

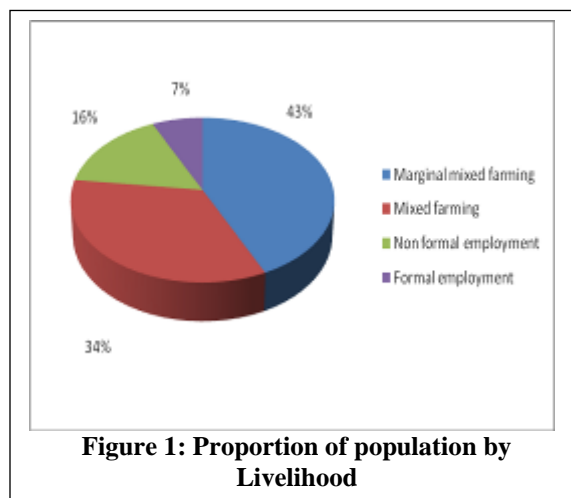
TABLE OF CONTENTS

1	INTRODUCTION.....	3
1.1	County Background	3
2	COUNTY FOOD SECURITY.....	3
2.1	Current Food Security Situation	3
2.2	Food Security Trends	3
2.3	Rainfall Performance	4
3	IMPACT OF RAINFALL PERFORMANCE, SHOCKS AND HAZARDS	4
3.1	Crop Production	4
3.2	Livestock Production.....	6
3.3	Water and Sanitation	8
3.4	Markets and Trade.....	9
3.5	Health and Nutrition.....	10
3.6	Coping Mechanisms.....	12
4	FOOD SECURITY PROGNOSIS.....	12
4.1	Prognosis Assumptions	12
4.2	Food Security Outcomes for the Next Three Months	12
5	CONCLUSION AND RECOMMENDATIONS.....	13
5.1	Conclusion.....	13
5.2	Summary of Recommendations	13
5.3	Sub-County Ranking	13
6	ANNEXES	14
	Food Intervention Required (Proposed population in need of assistance)	16
6.1	Annex II. On-going Interventions by Sector	16

1 INTRODUCTION

1.1 County Background

Kieni East and West sub counties lie within Nyeri County covering 52 percent of the total land cover. The two sub counties cover an area of 1,990.3 square kilometres with a total population of 175,812 people². The main livelihood zones include marginal mixed farming (covering 43 % of the total population), mixed farming (34 %), non-formal employment (16 %) and formal employment (seven percent) - Figure 1.



2 COUNTY FOOD SECURITY

2.1 Current Food Security Situation

All the three livelihood zones are classified in the Minimal (IPC Phase 1). The current factors affecting food security include frost, livestock pests and diseases, poor or low yielding livestock genetic stock, high cost of veterinary drugs, low use of fertilizers, and invasive pasture weed. Food is mainly accessed from own production and purchase.

Livelihood Change: There was a noted slight livelihood change in terms of introduction of *miraa* as a cash crop in the marginal mixed farming zone. Areas that previously grew maize are now under *miraa*. The farmers use the sales to buy food crops.

Nutritional Status: The mid upper arm circumference (MUAC) values for 2016 were lower than those of 2015 indicating improved health status during the current assessment period due to increased availability of food stocks at markets and households, milk, improved medical care and leguminous food consumptions for the households. At the household level, the household dietary diversity is stable across the two livelihood zones.

2.2 Food Security Trends

During the short rains assessment 2016, the county was classified in the Minimal Phase (IPC Phase 1) for all the livelihood zones. Currently, the county remains in the Minimal Phase (IPC Phase 1) as food stocks from previous season bumper harvest remain available within households. However there are growing number of pockets that are slowly shifting from minimal to stressed phase due to declining water levels, depleting pasture and browse due to severe effects of frost and declining maize stocks. Livestock productivity was normal as livestock body condition and milk production were fair to good across all the livelihood zones. The recharge of water sources was below normal and there are indications of declining water levels which is impacting negatively on pasture and browse. Further, frost is a great contributing factor and pastures have turned from green to brown, they are less palatable and the livestock body condition and milk production will decline. In marginal mixed farming livelihood zones, the terms of trade were in favour of the pastoralists as the sale of one sheep could purchase 140 kg of

² 2009 Kenya National Bureau of Statistics Census.

maize. The milk production was at 2 - 4 litre against a normal of 1 - 2.5 litre per household per day for cow milk. Milk consumption is 1-1.2 litre against a normal of 0.5-1 litres per household per day. Water consumption was at 15-20 lpppd in marginal mixed farming livelihood zone and 20-25 in mixed farming livelihood zones, water distances were at 0.5 - 2 km return. In the marginal mixed farming livelihood zone, the price of maize, beans and Irish potato were Kenya shilling 30, 120 and 50 per kilogram respectively. The maize stocks held at household level were 75,251 bags which is above the long term average (LTA).

