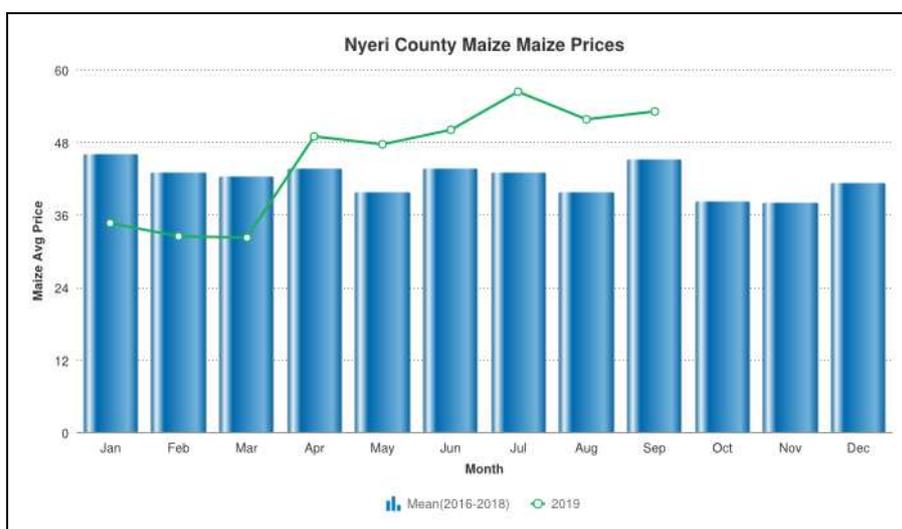
Figure 11: Average maize prices for Nyeri (Kieni)

56 and

Ksh 55 in August respectively.

☐ Compared to the 2016-2018 short term averages of Ksh 45, current price was higher by 18 percent as shown in figure 11.

4.2.2 Beans prices

☐ Beans prices increased by six percent to retail for Ksh 93 per Kg in September from Ksh 88 per Kg in August. The increase in prices could be attributed to households solely relying on markets for supply since they had exhausted stocks. The highest prices of Ksh 100 were reported in marginal mixed farming livelihood zones compared to 87 in mixed farming Livelihood zones.
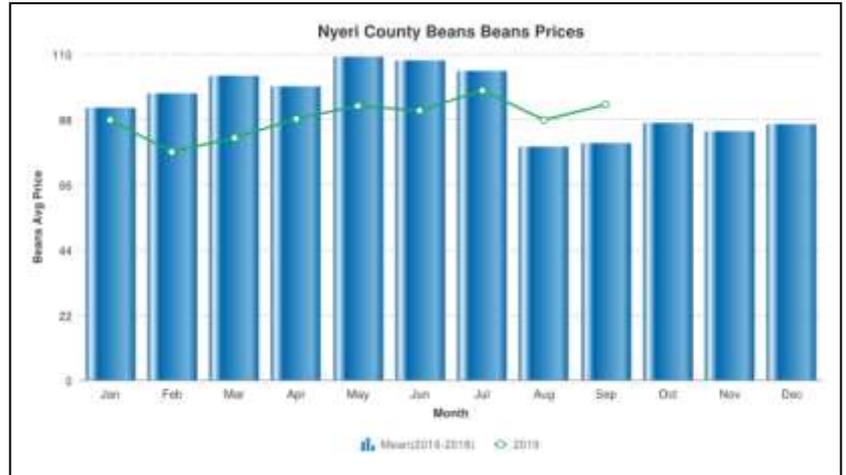
☐ The month's price was higher by 16.2 percent, compared to the 2016-2018 short term average of Ksh 80 as shown in figure 12.

