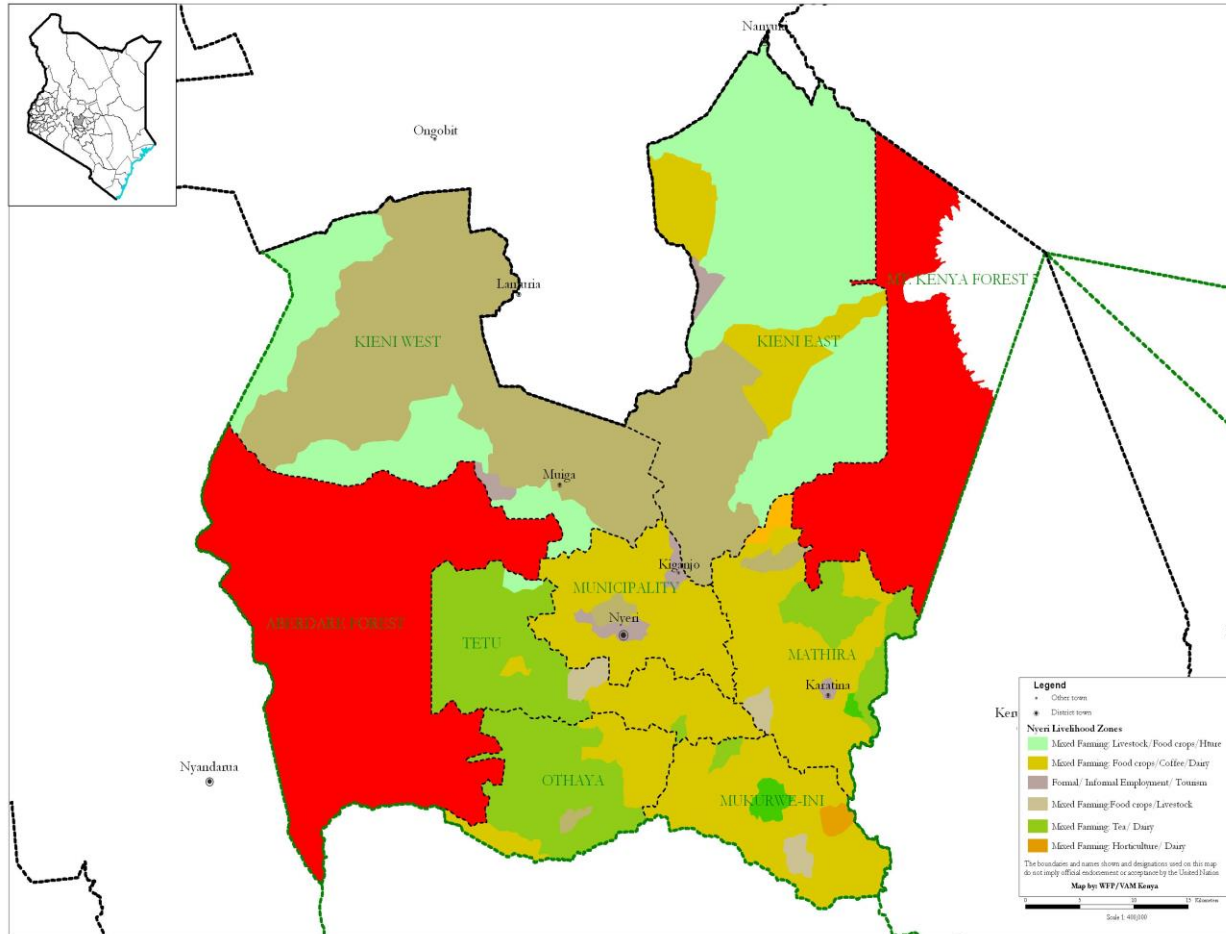


NYERI (KIENI) COUNTY
2013-14 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT
3RD - 7TH FEBRUARY, 2014



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1 INTRODUCTION

1.1 County Background and information

Kieni consists of two Sub Counties namely Kieni East and Kieni West. It is located in Nyeri and covers an area of 1,990 square kilometres (km²) out of which 1,026 km² is suitable for both Livestock and Crop Production. Individual land holding ranges between 0.4 hectares to 120 hectares with the average land size of 2.4 hectares. It borders Laikipia County to the North, Mount Kenya to the East, Aberdare Ranges to the West, Nyeri Central and Mathira Sub Counties to the South. It has a population of 175,812 persons according to the Kenya National Bureau of Statistics (KBNS census, 2009). Population distribution by livelihood zone is as follows; Marginal Mixed Farming Livelihood zone (MMFz) 43 percent, Mixed Farming Livelihood zone (MFLz) 34 percent, Non-formal employment 16 percent and Formal employment seven percent as indicated in figure 1.