Table 1: Food Security Indicators

Indicator	Current situation	Previous season
Food insecurity phase	Phase 1	Phase 1
Household food stocks (90kg bag)	7,525	114
Household water consumption, MMF	15-20	10-15
Household water consumption, MF	20-25	20-30
Coping strategy index	0.95	1.6
Food consumption score	2-3 meals	2-3 meals
Children at risk of malnutrition (MUAC)	0.8	0.8

2.3 Rainfall performance

The onset was timely in the third dekad of March. Rainfall amounts were mainly 90 - 110 percent of normal characterized by poor temporal and even spatial distribution. The highest amount was received in the third dekad of April. Only a small section in mixed farming livelihood zone received 110 - 125 percent of normal. Rainfall cessation was normal in the third dekad of May. Most of the rain was received in April, resulting in grain filling for maize being negatively affected especially in the marginal mixed farming livelihood zone.

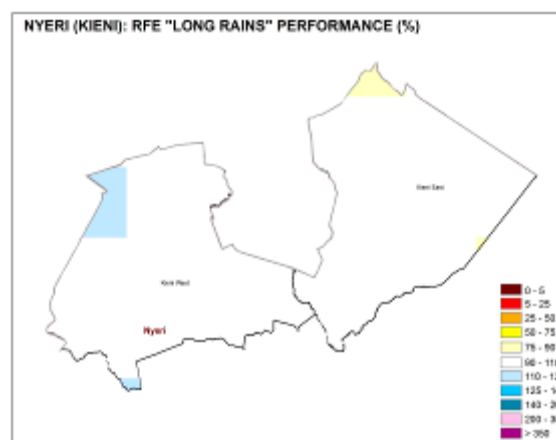


Figure 2: Rainfall performance, Nyeri County

3 IMPACT OF RAINFALL PERFORMANCE, SHOCKS AND HAZARDS

3.1 Crop Production

The county mainly relies on the October – December short rains for crop production, with the long rains season being unreliable for crop production. The major crops grown are maize, beans, Irish potato, cabbage, and onions. In the marginal mixed farming livelihood zone, beans, maize and sorghum contributes 60, 20 and 13 percent respectively of food income. In the mixed farming, maize, beans, Irish potatoes and cabbages contributes 40, 20, 15 and 12 percent of food income respectively. Onions contribute 10 percent of cash income in both livelihood zones while in Mixed Farming, cabbage and Irish potatoes contribute 32 and 22 percent. In the marginal mixed farming livelihood zone, long rains came late and ceased early followed by a period of

extreme cold days and nights contributing to frost and drying up of maize, beans, pastures and fodder

Table 2: Contribution of crops to cash and food income

Crops	Mixed farming zone		Marginal mixed farming zone	
	Contribute to cash income	Contribute to food income	Contribute to cash income	Contribute to food income
Maize	1	40	-	20
Beans	2	20	-	60
Irish potato	22	15	-	2
Cabbage	32	12	-	-
Onion	10	1	10	1

Table 3. Rain fed Crop production

Crop	Area planted during 2016 Long rains season (Ha)	Long Term Average area planted during the Long rains season (Ha)	2016 Long rains season production (90 kg bags) Projected	Long Term Average production during the Long rains season (90 kg bags)
Maize	2,680	2,800	2,680	5,600
Beans	2,045	3,050	2,045	6,100
Irish potato	4,220	4,100	168,800	205,000

The area planted with maize remained near average, attributed to the extension of *El Nino* rains and that farmers did not have enough time to harvest and do land preparation. Hectarage on Irish potato also remained near average due to Plantation Establishment and Livelihood Improvement Systems (PELIS), a form of *shamba* system where farmers are allowed to plant crops in the forest area as they take care of tree seedlings. Area under beans was lower than the LTA by 33 percent due to late planting as other crops were planted. Production declined by 52, 66 and 18 percent relative to LTA for maize, beans and Irish potato respectively, due to a lengthy dry spell from mid May to early June, which resulted in water stress.