Figure 12: Average beans prices for Nyeri (Kieni

4.3. Livestock price ratio/Terms of trade ratio

☐ During the month of September, a farmer would exchange a medium size sheep for 69.8 Kg of maize. This was 18 percent decrease from the month of August where a sheep exchanged for 84.9 Kg of maize. The change can be attributed to the decrease in sheep prices against the increasing prices of food commodities. This has led to unfavourable terms of trade to livestock keepers.
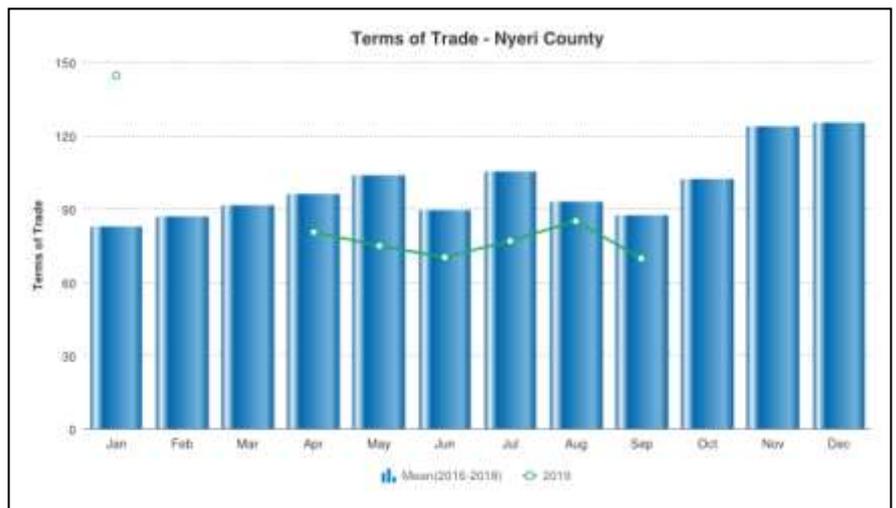
☐ Mixed farming livelihoods had a better TOT of 102.1 compared to marginal mixed farming livelihood zones with a TOT of 66.5.

Figure 13: Terms of Trade for Nyeri (Kieni

☐ The month's TOT was lower by 25 percent compared to the long term average of 87.2 kg of maize for a sheep.

5.0   FOOD CONSUMPTION AND NUTRITION STATUS
5.1   MILK CONSUMPTION

- The average daily milk consumption per household was 1.4 litres a slight decrease from 1.5 litres last month.
- Households in mixed farming livelihood zones consumed an average of 1.6 litres per day compared to those in marginal mixed livelihood zones who consumed an average of 1.4 litres per day.
- The month's consumption was higher compared to the 2014-2018 long term average of 1.3 litres as shown in figure 14.
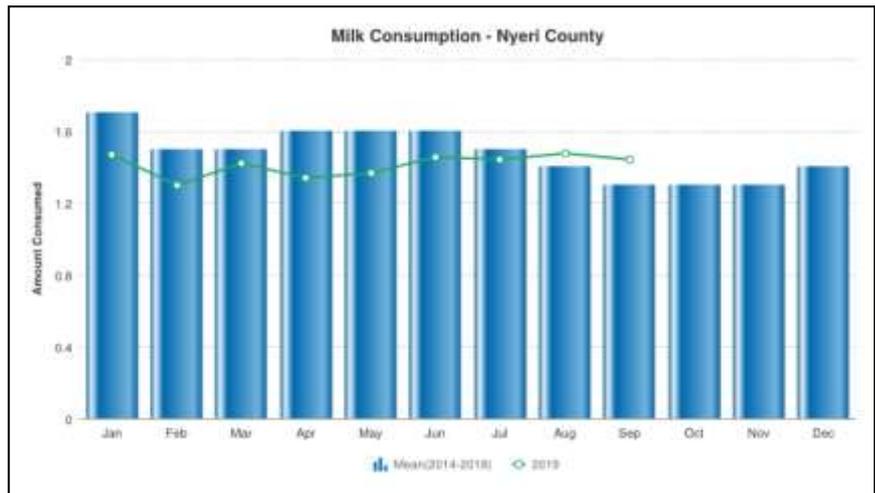