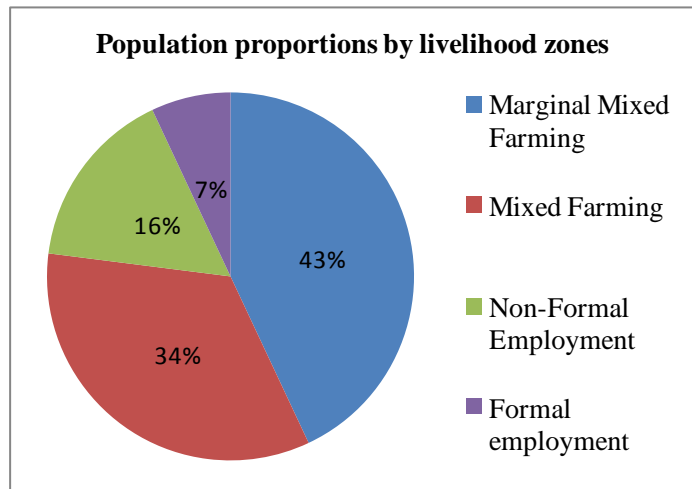


Figure 1: Population distribution by livelihood zones

1.2 Current Factors Affecting Food Security

- Frequent droughts
- High food Prices
- Crop and Livestock diseases
- Poor infrastructure
- Human wildlife conflict
- Frost
- Poor seeds for crops and livestock

2 COUNTY FOOD SECURITY SITUATION

2.1 Current Food Security Situation

The current food security Phase Classification (IPC) for the area is “None or Minimal” for both the livelihood zones with an exception of a few pockets in the Marginal mixed farming livelihood zone, which have moved to the “stressed” phase. There are factors showing improvements such as; the good pasture conditions, reduced distances to watering points, availability of milk, and fair terms of trade. The gains made are short lived and are likely to be watered down by the current drop in yields of major staple foods of maize, beans and potatoes by 77 percent, 52 percent and 74 percent respectively. In the marginal mixed farming livelihood zones, households consume 1-2 meals a day compared to the normal three meals a day. In the Mixed farming livelihood zones, 2-3 meals are taken per day instead of the normal four meals per day. Dietary diversity is poor with only three food groups taken instead of five. The percentage of children who are at risk of malnutrition as represented by Mid Upper Arm

Circumference (MUAC) increased marginally from 1.3 in July to 1.5 in December and is currently at 1.7 (January 2014). It is currently lower than the long term average but unstable which may be a pointer to food instability.

2.2 Food Security Trends

Kieni was in Stressed Phase of IPC classification during 2012-2013 short rains assessment. The situation improved during the long rains assessment of July 2013 and was in Minimal or None phase. The food security situation remains the same as in the long rains in most areas but has deteriorated and is currently at Stressed phase classification in localized parts of the Marginal mixed farming livelihood zone.

There has been a decline in return trekking distances for livestock from 1-2.5 km to 1-2 km for mixed farming and 1.5-4 km to 1-3 km for marginal mixed farming. Distances to watering points for domestic use equally reduced from 1-1.5 km to 0.5 km in mixed farming and from 2-4 km to 1.5 km in marginal mixed farming. Consumption remained normal at 25 litres per person per day in the mixed farming zone and increased from 7.5 litres to 10 litres for the marginal mixed farming. Pasture condition is normal and livestock body condition is fair to good. The current high temperatures, frequent frost bites and strong winds are likely to lead to faster deteriorating of pasture within the period of less than two months.

Sustenance in production of staple foods in the area has been affected gradually by incidences of pests such as millipedes in potatoes, Maize lethal necrosis disease in maize and frost bites directly and indirectly impacting on availability, access and utilization at household level. In effect, 90 percent of households are relying on markets compared to the normal 80 percent. Out of these, 25 to 30 percent are not able to meet the food needs sufficiently and the number is expected to increase if the long rains delay.

2.3 Rainfall Performance

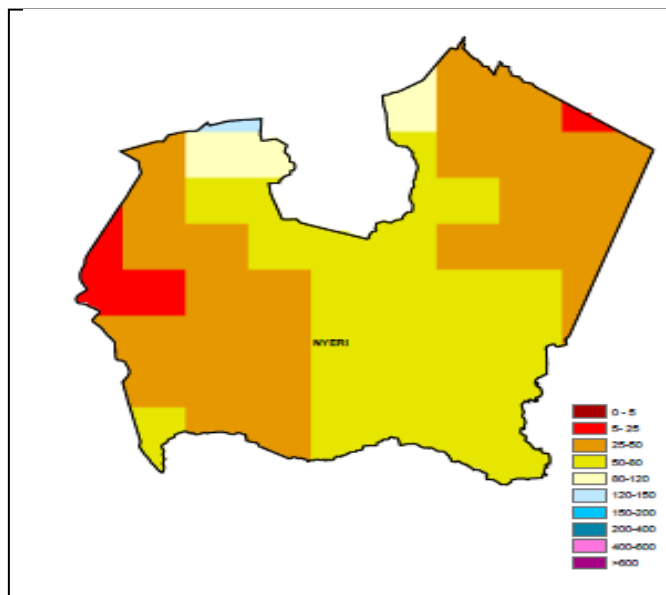


Figure 2: Rainfall Performance as a percent of normal

The onset of rain was late by one week, in the third dekad of October compared to the second dekad of October.