Irrigated Crop

Table 4. Irrigated Crops Production

Crop	Area planted during the 2015 Short rains season (ha)	Long Term Average (3 years) area planted during Short rains season (ha)	2015 Short rains season production (MT) Projected	Long Term Average (3 years) production during 2015 Short rains season (MT)
Cabbage	510	615	7,650	15,375
Onions	150	283	675	1,981
Beans in pod	15	65	38	293

The area planted under irrigation decreased by 17, 47 and 77 percent of the LTA respectively due to late nursery and land preparation necessitated by the extension of the *El Nino* rains. Bean in pods area and production is lower than the LTA due to market uncertainties and stringent global requirements on minimum residual levels (MRL). For onions, low production was attributed to inadequate water for irrigation, early cessation of rains and excessive build up of blight.

Maize stocks

Table 5: Maize Stocks held

Maize stocks held by	Quantities held currently (90-kg bags)	Long Term Average quantities held (90-kg bags) at similar time of the year
House Holds	7,525	2,000
Traders	9,571	3,200
Millers	-	-
NCPB	-	-
Total	17,096	5,200

The stocks held are 276 percent higher than the long term average. However, the stocks are getting depleted, and harvesting of the long rains crop has not started, though it's expected to be below average in the marginal mixed farming zone due to extensive crop failure. Many households are relying on the market for food as the stocks held are increasingly diminishing. For traders maize is locally available and at lower prices.

3.2 Livestock Production

The major livestock in the county are cattle and sheep. In the mixed farming livelihood zone, cattle and chicken production contributes 65 and 30 percent of cash income while in the marginal mixed farming livelihood zone, cattle, chicken and sheep production contributes 40, 30 and 20 percent of cash income.

Table 6: Forage condition

Livelihood zone	Pasture condition			Browse condition		
	Current	Normally	Projected Duration to last (Months)	Current	Normally	Projected Duration to last (Months)
Mixed Farming	Good	Above normal	2	Good	Above normal	2-3
Marginal mixed farming	Fair-Good	Slightly above normal	1-2	Fair-Good	Slightly above normal	2-3

Forage condition is good as compared to normal in Mixed farming livelihood zones and fair to good in marginal mixed farming areas in the two sub-counties. However, some areas were hit by frost and strong winds especially in the MMF and this has affected the quality and quantity of the pastures. Napier grass has been affected by frost (up to 40%) across all the livelihood zones therefore not adequate both in quality and quantity. The maize crop is also not doing well in some parts of the Marginal mixed zones in the sub counties and this will also contribute to livestock feeds. Other sources of feed include wheat straw and crop residue from beans.

Livestock Productivity

Table 7: Body condition

Livelihood zone	Cattle		Sheep		Goat		Camel	
	Current	Normally	Current	Normally	Current	Normally	Current	Normally
MF	Good	Good	Good	Good	Good	Good	N/A	N/A
MMF	Good-fair	Good	Fair	Good	Good	Good	N/A	N/A

The body condition of most livestock species is currently ranging from good to fair especially in the marginal mixed farming areas where pasture and browse are fair. As the quality of the

available forage declines, the body condition of the livestock will deteriorate and consequently affect livestock productivity. Such a decline impacts negatively on food security and overall household income.

Table 8: Milk Production, consumption and prices

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres)per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
MF	2- 2.5	1	1.2	1	28	28
MMF	3.5 - 4	2.5	1	0.5	29	29

The milk production is currently higher than LTA as good rangeland resources, and absence of diseases support improved livestock productivity. There was higher milk consumption due to availability of milk. Currently, the milk prices are stable as the supplies and market demands are equal and milk processors, which are the main consumers, controls the prices. The prices are expected to go up in both livelihood zones as the pastures continue to diminish, affecting livestock productivity including milk production.

Tropical livestock units (TLU)

The TLUs in the Mixed Farming areas average 3.5 while in the Marginal Mixed Farming areas it averages 4.5. TLUs are above normal carrying capacity. Poultry also contributes to household incomes, especially households in the Marginal Mixed Farming livelihood zone with most households having between 8-15 local birds.

Birth rate

Currently, the birth rates are normal. However, for sheep and goats the birth rates are slightly high. This is attributed to the availability of feeds. There was more lambing and kidding as compared to normal times.

Migration

There were no unusual livestock's movements into or out of the county. However, in Kieni East sub county roadside grazing were noted and it's endangering the livestock. Road side grazing can be attributed to search for better forage conditions along the road sides particularly in the MMF areas where pasture and browse is fair.

Livestock Diseases and Mortalities

Cases of Pulpy kidney disease in sheep have been reported in Kieni East, however, it is still under investigation for necessary action to be taken. In Mweiga, cases of rabid dogs were reported and baiting was done and plans to start the vaccination against the same are underway. Other livestock diseases common in the county include East Coast Fever (ECF), Anaplasmosis, eye infections and Newcastle disease (NCD) in fowls. ECF is a common killer among the calves especially in the mixed farming areas. However, there are no unusual livestock deaths reported.