Figure 14: Average household Milk consumption for Nyeri

5.2 FOOD CONSUMPTION SCORE

- During the month of September proportions of household with poor, borderline and acceptable food consumption score were four percent, 37 percent and 59 percent compared to five percent, 39 percent and 56 percent in August as shown in the figure 15.
- In marginal mixed livelihood zones all the households had acceptable food consumption score while those in mixed farming livelihood zones, 8.5 percent, 74.6 percent and 16.9 percent had poor, borderline and acceptable food consumption scores respectively.
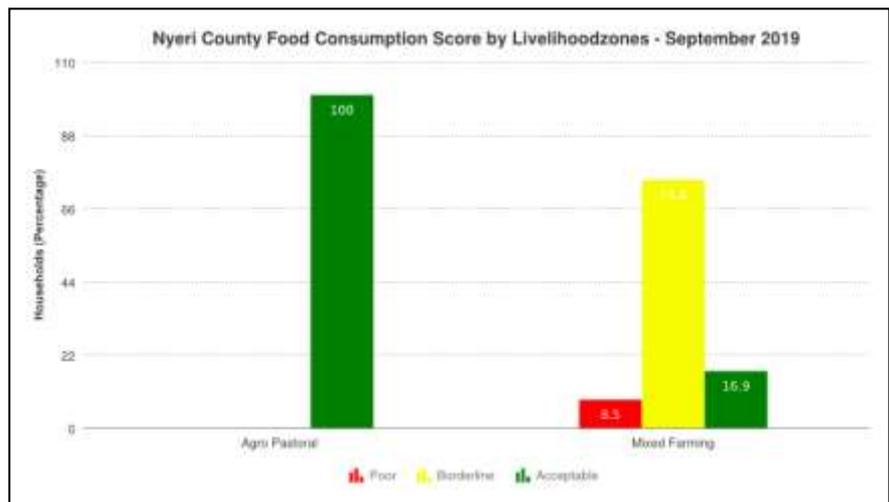- This is an indication that households in marginal mixed livelihood zones had a better dietary diversity and consumption frequency compared to those in mixed farming livelihood zones.

Figure 15: FCS by livelihood zone for Nyeri (Kieni)

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5.3 HEALTH AND NUTRITION STATUS
5.3.1   Nutrition Status

☐ The percentage of under-fives at risk of malnutrition in the month of September was 2.1 percent as shown in figure 15. The increase in malnutrition cases could be attributed to poor dietary diversity.

☐ Percent of children at risk of malnutrition in the month under review was similar to the 2013-2018 long term average of 2.1 percent.
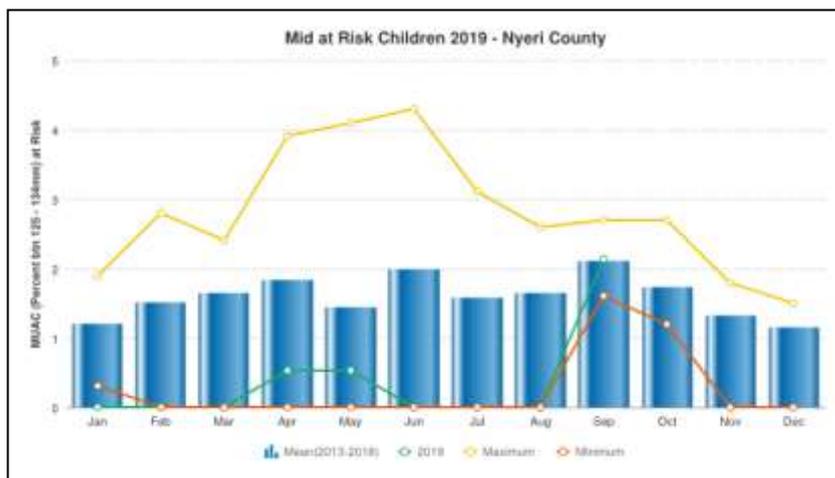

Figure 15: Presentation of children at risk of malnutrition in Nyeri (Kieni)

5.4 COPING STRATEGIES

☐ The mean Coping Strategy Index (CSI) for Kieni increased by three percent from 5.01 in August to 5.15 in September. This is an indication that households were employing consumption based strategies more frequently compared to the previous month.