The central parts of the region received 50 to 80 percent of normal rains, while the Eastern and the North Western parts received 25 to 50 percent of normal rainfall. There is a small pocket in the East which received 5 to 25 percent of normal as illustrated in figure 2.

Distribution was poor both in time and space and cessation was in mid December instead of end of December.

2.4 Current Shocks and Hazards

There were no major shocks and hazards cited in the region except frost bites.

3 IMPACT OF RAINFALL PERFORMANCE, SHOCKS AND HAZARDS

3.1 Crop Production

The short rains season is of great significance to crop production since it contributes 40 percent of income across all the livelihood zones. The major crops grown are; maize, beans, potatoes and wheat. The contribution made by sell of rain fed horticultural products such as onions and cabbages contribute 30 percent. Potatoes and beans contribute 45 and 10 percent respectively. Maize Production contributes 20 percent of food in the marginal mixed farming livelihood zone and 60 percent in the mixed farming livelihood zone.

3.1.1 Table 1: Rain-fed Agriculture (3 major crops)

| Crop | Area planted 2013 Short rains (Ha) | Long Term Average of area planted Short rains (Ha) | 2013 Short rains production (90 kg bags) Projected/Actual | Long Term Average production Short rains (90 kg bags) |
|-------------------|------------------------------------|--|---|---|
| 1.Maize | 4,499 | 4,943 | 8,998 | 39,544 |
| 2.Beans | 4,373 | 4,569 | 8,746 | 18,276 |
| 3.Potatoes | 4,850 | 5,900 | 121,259 | 472,000 |

Variation on hectareage put under crops was minimal; however, significant reduction in yields for all crops is expected as seen in table 1. The significant drop in production is attributed to poor performance of rain at crucial stages of development such as podding in beans, tussling in maize and tuber expansion in potatoes. There was no provision of subsidized relief seed and the government subsidized fertilizer was late and inadequate at the time of planting. The situation was compounded further by incidences of pests and diseases such as maize lethal necrosis disease in maize, attack of millipedes in potatoes and frost bite. Subsequently, a significant drop in production for all the crops is expected by 77 percent for maize, 52 percent for beans and 74 percent for potatoes.

The drop is expected to be more significant in the Marginal mixed farming livelihood where harvest is estimated to be less than ten percent of normal. Comparatively, Mixed farming livelihood zone is expected to realize 40 percent of normal harvest because of the influence of micro climatic conditions of slightly more rains and cool temperatures in the mornings and evenings. The poor performance of crops for the last three successive seasons sets a stage for the households to become impoverished.

3.1.2 Table 2: Irrigated Agriculture

| Crops | Area planted 2013 Short rains (Ha) | Long Term Average of area planted Short | 2013 Short rains production (90 kg bags) | Long Term Average production the Short rains (90 kg bags) |
|-------|------------------------------------|---|--|---|
|-------|------------------------------------|---|--|---|

| | | rains season(Ha) | Projected/Actual | |
|--------------|-----|------------------|------------------|------------|
| Cabbages | 635 | 650 | 9525 tons | 16250 tons |
| Beans in pod | 115 | 180 | 345 tons | 540 tons |
| Onions | 258 | 283 | 14333 tons | 15740 tons |

There was a general decline in production of cabbages by 41 percent and beans in pods by 36 percent as seen in table 3. The decline in production is attributed to insufficient water resulting from abstraction upstream. Ten percent of households who produced through irrigation had sufficient food compared to those who relied on rain fed cropping.

3.1.3 Table 3: Maize stocks

| Maize stocks held by | Quantities of maize held (90-kg bags) | Long Term Average quantities held (90-kg bags) at similar time of the year |
|----------------------|---------------------------------------|--|
| House Holds | 55 | 90 |
| Traders | 4,741 | 5,975 |
| Millers | 2,470 | 4,590 |
| NCPB | 0 | 0 |
| Total | 7,266 | 10,565 |

There is a reduction of stock at all levels compared to the long term average as seen in table 3 above. The reduction is attributed to eroding of stocks resulting from successive failed seasons at household level and the fact that the piece meal harvests realized at this time is insignificant. The stocks at trader's level are reducing because of increased demand from households. Less than ten percent of households have stock which is estimated to last for two weeks compared to the normal one month while 90 percent of households rely on markets.

3.2 Livestock Production

Major livestock species in Kieni sub counties include cattle, sheep, goats and local poultry. About 70 percent of the households keep one or more livestock species as a source of income across the two major livelihood zones of marginal mixed farming and mixed farming. About 80 percent of cattle kept are crosses with pure breeds being kept by only a few farmers in high rainfall potential areas. Livestock keeping accounts for about 30 percent of households' incomes in the mixed farming and 35 percent in the marginal mixed farming zone. Out of the 3 major species, cattle are most preferred especially the mixed farming zones where they are mainly kept for milk production. There has been a reduction in the meat goat population as more farmers are now shifting to dairy goats rearing.