Table 9: Water for Livestock

Livelihood zone	Sources		Return trekking distances		Expected duration to last		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
MF	Dams, Rivers, Streams, Water pans	Dams, Rivers, Streams, Water pans	0.5 - 3	0.5 -2.5	2-4	1.5	Cattle-2 Sheep-1 Goats-1	Cattle-2 Sheep-1 Goat-1
MMF	Dams, Rivers, Streams, Water pans	Dams, Rivers, Streams, Water pans	1-4	1-4	1-2	1	Cattle-1 Sheep-1 Goats-1	Cattle-1 Sheep-1 Goat-1

The trekking distance is expected to increase as the next expected rains are two and a half months away. Currently, the watering frequency is daily for all the species. Further, some water pans have completely dried up such as Kienjero dam in Mugunda, while some streams are occasionally drying up due to over abstraction up stream for crop irrigation water.

3.3 Water and Sanitation

Major sources of water

The current water sources for livestock include; rivers, boreholes, water dams, shallow wells and piped water in all livelihood zones and are the normal sources at such time of the year. The main sources of water for domestic use are rivers (Nanyuki, Burguret, Thegu, Narumoru, Ewaso Nyiro, Mwiyoogo and Honi/Amboni), boreholes, dams and piped water systems. Most open water sources had approximately 70-80 percent recharge level. In the mixed farming livelihood zone, recharge was between 80 to 90 percent attributed to the October-November-December (OND) heavy rains however in the MMF livelihood zone, the recharge levels were 40-50 percent attributed to high evaporation due to high temperatures and high levels of siltation in some water pans.

Table 10: Water indicators

livelihood zone	Sources of water		Distance to Water for Domestic Use (Km)		Cost of Water (Kshs./20litres)		Waiting Time at Water Source (Minutes)		Average HH Use (Litres/person/day)		Projected duration of water availability in current water sources (months)
	Normal	Current	Normal ³	Current	Normal	Current	Normal	Current	Normal	Current	
Marginal Mixed Farming	River, borehole, dam	River, borehole, dam	0.5-1	0.5-1	2-20	2-20	2-30	2-30	15-20	15-20	3 months
Mixed Farming	River, borehole, dam	River, borehole, dam Water pans	0-2	0-2	2-5	2-5	5-15	5-15	20-25	15-20	3 months

³ Normal refers to same period in absence of a shock (what usually happens around that period).

3.4 Markets and Trade

Market operations

Market operations were normal without disruptions and the main markets are Chaka, Naro moru, Kiawara and Mweiga. Market supplies were stable, with cereals, pulses and livestock being sourced from farmers within the County and the nearby Laikipia and Meru Counties. The mainly traded food staples were maize, beans and Irish potato while cattle, and sheep, together with poultry were most traded livestock types.

Maize prices

The current maize prices are lower than those of 2015 by 14 percent, attributed to stocks from the short rains harvest and low demand for the commodity (Figure 3). The price trending was declining but from May, the prices started typically increasing as households stocks get reduced and market demand starts increasing.

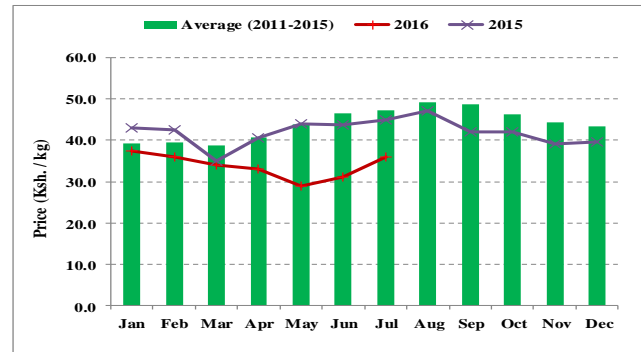


Figure 3. Maize prices

Sheep price

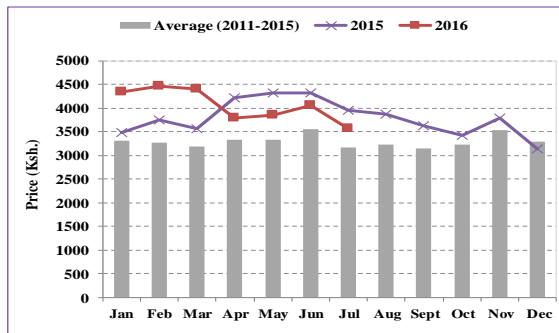


Figure 4. Sheep prices

The current (July) price is above the LTA and 2015 price, by 28 and five percent respectively, attributed to improved body condition, low supply and high demand of the animals in the local markets (Figure 4). With the likelihood of declining grazing resources, the body condition are likely to decline, and will affect prices which are expected to typically start declining from August.

