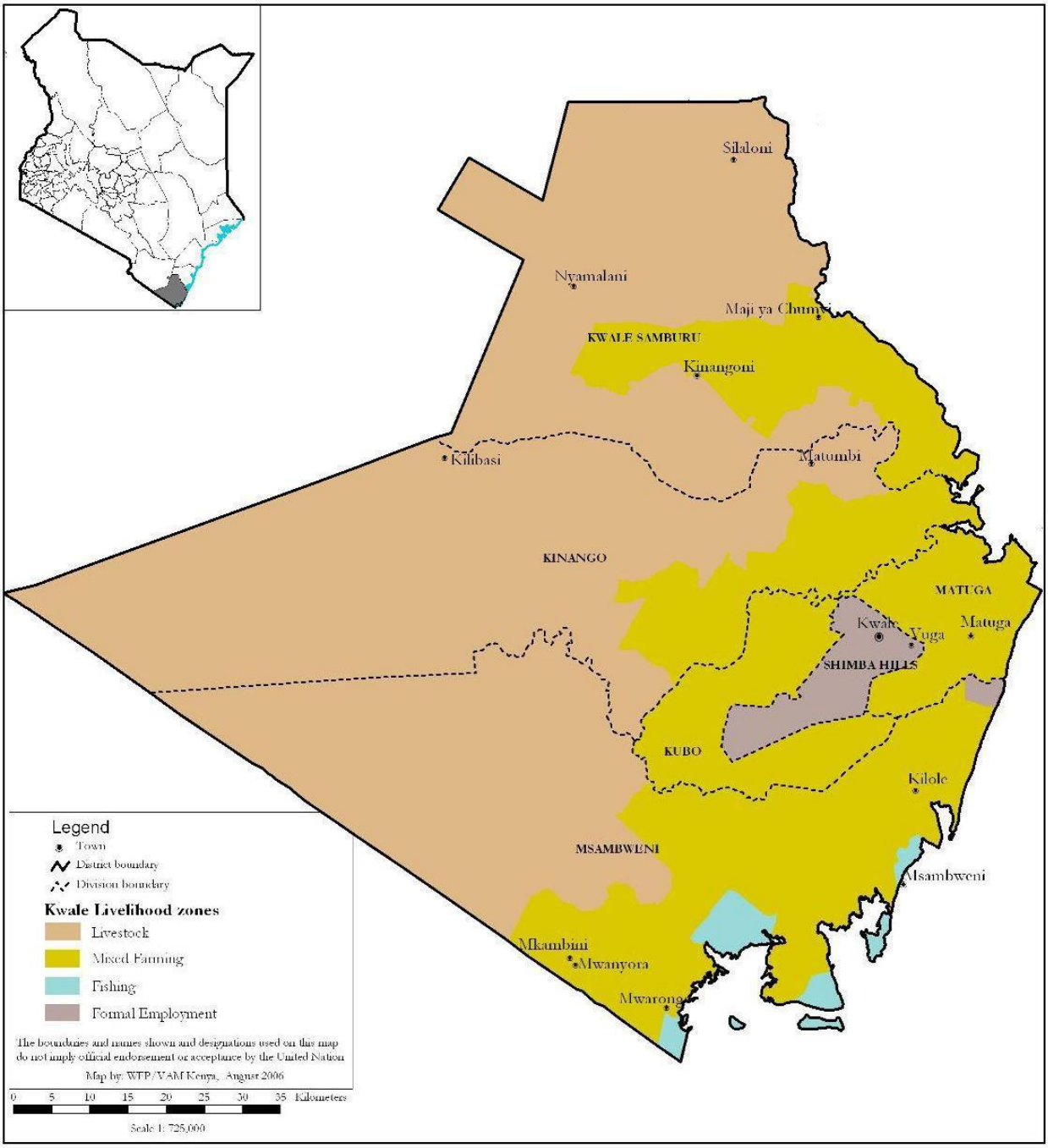
KWALE COUNTY
2016 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report by the Kenya Food Security Steering Group[1] (KFSSG) and Technical County Steering Group, Kwale County
February, 2017

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Executive Summary

The county is currently classified as stressed (IPC phase 2). There was total crop failure across the livelihood zones. Livestock prices are on the decline eroding households' purchasing power. However, the terms of trade (TOT) are favorable since households were able to purchase 76 kilograms of maize with the sale of one medium-sized goat as compared to 71 kilograms normally.