3.2.1 Pasture and Browse

The pasture condition is fair in marginal mixed farming livelihood zone and good in mixed farming zone. It is expected to last for one month in marginal mixed farming livelihood zone and 1.5 months in mixed farming livelihood zone showing a normal trend. Exceptions were observed in a few pockets of Burguret, Lamuria and Karemeno, of marginal mixed farming livelihood zone where pasture condition was seen to be deteriorating. Browse condition is good in all the livelihood zones and is expected to last for two months but may deteriorate faster in the marginal mixed farming livelihood zone where the small stock intensity is higher. The current pasture and browse situation can be attributed to the unexpected rains that the sub counties experienced during the first week of January which is usually dry.

Factors that are likely to contribute to faster deterioration of pasture and browse condition include; current high temperatures being experienced, frost bites and strong winds which have been more frequent than normal. The mentioned factors have also affected quality of the available pasture.

3.2.2 Livestock Productivity

Birth Rates

The birth rates are normal despite the longer calving intervals of about 420 days in cattle, attributed to poor diet and poor quality of AI services.

Tropical livestock units (Tropical Livestock Units)

The TLUs in the mixed farming LZs average 3.5 while in the marginal mixed farming livelihood zones, it averages 4.0 showing an increase by one percent for both zones. More farmers are shifting towards keeping the small stock as land parcels diminish with the increase in population. Poultry is also contributing to incomes, especially in the Marginal Mixed Farming livelihood zone with most households having between 8-12 local birds.

Milk availability, Consumption and Price

There is an increase in milk production with the marginal mixed farming zones producing 1.5 litres compared to a normal of 1.0 litres, and mixed farming livelihood zone, averaging at 3.5 litres compared to a normal of 2.5 litres.

Consumption of milk is higher than normal and stands at 0.8 litres per day compared to a normal of 0.5 litres in the marginal mixed Farming livelihood zones and 1.2 litres in the mixed farming livelihood zone compared to a normal of 1.0 litre. Consumption is expected to decline with the deteriorating quality of pasture and lack of capacity to buy supplement. The current price of milk is Ksh. 30 in the mixed farming areas and Ksh. 31 per litre in the marginal mixed farming zone compared to the normal Ksh.35 and Ksh.40

3.2.3 Water for Livestock

The current water sources for livestock are rivers, streams, water pans and dams. Water volumes in these sources are below normal owing to a higher rate of evaporation. The current return trekking distances range from 1-2. km in the mixed farming zones as compared to a normal 1.0 - 2.5 km. while in the marginal mixed farming areas, return trekking distance is 1-3 km compared to a normal of 1.5 - 4 km. The frequency of watering is currently twice a day for cattle and sheep across all the livelihood zones.

3.2.4 Livestock Migration

There are no notable migrations in or out of the sub counties, except the normal movement of animals within the sub counties for grazing and watering purposes.

3.2.5 Livestock Diseases and Mortalities

Foot and Mouth disease (FMD) cases were reported in Lamuria in marginal mixed farming and Mureru in the mixed farming livelihood zones leading to quarantine in Lamuria. Other livestock diseases reported include; East Coast Fever (ECF) Anaplasmosis, Eye infections and New Castle Disease (NCD) in fowls particularly in Mweiga Ward. The unusual mortalities experienced were those of the young cattle stock that easily succumb to ECF currently prevalent in areas close to the forest. These deaths continue to pose a major challenge to the accumulation of livestock assets at household level, hence loss of livelihood.

3.3 Water and Sanitation

The main water sources are; Rivers, Streams, Boreholes, Springs, Dams and Pans. Surface water from rivers and streams is abstracted through gravity systems which are operated through rationing programmes reaching 52 percent of population in both livelihood zones. Most farmers in the mixed farming zones of Upper Kieni grow onions under irrigation upstream, reducing water for farmers in the marginal mixed farming zones downstream especially around Gatarakwa and Eramuria sub-locations. Discharge in boreholes and springs were not affected in both Livelihood zones. Out of 24 boreholes, only 17 are operational and four are under rehabilitation. The existing Dams and Pans are 80 percent silted up but have impounded adequate water to last for the next two months.

3.3.1 Distance to water sources

Distances to water points have reduced from 1-1.5 km to 0.5 km in the mixed farming livelihood zone. In the marginal mixed farming livelihood zone, the current distance is 1.5 km compared to the normal of 2-4. There is water rationing once a week hence households rely more on rivers and seasonal streams. The mixed farming livelihood zone receives three days in a week.

3.3.2 Waiting time at the source

Average waiting time for domestic water in the mixed farming zone is five minutes compared to the normal 10 minutes, and stands at normal time of 40 minutes in marginal mixed farming livelihood zone. The longer time is attributed to imbalanced water distribution; hence deficits experienced in the marginal mixed farming Zones.

3.3.3 Cost of water

About 20 percent of farmers in the marginal mixed farming livelihood zone are currently buying water compared to 10 percent in normal times; and three percent in mixed farming zones compared to less than one percent normally. The increase in the cost of water is attributed to increased intensity of farming activities and rationing inadequate amounts. The current cost of water (20 liters jerrican) in the mixed farming livelihood zones remain normal at Ksh. 2. in the marginal mixed farming zones. The cost is Ksh. 20 compared to the normal of Ksh. 3.