Terms of trade

Terms of trade are above normal in 2016 as compared to 2015 by 48 percent and the LTA, by 88 percent, attributed to high sheep prices and lower maize prices due to accumulation of short rains stocks (Figure 5). The current trend is increasing, but is expected to stabilize, as sheep prices start declining.

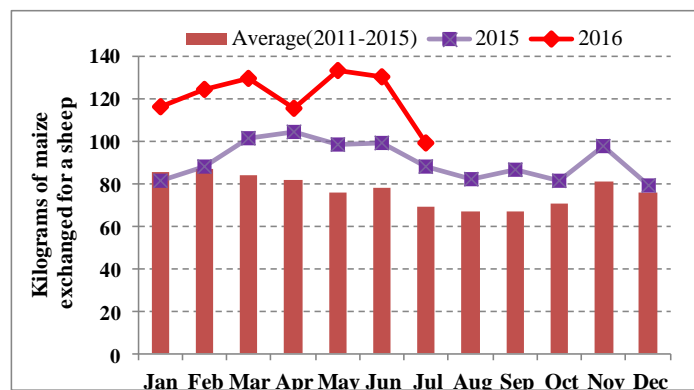


Figure 5. Terms of Trade

3.5 Health and Nutrition

Morbidity patterns

Table 11: Morbidity cases for children under five and general population

Reported Morbidity cases for children under five				Reported Morbidity cases for General Population			
Disease	Jan-June 2015	Jan-June 2016	% Change	Disease	Jan-June 2015	Jan-June 2016	% Change
Malaria	0	0	0	Malaria	0	62	N/A
URTI	26923	24387	9	URTI	51781	50286	3
Diarrhoea	3543	3063	14	Diarrhoea	5201	4462	14
Pneumonia	3600	2634	27	Pneumonia	4206	3692	12
Skin Disease	2748	2475	10	Skin Disease	13267	11846	11

The cases for all the diseases declined, attributed to rainy weather and improved personal hygiene during the *El Nino* period.

Epidemic prone diseases

Table 12: Epidemic prone diseases

Epidemic	January –June 2015		January –June 2016	
	No of cases	Reported Deaths	No of cases	Reported Deaths
Measles	0	0	0	0
Cholera	0	0	0	0
Dysentery	0	0	0	0
Diarrhoea	2,253	0	4,462	0
Malaria	0	0	62	0
Typhoid	0	0	0	0

Overflow of latrines/sewerage system during the *El Nino* rains lead to increased cases of diarrhoea. However, there was increased hand washing and washing of vegetables before cooking campaigns resulting in zero mortality.

Table 13: Immunization Coverage

Year	Percentage of fully immunized children in the district Source DHIS MOH 710 Vaccines and Immunizations	Percentage of children immunized against the mentioned diseases in the district Source Nutrition survey
January to June 2016	90%	OPV 1 ____ OPV 3 ____ No survey Measles ____
January to June 2015	101%	OPV 1 ____ OPV 3 ____ No survey Measles ____

The coverage for immunization dropped from 101 percent in 2015 to 90 percent in 2016 which was attributed to less clients seeking immunization from outside the County.

Table 14: Vitamin A supplementation

% Children < 12 months who received Vit A (DHIS 710)		% Children 1 to 5 years old who received Vit A (DHIS 710)		% Children 6-11 Ones (Survey)		% Children 12-59 Twice (Survey)		% Children 6-59 Ones (Survey)	
Jan - June 2015	Jan - June 2016	Jan - June 2015	Jan - June 2016	Jan - June 2015	Jan - June 2016	Jan - June 2015	Jan - June 2016	Jan - June 2015	Jan - June 2016
1246	1115	2853	2239	N/A	N/A	N/A	N/A	N/A	N/A

Vitamin A coverage from Jan-June 2015 was at 80 percent while the coverage for Jan-June 2016 was between 60 - 65 percent attributed to ECD centres not covered. Immunization was within facility during measles campaign. There is increased promotion of exclusive breastfeeding and use of therapeutic feeds/supplements' (food by prescription, vitamin A Iron, Folic Acid supplements'.)