The food consumption score show a deteriorating situation with 20, 46 and 34 percent of households having poor, borderline and acceptable food consumption scores respectively. Most households are accessing food from the markets and the terms of trade are fairly good. Water availability and accessibility have severely been affected in the mixed farming food crop and livestock zones. The coping strategy index is currently 22 compared to 16 for July 2016, an indication of a worsening situation. The severity of coping mechanisms employed to bridge the food gaps have also increased. The proportion of children who are at risk of malnutrition based on Mid Upper Arm Circumference (MUAC <135mm) declined by 0.4 percent in December 2016 to 5.3 percent from 5.7 percent in November

The main drivers of food and nutrition security in the County are rainfall Performance and commodity prices. A large proportion of the population depends on rainfall either for crop production or for livestock rearing. With the inadequate short rains season of 2016, crop failure is widespread in the mixed farming livelihood zones coupled with inadequate pasture in livestock farming zone. The failed season has subsequently affected the four pillars of food security. Food availability is scarce at household level due to declined household stocks. However, staple food is available in the market across the county. Physical access to the markets is efficient through good access roads and financial access is good due to the favourable terms of trade for the livestock farmers. Water availability, accessibility and consumption are within the seasonal norms. Adequate water is available for food preparation as well as other domestic uses. However water treatment is minimal across the livelihood zones using open water sources. Households are expected to continue accessing staple foods from the markets whereby supply to these markets is expected to remain stable.

1.0. Introduction

1.1 County background

Kwale County is located in the coastal region of the country and borders the Republic of Tanzania to the South, Mombasa County to the North East, Taita Taveta County to the North West, Kilifi County to the North and the Indian Ocean to the East. The county covers an estimated area of 8,270 square kilometers and has an estimated population of 820,199 (KNBS Projected 2017) It is subdivided into four sub counties namely; Matuga, Msambweni, Kinango and Lungalunga. There are four main livelihood zones; Mixed Farming comprising 69 percent of the population, Livestock Farming (22 percent), Fishing (five percent) and the others at four percent.

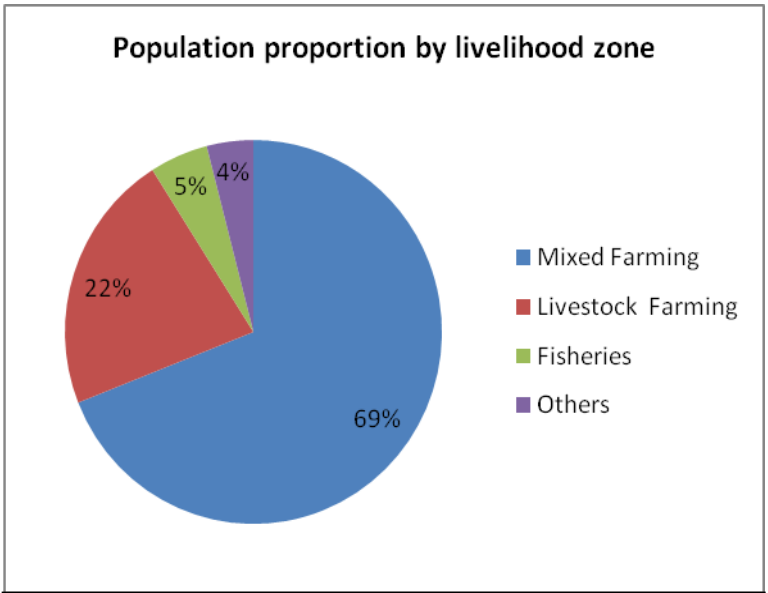

Figure1:Population proportion by livelihood zones

For the purposes of this assessment,fishing and others which mostly include formal employment are excluded as they are not directly affected by the performance of a rain season .The main livelihoods are mixed farming and livestock farming.

Therefore the aseessment concentrated on mixed farming and livestock farming livelihood zones. In the mixed farming zones ,livestock rearing and crop production is practised with the major crops cultivated being maize, cowpeas and green grams under rain fed agriculture. The main livestock species kept in both livelihoods are cattle, sheep, goats and poultry .Crop production contributes 30 percent to cash income followed by livestock production at 23 percent. In the livestock farming livelihood zone, charcoal burning has emerged as a livelihood activity contributing about 27 percent to cash income followed by livestock production at 20 percent. Other livelihoods include fishing contributing about 60 percent to cash income in the fisheries zones and casual / waged labour which is common in both livestock farming and formal employment.