☐ The month's index had increased by 19.6 percent in marginal mixed farming livelihoods from 5.6 in August to 6.2 in September while in mixed farming livelihood zones the CSI decreased by seven percent from 4.4 in August to 4.1 in September.
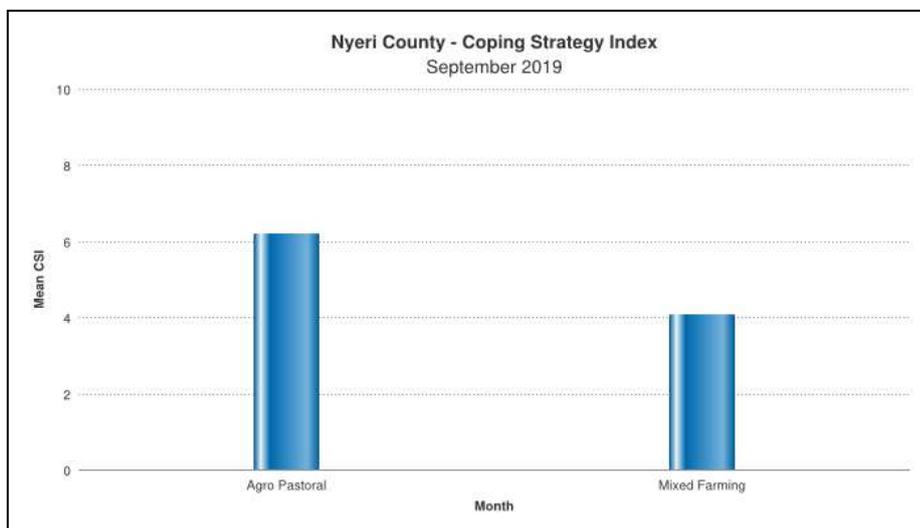

Figure 16: Coping strategy index for Nyeri (Kieni)

☐ The decrease in CSI in Mixed farming livelihood could be attributed to availability of income from casual labour.

6.0   CURRENT INTERVENTION MEASURES
6.1   NON-FOOD INTERVENTIONS

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

6.2   FOOD AID

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

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7.0 EMERGING ISSUES.
7.1 FOOD SECURITY PROGNOSIS

☐ The just concluded long rains assessment carried out by the Kenya food security steering group classified Kieni in the stressed food security phase classification (IPC phase 2). The Marginal Mixed Farming and Mixed Farming zones are expected to have an unstable food security situation since most households rely on markets for food. Due to the harsh weather conditions that have continued to be experienced, water and forage resources have deteriorated and are expected to deteriorate further across all livelihood zones until the start of the OND rains. Distances to water sources for livestock and household are expected to increase further.

☐ The livestock body condition is expected to deteriorate through to October therefore reducing the supply of milk and reducing livestock prices. This will reduce household livelihood sources and purchasing power. Malnutrition rates will increase further while terms of trade are likely to reduce as the price of maize increases and sheep prices reduce.

7.2. LIVESTOCK AND MIGRATION.

☐ There were no unusual human and or livestock's movement into and out of the county. Observed animal movement with the county was for grazing and watering.

7.3 CONFLICTS.

☐ Human wildlife conflict was reported in Gathiuru and Kahurura locations in Gakawa ward in Kieni East sub county.

7.3. RECOMMENDATIONS

☐ Activation of sectoral working groups to prepare for response plans (Action: NDMA)
☐ Rehabilitation of strategic water points and de-siltation of pans and dams (Action: CGN)
☐ Sensitization on surface water harvesting (Action: CGN)
☐ Provision of supplementary feeds for livestock (Action: CGN)
☐ Provision of relief food to needy households (Action: Department of special programmes)
☐ Undertake a rapid assessment (Action: NDMA)
☐ Continued livestock disease surveillance (Action: CGN)
☐ Rehabilitation of water storage facilities in preparation to the October-November-December (OND) rains.
☐ Support farmers with certified seeds and subsidised mechanisation services. (Action: CGN)