Nutrition Status and Dietary Diversity

The feeding for males and female is currently the same in both livelihood zones. In mixed farming livelihood zone, they are consuming three meals per day which is normal, while in marginal mixed farming livelihood zone they are consuming two to three meals per day which is normal. The main food groups consumed are maize, beans, greens, cabbage, sweet potatoes, arrow roots and millet. Porridge from mixed flour is used to feed the children. Complete breastfeeding for six months is practiced in both livelihood zones, except few cases in the marginal mixed farming livelihood zone contributing to the low infection rates among children. Children are introduced to millet porridge and milk as a supplement after six months. Low malnutrition rates for under-fives are attributed to availability of milk at household level. Milk consumption was 1-1.2 litres per household across livelihood zones. Meals currently being consumed consist of beans, maize, *ugali*, porridge, rice and potatoes.

MUAC

The proportion of children at risk of malnutrition, measured by mid-upper arm circumference (<135mm) has remained below the LTA and 2015 levels, implying improved nutrition situation (Figure 6). However, as food consumption is expected to reduce with the lean season, at risk levels will typically rise but still remain below the LTA.

Figure 6:

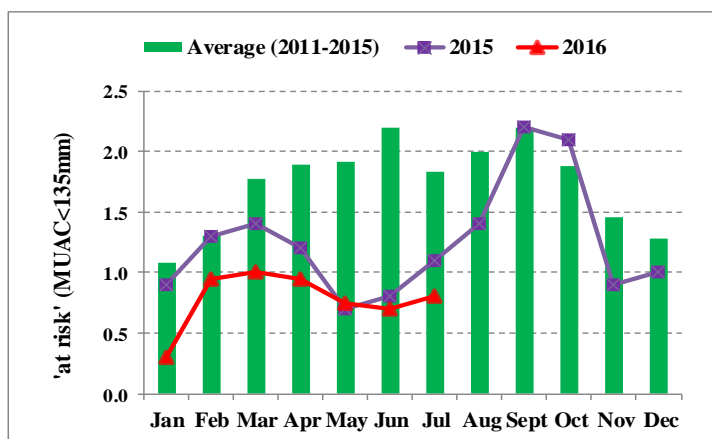


Figure 6. Proportion of children at risk of malnutrition (MUAC)

3.6 Coping Mechanisms

Livelihood zone coping strategies

The CSI is at 0.95, an indication that households were employing coping mechanism more frequently as food access was not good throughout.

Sanitation and Hygiene

Latrine coverage was 97 percent in both mixed farming and marginal mixed farming livelihood zones. Hand washing is practiced in both livelihood zones which resulted in improved health status within the community. Water treatment is by boiling, domestic water chlorination, solar disinfection and natural sedimentation.

4 FOOD SECURITY PROGNOSIS

4.1 Prognosis Assumptions

- The short rains in October - December are projected to be below average driven by the forecasted *La Nina* conditions. The market prices for cereals are likely to increase as dry conditions persist.
- The pasture and browse conditions are expected to decline in both livelihood zones resulting in poor animal body condition and reduced milk production.

4.2 Food Security Outcomes for the Next Three Months

Food Security outcomes from August to October 2016

As a result of a continuous rainfall that began during the OND season into the MAM season, the region has realized a bumper harvest for maize. Food prices remained relatively low while that of livestock recorded some improvements. This has led to improved household purchasing power. Milk production has increased leading to low malnutrition rates for the under-five. As a result, current food insecurity situation for the households remains at minimal or none (IPC phase 1). However, water sources were only at 40-50 percent recharge, the diurnal temperature range is increasing resulting in frost that greatly reduces the quality and amount of pasture and browse and will push the marginal mixed livelihood zone into the stressed phase (IPC phase 2).. Livestock production is expected to decline as forage conditions deteriorates, resulting in reduced milk production and consumption among households. The nutrition status of the children under five is expected to decline across both livelihood zones. Mortality rates for children under five and the general population is expected to remain below the alert cut off points of two per 10,000 children per day and one per 10,000 people per day respectively. The terms of trade are likely to decline, thus most households incomes are expected to decline further reducing access to foodstuffs in the market. Households in both the livelihood zones are expected to employ more coping mechanism and livelihood change strategies. The overall food security situation is expected to remain at minimal phase for the next three months for both livelihood zones.

Food Security Outcomes for November to January

The 2016 short rains are expected to be below normal owing to the expected *La Nina* phenomenon. Crop production is expected to be below normal. Since less harvest are expected, there will be less opportunities for on-farm labour. The browse and pasture condition are

expected to decline. Terms of trade are expected to be unfavourable and food commodity prices are expected to rise. Maize prices are expected to increase with livestock prices expected to decline in both livelihood zones as the pasture and browse condition worsens. Food stocks, the number of meals taken per day and dietary diversity per household across all livelihood zones are expected to decline. The nutrition status of under-fives is expected to decline following reduced availability of milk, food stocks and increased disease incidences and mortality patterns are projected to increase further in the next months. Overall food security situation for the county is expected to decline. More food insecure households will employ frequent insurance coping strategies measures as the dry conditions persist.