1.2 Objectives and approach

The main objective undertake an evidence-based and transparent food security situation analysis following the Short Rains Season of 2016 and taking into account the cumulative effect of previous seasons, and to provide recommendations for possible response options based on the situation analysis. The short rains 2016 assessment methodology involved checklist administration by county sector heads followed by initial briefings by the county food security group (CSG) and Kenya Food Security Steering group representatives. The county steering group (CSG) and Kenya food security steering group (KFSSG) embarked on two day transect drive to validate the initial briefing findings considering in mind coverage of the major

livelihood zones. The team went through Matuga, Msambweni, Lungalunga and Kinango conducting community and market interviews. The team jointly reviewed the data and reports provided earlier enriched with field interviews to come with report presented before the CSG for validation and approval.

2.0. Drivers of Food and Nutrition Security in the County

2.1. Rainfall Performance

The Short rains onset was late across all livelihood zones with rains staring in the first week of November as compared to the first week of October normally. Temporal distribution was poor with uneven spatial distribution. Livestock farming livelihood zone (Kinango) received between 50-90 percent of normal rainfall while mixed farming livelihood zone (Matuga) received between 90-125 percent of normal rainfall. Cessation was normal during the last week of December 2016.The depressed rains negatively impacted on the crop production thereby affecting food availability at household level.

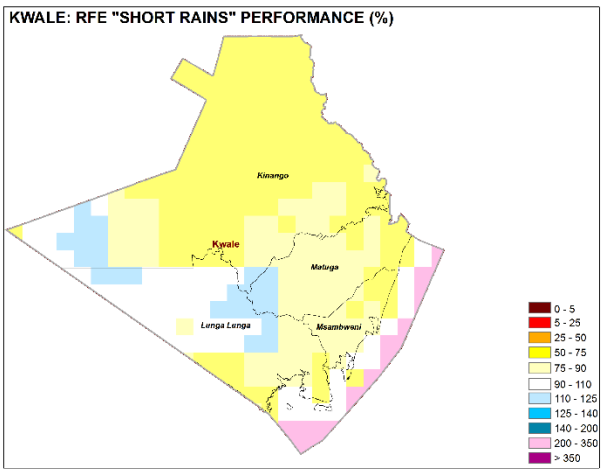

Figure 2; Rainfall performance as a % of normal

2.2 Commodity and Livestock prices

Livestock and cereal prices are very important and they directly affect the pillar of availability and access .High commodity prices affect the terms of trade either positively or negatively. Currently, the high goat prices have positively affected the terms of trade, thereby boosting households' purchasing power.

3.0 Impacts of drivers on Food and Nutrition Security

3.1 Availability

3.1.1. Crops Production

The short rains season is less dependable for crops production in the county as compared to long rains season. The main food crops grown in the county are maize, cowpeas, cassava and green grams.

Table1. Crop production contribution to food and cash income

Livelihoods	**Mixed Farming Livelihood Zone**		**Livestock Farming livelihood zones**	
Food Crops	Contribution to Food	Contribution to Cash income	Contribution to Food	Contribution to Income
Cassava	12%	10%	20%	10%
Maize	50%	9%	28%	9%
Cow peas	No data	No data	15%	14%

Rain-fed Crop Production

The three major crops grown under rain-fed agriculture in the mixed farming and livestock livelihood zone are maize, cowpeas and green grams. The area planted under maize, cowpeas and green grams declined by 19,17 and 58 percent of the Long term average (LTA) respectively while crop production decreased by 86 and 89 percent respectively for cowpeas and green grams. There was complete failure of maize production across all livelihood zones. Area put under production reduced due to anticipated poor performance of short rains after the forecast while Poor crop production was as result of poor performance of the short rains.

Table 2: Area Planted and Production in the Rain-fed Crop farming

Crop	**Area planted during 2016 Short rains season (Ha)**	**Long Term Average area planted during the Short rains season (Ha)**	**2016 Short rains season production (90 kg bags) Projected/Actual**	**Long Term Average production during the Short rains season (90 kg bags)**
Maize	14,520	17,931	0	85,000
Cowpeas	1,751	2,390	3,000	21,240
Green grams	1,302	3,095	2,000	18,520

Irrigated Crop Production

The three main crops under irrigation are vegetables, water melons and onions. Area put under production for irrigated cropping increased by 54 and 530 percent for vegetables and water melon respectively while area put under production for onions decreased by 50 percent as compared to previous short rains season. Production for vegetables and water melon increased by 61 and 128 percent respectively as compared to previous short rains season while production for onions decreased by 72 percent as compared to previous short rains season. (Table 3).Increase in area put under production for vegetables and water melon is as result of expansion of Micro- irrigation projects supported by the County Government and Safaricom foundation. Increased production was result of increase in area put under production for vegetables and water melon while decrease in production for onions was as result of decrease in area put under production for onions in preference for vegetables and watermelon. Irrigation farming is becoming popular in the count