3.3.4 Water consumption

The current average water consumption per person per day in the mixed farming livelihood zone remains normal at 25 litres and 10 litres compared to normal 7.5 litres in the marginal mixed farming livelihood zone. More farmers within the marginal mixed farming zones buy water more

expensively and draw from distribution points at distances relatively far as compared to farmers in the mixed farming zones. Implications on food security in the marginal mixed farming zones is lack of water for kitchen gardening and minor irrigation.

3.3.5 Sanitation

There is contamination of flowing rivers- by waste water effluent from Mweiga market, chemicals from horticulture and floriculture farms, human activities like clothe and vehicles washing in rivers, farming near river banks and underground toilet sippage. There are also reported cases of surface water contamination of piped water scheme due to pipe leakages, harvested rain water from contaminated storage and handling equipment in all the livelihood zones. Current corrective measures to curb contamination include, encouraging water service provider to upscale piped water provision to households, capacity building on proper waste management practices both at households and markets.

3.3.6 Hygiene

Water treatment chemicals are not available to community members in both livelihood zones and the public health office has taken initiative to avail the chemicals. Domestic water treatment practices which include; boiling drinking water, domestic water chlorination, solar disinfection is practiced by only 20 percent of households in all the livelihood zones.

Food handling and hygiene practices are poor in all the livelihood zones. There exists a gap in knowledge, attitudes and practice of both food and hygiene practices. About 40 percent of households store their foods in poorly lighted and ventilated stores; eat un-washed raw foods and don't practice ideal hand washing practices.

3.4 Markets and Trade

3.4.1 Market operations

Main markets in the county are found along the main Nyeri- Nyahururu highway and Isiolo, Nanyuki – Nairobi highway hence provide good opportunities for buyers and sellers from within and out to operate. There were no major market disruptions during the period under review and all markets operated normally. The major food commodities sold by farmers in the area are onions, potatoes and vegetables. Maize and beans are from outside the area.

3.4.2 Market Supply, Traded Volumes and Commodity Demand

There was a decline in traded volumes. Crop failure which usually provide alternative source of income through casual farm labor and sale of local produce were cited as some of the causes for the decline. Supply sources to the markets include Laikipia, Nyandarua and Meru County. The market demand for the staple food stuff is expected to increase, but purchasing power of the households especially in the marginal mixed farming will be low, because they depend more on casual labour from the farms which is now scarce due to erratic rainfall that has affected crop farm activities. There were no recorded distress sales or unusual purchases

Kieni has an organized market for milk with 13 co-operative societies and 5 self-help groups engaged in milk marketing but most farmers prefer selling milk to middle men. It has no organized markets for cattle, small stocks and local poultry, which are commonly traded under local arrangements between a willing seller and buyer. The livestock market has also remained stable throughout with no major disruptions. The quarantine in Lamuria because of Foot and

Mouth disease had no significant impact on livestock marketing since there is no livestock market in the area.

3.4.3 Market Prices

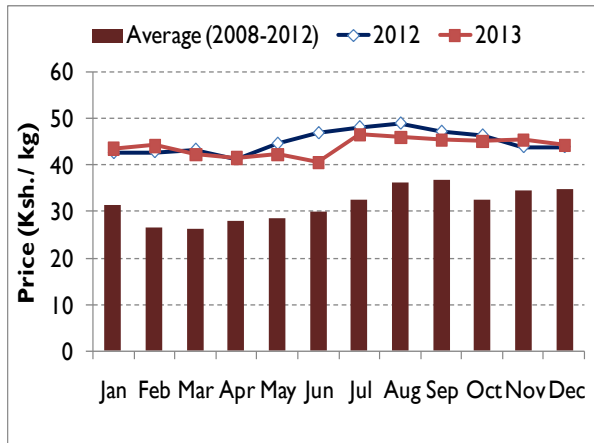


Figure 3: Average Maize price in Ksh. Per kilo

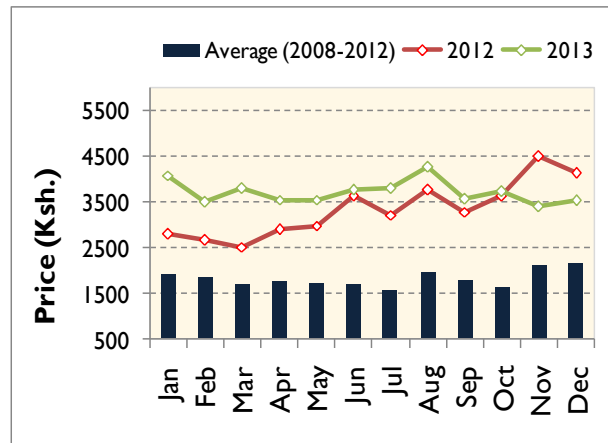


Figure 4: Average Sheep price in Ksh.

Maize price

The price of maize ranges between Ksh.40 and Ksh.45 depending on where it is sourced. It retailed at an average Ksh.44 per kilogram in December compared to the long term average of Ksh. 39 per kilo as shown in figure 3 above.