5 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The current food security situation in the county is stable but is expected to typically deteriorate for the next six months. There needs to be some close monitoring in the coming 3 - 6 months on the water situation in livelihood zones, frost, endemic livestock diseases and forecast for the next short rains.

5.2 Summary of Recommendations

- Provision of water and water treatment chemicals
- De-silting of dry dams and water pans
- Livestock disease and pest surveillance
- De-worming of students in schools
- Livestock upgrading by use of superior semen for breeds suited for the livelihood zones
- Introduction of early maturing crop varieties
- More emphasis on drought tolerant crops/emerging cash crop

5.3 Sub-County Ranking

Table 15: Ward food security ranking (worst to best)

Ward	Food Security (1 – 8)	Threats to food insecurity
Thegu	1	Poor temporal and even distribution of the rainfall, frost bites. Lack of diverse livelihood, tail end of piped water
Gakawa	2	Poor rainfall temporal distribution, frost bites. Lack of diverse livelihood, water sources drying, deterioration of pasture and browse
Mugunda	3	Poor rainfall temporal distribution, frost bites. Lack of diverse livelihood, deterioration of pasture and browse
Gataragwa	4	Lack of diverse livelihood
Mweiga	5	Poor rainfall temporal distribution, marketing of farm produce
Naromoru	6	Poor rainfall temporal distribution, informal/formal employment
Mwiyogo	7	Poor rainfall temporal distribution
Kabaru	8	Poor rainfall temporal distribution

6 ANNEXES

Table 16: Ongoing non-food sectoral interventions

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
AGRICULTURE							
Kieni East & Kieni West	Capacity building on soil and water conservation	All	2000 farm holdings	CDA Community NDMA County Government	1,390,400	Skilled Personnel Farmers	2016/2017
Kieni East & Kieni West	Preservation of vegetables and other crops	All	2000 farm holdings	CDA Community NDMA County Government	233,600	Skilled Personnel Farmers	2016/2017
Kieni East & Kieni West	Promotion of early maturing and drought tolerant crops in the most affected areas	All	2000 farm holdings	CDA Community NDMA County Government	686,400	Skilled Personnel Farmers	2016/2017
LIVESTOCK							
Kieni East & West	Up scaling on pasture and fodder production, conservation & utilization. 15 acres	All wards	All livestock keepers in Kieni	DALD- County govt and Farmers/ UTaNRP	Ksh <u>2,407,250</u>	Personnel Land	1 year
Kieni East & West	Up scaling on Preventive Vaccination against FMD, RVF, CCPP, and NCD in local poultry.	All wards but emphasis on the hot spots	10,000 heads of cattle, 10,000 shoats and 40,000 local birds	DALD- County govt/ KVA	Procurement of Vaccines Ksh 5,480,400.00	Personnel Vehicles	Continuous
Kieni East & West	Bulking of protein rich sweet potato vines for animal feeds	All wards	5000 Livestock keepers	DALD- County govt and Farmers	Ksh 2M	Personnel Vehicles	6 months
WATER							
Kieni East & West	Bulking of protein rich sweet potato vines for animal feeds	4 wards in the sub county	2500 Livestock keepers	DALD- County govt and Farmers	Ksh 117,750	Personnel, Land, logistics	6 months
Kieni East & West	Up scaling on Preventive Vaccination against FMD, RVF, CCPP, and NCD in local poultry.	All wards but emphasis on the hot spots	10,000 heads of cattle, 10,000 shoats and 40,000 local birds	DALD- County govt/ KVA	Ksh 2,740,200	Personnel Vehicles	Continuous

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
All wards in Kieni East and Kieni West sub counties	Up scaling on pasture and fodder production, conservation & utilization	All wards	All livestock keepers in Kieni	DALD-County govt/ Farmers	Ksh 13,980,000	Personnel Land	1 year
HEALTH AND NUTRITION							
Kieni east & West	Nutrition and health education	All wards	200,000	MOH NDMA APHIA+K	Ksh 1,000,00	Personnel ,logistics	1 month
Kieni East & West	Nutrition survey	All wards	All	MOH NDMA APHIA+K	Ksh 750,000	Personnel ,logistics	1 month
Kieni east & West	Food supplementation	Naromoru Gakawa Thegu Kiamathaga Kabaru	12,000	MOH NDMA APHIA+K	Ksh 6,000,000	Human resources & Logistics	3 months
Kieni East & West	Intensify community advocacy on immunization particularly 2 nd dose measles at 18 months, hospital deliveries, family planning Vit. A supplementation up to 5 yrs of age	All wards	800 HH	MOH NDMA APHIA+K	Ksh 1,500,000	Human resources & logistics	3 Months
EDUCATION							
Kieni East	Expand the HGSM	31 Public primary schools	10,577 Pupils	MOEST	Funds Kitchen and jikos	Human and structural	Continuous
Kieni West	HGSM	23 public Primary	5,953 pupils	MOEST	Retention and improved	Approximation 3,127,310	Continuous