Table 3: Area Planted and Production in the Irrigated Crop farming

Crop	Area planted during 2016 Short rains season (Ha)	Area planted during the 2015 Short rains season (Ha)	2016 Short rains season production (90 kg bags) Projected/Actual	Production during the 2015 Short rains season (90 kg bags)
Vegetables	20	13	250	156
Water melon	70	11	1000	438
Onions	5	10	100	173

Maize stocks

The maize stocks currently held by households are approximately 86 percent below the LTA (Table 4). The source of the current stocks is the carryover stocks from previous seasons and is held in mixed farming livelihood zone. Traders have about 50 percent above the LTA stocks, most being sourced from Tanzania. Traders are stocking the commodity in anticipation of higher prices as demand for maize increases. The National Cereals and Produce Board (NCPB) and Millers did not have any stock during the reporting period. The NCPB has not received stock from strategic grain reserve. The stocks at the household level are expected to last for one month in the mixed farming zone. Households in livestock farming zone are dependent on markets.

Table 4: Maize stocks held in the County

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
Households	33,836	245,296
Traders	118,978	79,350
Millers	0	0
NCPB	0	3,800
Total	**152,816**	**301,150**

3.1.2. Livestock Production

The main livestock species kept in the county are cattle, sheep and goats, and poultry. Livestock productions contribute 70 percent of the cash income in the Livestock farming zone compared with 50 percent in the Mixed farming zone.

Livestock Body Condition

Livestock Productivity

The body condition for cattle, goats and sheep is good in the mixed farming zone while fair to good in the livestock zone for all the species (**Table 5**). The good to fair body condition is as result of good to fair pasture and browse. The body condition is below normal at this time of the year and is expected to worsen when the available pasture and browse diminishes especially in livestock farming zone.

Table 5: Livestock body condition

Livelihood	Cattle		Goats		Sheep	
	Current	Normally	Current	Normally	Current	Normally
Livestock zone	Fair	Good	Good	Good	Fair	Good
Mixed farming zone	Good	Good	Good	Good	Good	Good

3.1.3 Forage Condition

Pasture and Browse

The condition of pasture and browse is good in mixed farming and fair in livestock farming zones respectively.The pasture condition is likely to worsen as the dry spell continues especially in livestock farming livelihood zone. Pasture and browse is expected to last for one and one to two months for livestock farming zone and mixed farming zone respectively. (**Table 6**). The condition is below normal at this period of the year.

Table 6: Forage stability

Livelihood Zone	Pasture Condition		Browse Condition	
	Current	Projected duration to last	Current	Projected duration to last
Livestock Zone	Fair	1 Month	Good	1 Month
Mixed farming	Good	2 Months	Good	2 Months

Milk availability and consumption

The average household milk production in livestock farming livelihood zone was 43 percent below normal due to poor performance of short rains which affected pasture regeneration that led to livestock deaths between October and November. Milk production was normal in mixed

farming livelihood zone. Milk consumption and milk prices were normal across all livelihood zones (Table 7).

Table 7.Milk availability and consumption

Livelihood zone	Milk production/litres per household		Milk consumption /litres per household		Prices /kshs /litres	
	Current	LTA	Current	LTA	Current	LTA
Livestock Farming	3	5	2	2	40	30
Mixed farming	8	8	2	2	60	60

Tropical Livestock Unit (TLU) and birth rates

The current tropical units (TLUs) are below normal in livestock farming livelihood zone due to October-November livestock death as result of lack of pasture and water while the TLUs in mixed farming livelihood zones were normal. Livestock birth rates for all species are normal across all livelihood zones (Table 8).

Table 8: Tropical livestock by livelihood zones

Livelihood zone	**Tropical livestock Units**			
	Low income households		**Middle income households**	
	Current	**Normal**	**Current**	**Normal**
Livestock Farming	0-2	2-3	5-10	10-20
Mixed Farming	0-1	0-1	3-5	3-5

Water for Livestock

The main sources of water for livestock are boreholes and water pans which are the normal sources at this time of the year. The return trekking distances between water points and pasture was normal due to the rains received in December 2016. However the water sources may only last for one month in livestock farming livelihood zone and two months in mixed farming livelihood zone which is below normal at this period of the year. (Table 9). Watering frequency was normal across all livelihood zones.