Sheep price

The average price of a mature sheep in Kieni retails at Ksh. 3,539 in December compared to the long term average of Ksh. 2,251 as shown in figure 4 above. The prices in the marginal mixed farming zone were ranging from Ksh. 3,000 to Ksh. 3,500; and about Ksh. 4,000 in the mixed farming livelihood zones.

3.4.4 Terms of trade

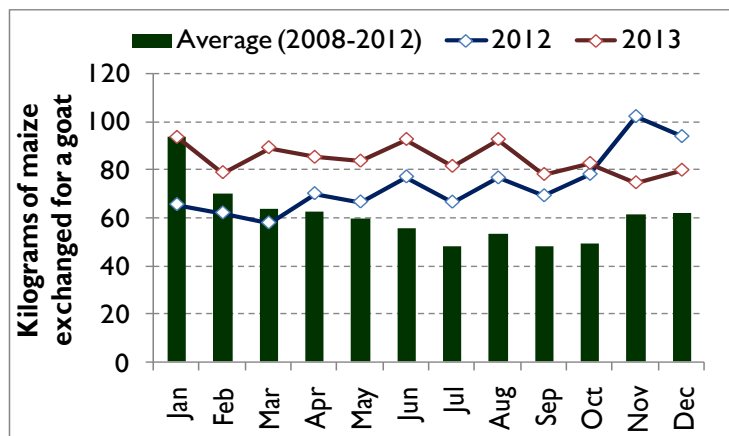


Figure 5 Comparative terms of trade.

The current Terms of trade (ToT) in December have fallen 15 percent below the year 2012 but still remain 38 percent above the LTA.

Currently, the sale of one goat would purchase 80 kg of maize compared to 94 kg of maize same period last year and the long term average of 58 kg as shown in figure 5.

3.5 Health and Nutrition

3.5.1 Morbidity and mortality patterns

The most common diseases reported for both the under 5 and the general population in order of significance are; Upper respiratory tract infection, disease of the skin, diarrhea, pneumonia and intestinal worms. Disease prevalence rate for the under 5 has been on the decline in Kieni East in comparison to Kieni West. This is attributed to close proximity to health care services

There was no major disease outbreak during the period under review. Diarrhea cases increased from 2,745 in July-December 2012 to 3,060 cases same period in 2013.

Crude Mortality Rates

The crude mortality rate for the under fives has remained the same and stands at 0.14/10,000/day while the crude death rate for the general population is at 0.03/10,000.

3.5.2 Immunization and Vitamin A supplementation

The fully immunized child coverage stood at 97 percent compared to 93 percent in 2012 showing an improvement. Vitamins A coverage was 66 percent which fell short of the national target of 80 percent. This was attributed to low supplementation at ECD centres due to inadequate resources to facilitate the exercise. There were no variations within the livelihood zones.

3.5.3 Nutrition Status and Dietary Diversity

Households in mixed farming livelihood zones consume three meals per person per day compared to the normal four times a day. In marginal mixed farming livelihood zone households take one to two meals a day compared to the normal three due to unavailability of food and limited sources of income. The dietary diversity consists of potatoes, ugali with beans, ugali with cabbage and tea. Initiation of complementary feeds is started as early as two weeks to two months for 20 percent of mothers and three months to five months for 70 percent of mothers. The diet consists of maize meal porridge with milk, mashed potatoes, pumpkins and bananas. Impediments to exclusive breast feeding include mothers resuming casual labor and low production of milk by lactating mothers who do not get adequate meals.

The percentage of children at risk of malnutrition as represented by MUAC increased from 1.2 in July to 1.5 in December 2013 as indicated in figure 6 and further increased to 1.7 in January

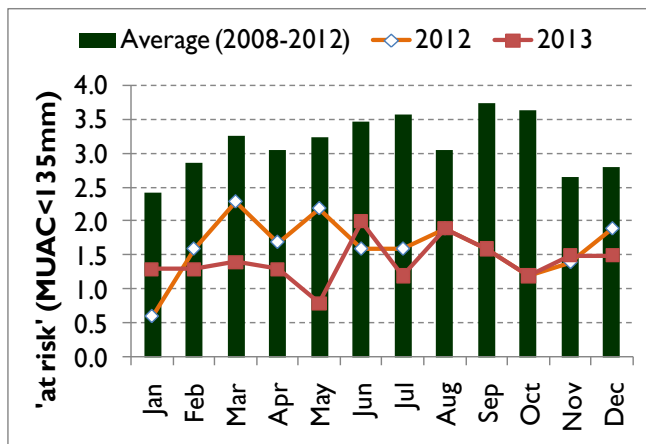


Figure 6: Percentage of Children at risk of malnutrition

2014 indicating a deteriorating trend. Although it is lower than the long term mean average, MUAC has been seen to be unstable from July to January, 2014 possibly because of instability in availability and access of food by households because of poor harvests. The most likely causes of malnutrition include; insufficient food at household level, poor infant and young child feeding practices even when food is available and low purchasing capacity for some household leading to inability to access food .