School Meals Programme

Table17: School meals programme coverage

Sub county	Intervention	Wards	No. of beneficiaries	Proposed Implementers	Impact	Cost	Time Frame
Kieni East and West	HGSMP	44 schools	12,720	MOEST	Retention and improved enrolment	5,926,500	Continuous

6.2 Proposed Intervention

Food Intervention Required (Proposed population in need of assistance)

Table 18: Population requiring assistance

WARDS	Population(KNHS, 2009)	%	Min	Max
GAKAWA	26,321	25-30	6,580	7,896
MUGUNDA	23,712	25-30	5,928	7,114
THEGU	21,804	25-30	5,451	6,541
MWEIGA	17,264	20-25	3,453	4,316
GATARAGWA	18,890	20-25	3,778	4,723
MWIYOGO	19,446	20-25	3,889	4,862
NAROMORU	26,291	10 - 15	2,629	3,944
KABARU	22,084	10 - 15	2,208	3,313
Total	175,812		33,917	42,707

6.1 Annex II. On-going Interventions by Sector

Table 19: On-going Interventions by Sector

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Time Frame	Implementation stakeholders
AGRICULTURE							
Post-harvest management	To reduce post-harvest losses as result of lack of skills by farmers	All locations	Farmers, SHGs and institutions	KSH 2M	130 HH	Continuous	CGN, NDMA, Community
Provision of subsidized fertilizer	To Increase agricultural productivity	All	farmers	Ksh 10 M	1500 HH	Continuous	CGN, NDMA, Community
Training on good agronomic practices	To improve knowledge, attitude and skills of the farmers	All locations	Farmer, Agriculture institutions	Ksh 1M	877 Households	Continuous	CGN, NDMA, Community
LIVESTOCK							
Free A.I services	Improved production from better breeds	All wards in the Sub counties	All dairy farmers – 4000 dairy cattle	Dept of Veterinary / County government	4000 farmers	5.6m	1 yr
Improved Pasture establishment (Rhodes grass)	Improved milk production and incomes	Kieni East	3000 farmers	County government & UTaNRP, Farmers	3000 farmers	0.36 million	1yr
Capacity building on better management practices and dry season feeding. Through group trainings and demos	Increased milk, meat and egg production and incomes	All wards	Livestock keeping households (2000)	County govt, Farmers, KAPAP, UTaNRP	2000 farmers	Farmer initiative / County government	Continuous
WATER							
Construction of storage facilities and	Improvement of water service provision	Naromuru, Mwaiga, Thegu,	Farmers, livestock keepers, schools and health centres	Ksh 10.8 m	2000 HH	2016/2017	CGN, NDMA, Community,

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Time Frame	Implementation stakeholders
extension of distribution networks and boreholes fuel subsidies		Gataragwa					WVI
Capacity to farmers	Create awareness on water management	All wards	Farmers and livestock keepers	3.4 M	3500 HH	2016/2017	CGN, NDMA, Community
Rehabilitations of water dams and boreholes	Improvement of water service provision	All	Farmers, livestock keepers, schools and health centres	20M	3500HH	Continuous	CGN, NDMA, Community
HEALTH AND NUTRITION							
Vitamin A Supplementation	Improve nutritional status	all	Boost immunity for all	Ksh 11,000	19116	continuous	MOH MOE NDMA
Zinc Supplementation	Reduction of loss of nutrients	All wards	Community members	Ksh 200,000	220	ongoing	
IYCN Interventions (EBF and Timely Intro of complementary Foods)	Reduction of loss of nutrients		Community members	Ksh 250,000	450	Ongoing	MOH NDMA APHIA+K
EDUCATION							
HGSMP	Retention and improved	21 public Primary	5,000 pupils	Approximation 3,127,310	5,000 learners	Continuous	MOEST
Income generating projects	Improve Retention among learners and reduce cost.	16,190	2500 pupils	1.2 Million		Continuous	BOM/DEO / DEB