3.6 Education

3.6.1 Enrolment

There was an increase in enrolment for both ECD and Primary level by 42 and 951 pupils respectively. Enrolment increased by 0.6 and 0.3 percent for boys and girls at ECD respectively, while at Primary level the increase was 3 and 2.5 percent for boys and girls respectively, showing a normal trend. In primary school, boys' enrolment out-numbered girls for both years owing to high dropout rates for girls

3.6.2 Drop out

Few cases of dropouts were reported in ECD because of the low fees charged and the short duration. Dropout rates were minimal at primary level because of free primary education, although the reported cases indicated that the rates for girls were higher than boys. Girls usually drop out because of early pregnancies, early marriages and poverty. The cause for dropout was reported to be poverty and this was grave in horticultural zones of Kabaru where children go to seek for labor to supplement the family needs.

3.6.3 Transition

Transition rate from ECD to primary is 95 percent because of affordable fee. At Primary school level, transition rate from lower primary to upper primary 94 percent, attributed to the ministerial policy against repetition. Transition from Primary to Secondary was 76.58 percent attributed to establishment of secondary schools within primary schools.

3.6.4 School meals programme

There is no school under the School meals program in Kieni. Supplementary Feeding Program which was targeting 5,990 boys and 5,706 but stopped ten months ago and children are in dire need of the food. Previously, parents used to contribute food portions to schools but this has been hampered by crop failure, the marginal mixed farming zone being affected most. A visit to the schools indicated that most children did not carry packed lunch and few who carried; the meal composition was below the required standards of a balanced diet.

3.7 Coping Mechanisms

The coping mechanism currently employed by households especially in the Mixed marginal farming zone include; reduction in size and number of meals taken per day, relocation to the shamba system agricultural sites for farm labour and relying on remittances.

3.8 Ongoing Interventions by Sector

There were no food interventions or emergency non-food intervention in the county, only medium to long term non-food interventions as listed in the table below.

Table 4: Ongoing non-food Sectoral Interventions

| Intervention | Objective | Specific Location | Cost (Ksh) | No. of beneficiaries | Implementation Time Frame | Implementation stakeholders |
|---------------------|------------------|--------------------------|-------------------|-----------------------------|----------------------------------|------------------------------------|
| AGRICULTURE | | | | | | |

| | | | | | | |
|--|---|---------------------------|-------------------|---------------------------------------|--------------------|-----------------------------------|
| Provision of drought tolerant crop seeds | increase food availability | Kieni East | 700,000 | 400 | | MoALF NDMA |
| GREEN HOUSES | Increase income from hort. crops | Kieni East | 18.0M | 60 | | NIB/MoALF |
| Njaa Marufuku Programmes | Improve food security at House hold level | Kieni East and West | 120,000 per group | 23 groups funded cumulatively to date | | MoALF |
| LIVESTOCK | | | | | | |
| Support to formation of livestock marketing groups and federations | Improve income from marketing of livestock and products | Kieni East and Kieni West | | 400 farmers | 1 year | Farmers, MoALF |
| Construction of a modern slaughter house | Improve marketing of livestock | Kieni East | 21.0m | All livestock keepers | 1 Year | MoALF |
| Upgrading of local goats | Improve goat breeds and milk production | Kieni East | 1.87m | 3000 persons | 2yrs | MoALF/NMK &G.R.A.C.E Africa |
| WATER | | | | | | |
| Provision of pipes for Nairobi | increase food production under | Kieni East | 1.2 Million | 80 | October - December | Irrigation Department AIE |

| | | | | | | |
|--|---|---|--------|--------|------------|-------------------------------|
| Irrigation | irrigation | | | | | |
| HEALTH | | | | | | |
| Management of Acute Malnutrition (IMAM) | Increased/improved food intake Improved productivity | Narumoru Thegu Gakawa Gataragwa Mwiyogo Mweiga | | 410 | 3-6 months | MOH NDMA APHIA +K |
| IYCN Interventions (EBF and Timely Intro of complementary Foods) | Reduced morbidity and increase productivity | Naromoru Gakawa Gataragwa Mwirogo Thegu | 50,000 | 900 | 2 months | MOH NDMA APHIA+K |
| Iron Folate Supplementation among Pregnant Women | Increased productivity Reduced morbidity | Kieni west and Kieni east | 50,000 | 14,708 | continuous | MOH MOE NDMA APHIA+K |

3.9 Sub County Ranking

The Sub County ranking was as reflected in table 10 after a wide consideration of the food security threats in the area.

Table 5: Ranking of Sub-county in order of food insecurity severity.

| Sub County | Ward | Rank | Food security threat |
|------------|-----------|------|--|
| Kieni East | Thegu | 1 | 80% crop failure, livestock diseases, declining water sources, pest and diseases, frost bites and poor roads |
| Kieni west | Gatarakwa | 2 | 80% crop failure, livestock diseases, declining water sources, pest and diseases, frost bites and poor roads |
| Kieni East | Gakawa | 3 | 80% crop failure, livestock diseases, declining water sources, pest and diseases, frost bites and poor roads |
| Kieni west | Mugunda | 4 | 80% crop failure, livestock diseases, declining water sources, pest and diseases, frost bites and poor roads |

| | | | |
|------------|------------|---|--|
| Kieni East | Naromoru | 5 | 80% crop failure, livestock diseases, declining water sources, pest and diseases, frost bites and poor roads |
| Kieni west | Mwiyogo | 6 | 80% crop failure, livestock diseases, declining water sources, pest and diseases, frost bites and poor roads |
| Kieni East | Kiamathaga | 7 | 60% crop failure, existence of colonial villages highly dependent on casual, markets and relief Poor infrastructure |
| Kieni East | Kabaru | 8 | 60% crop failure, existence of colonial villages highly dependent on casual, markets and relief Poor infrastructure |
| Kieni west | Mweiga | 9 | 60% crop failure, existence of colonial villages highly dependent on casual, markets and relief Poor infrastructure |

4 FOOD SECURITY PROGNOSIS

Food security situation is expected to deteriorate to stressed levels if the long rains fail to be timely with significant impacts experienced in the marginal mixed farming livelihood zone. Depletion of pasture whose quality is already low will lead to poor livestock body condition hence poor market prices.

Household food consumption is expected to significantly decline in two months' time due to deficits at household level and inability to purchase because of minimal wages earned. Increased coping strategies are expected as malnutrition levels for children under five and school going children are expected to worsen.

Increase in distances to watering points and more rationing are expected. Consequently, water intake which is already below the thresholds (currently at ten litres per person per day) will decline further. If the long rains start on time, there likely to be an improved pasture and browse condition and livestock body conditions, increased milk yields and good market prices will offered making the marginal mixed livelihood less vulnerable. In the mixed farming livelihood zone, short seasoned horticultural crops under irrigation are expected to bridge the food gaps to some extent.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion Statement

Kieni region is currently under Minimal food security phase in both the marginal mixed livelihood zones and the mixed livelihood zones. Both livelihood zones may be at risk of sliding to stressed levels.

5.2 Factors to monitor

- Frost bites
- High temperatures
- MUAC levels of children under five and nutritional status of the school going children
- Attendance for primary school going children
- Food availability and access at household levels

- Water availability especially in the marginal mixed farming livelihood zones

5.3 Summary of Recommendations

- Relief food for the vulnerable for six months
- Provision of relief seed
- Food for Assets
- School feeding program
- Nutrition survey
- Food supplementation
- Provision of water treatment chemicals
- Water harvesting for crop production

6 ANNEXES

6.1 Annex1: Food Interventions Required

Proposed population in need of food assistance

Table 6: The percentage range of the population in need of food assistance

| Ward name | Population | Population in need (% range min-max) | Proposed mode of intervention | Remarks |
|------------|------------|--------------------------------------|---|--|
| Thegu | 14,619 | 25-30 | Require relief food for the next six months Require relief seeds for the LR season planting FFA | 80% crop failure Livestock diseases Declining water sources Pest and diseases Frost bites affecting weather and crops Poor infrastructure |
| Gatarakwa | 29,025 | 20-25 | | |
| Gakawa | 26,321 | 20-25 | | |
| Mugunda | 12,600 | 20-25 | | |
| Naromoru | 21,533 | 20-25 | | |
| Mwiyogo | 11,730 | 15-20 | Require relief seeds for the LR season planting FFA | 60% crop failure Existence of colonial villages highly dependent on casual, markets and relief Poor infrastructure |
| Kiamathaga | 11,943 | 15-20 | | |
| Kabaru | 22,084 | 15-20 | | |
| Mweiga | 17,264 | 15-20 | | |
| Endarasha | 17,693 | 10-15 | | |
| Total | 184,812 | | | |

6.2 Annex 2: Non Food Interventions

Table 7: Proposed Cross Sectoral Non-Food Interventions

| Sub County | Intervention | Location | No. of beneficiaries | Proposed Implementers | Required Resources | Available Resources | Time Frame |
|--------------------|--------------|----------|----------------------|-----------------------|--------------------|---------------------|------------|
| AGRICULTURE | | | | | | | |

| | | | | | | | |
|------------------------------|--|-------------------|------------------------------------|-------------------------|---------|----------------------------|-------------|
| Kieni East & West | Water harvesting for crop production | All | 35,200 | County Govt, MOAI,ND MA | Funds | Human and technical skills | March-May |
| Kieni East & West | Provision of relief seeds | All | 11,500 | county govt,MOA LF,NDMA | funds | Technical staff | March,april |
| EDUCATION | | | | | | | |
| Kieni East & West | SFP | All locations | 10,000 in primary and 2,000 in ECD | MOE County Govt | 2.6M | | 3 months |
| HEALTH AND NUTRITION | | | | | | | |
| Kieni East & West | Nutrition survey | Kieni East & West | 10,000 | MOH, NDMA, APHIA+K | 2.5 M | | 3 months |
| Kieni East & West | Food supplementat ion | Kieni East & West | | MOH, NDMA, APHIA+K | 6.3M | | 3 months |
| Kieni East & West | Provision of water treatment chemicals | Kieni East & West | | MOH, NDMA, APHIA+K | 500,000 | | 1 month |