Table 9: Distances to water.

Livelihood zone	Sources		Return trekking distance		Expected duration to last		Water Frequency	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Livestock Farming	,Pans, Boreholes,	Rivers,Pans,Boreholes,	2-4	4-8	1	2	Once daily	once
Mixed Farming	Pans, Piped water, Boreholes	Rivers,Pans,Boreholes, Ponds Piped water	1-2	1-2	2	3	Once daily	Once daily

Migrations, Livestock Diseases and Mortality

There were reported cases of in migration of livestock from livestock farming livelihood zone (Kinango Sub County) to Mkongani in Matuga Sub County which is in a mixed farming zone. The county did not experience any notifiable livestock disease outbreak; hence there were no livestock deaths due to diseases. However the county lost around 8,600 livestock (cattle, sheep and goats) between October and November 2016 as result of starvation.

3.2 Access

3.2.1 Markets

Market operations

The major markets for both livestock and cereals in the county include Kombani, Msambweni Mwangulu and Lunga Lunga,Vigurungani and Mwakijembe. Markets were functioning normally in all livelihood zones with households accessing main food stuffs and livestock products. The three main foods sold in the markets were maize, beans and green grams. The main source of maize supply was from the neighboring county of Tanzania brought in by traders.

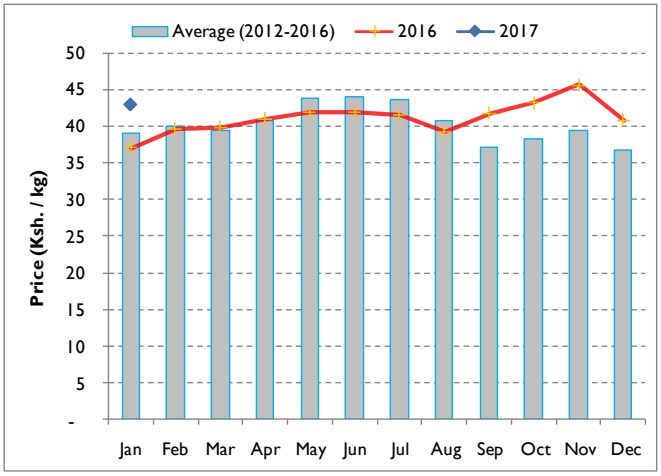

Figure 3 Trends in Maize Prices

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Maize price

The average maize price in the county was Ksh. 43 per kilogram in January which is 19 percent above the long term average of Ksh. 39 per kilogram (**Figure 4)** and also 16 percent above that of same time in 2016.The field interviews conducted across the livelihood zones indicated that the average price of maize in the mixed farming livelihood zone ranged from Ksh. 37-42 per kilogram while in the livestock zone (Ksh. 41-45) per kilogram. The increase was attributed to dwindling stocks at household level and the increasing demand for the commodity. Prices are expected to continue increasing due to total failure of maize crop.

Goat price

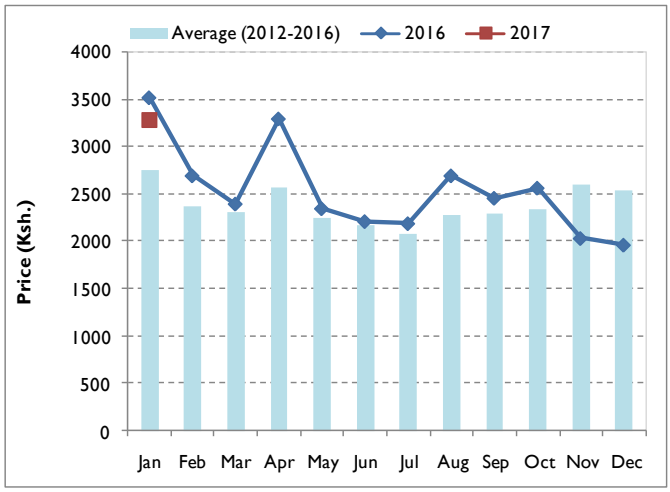

Figure 4. Trends in Goat Prices

The average market price for a medium-sized goat was Ksh. 3,286 which is approximately 19 percent above the long term average of Ksh. 2,753 and seven percent below that of same time in 2016 (Figure 5). The increase in price across all the livelihood zones was attributed to improved body condition. Livestock prices are expected to remain stable in mixed farming livelihood zone for the next 1-2 months as compared to only one month in livestock farming zone where pasture and forage is fair to good.

3.2.2 Terms of trade

Terms of trade (TOT) are favorable since households were able to purchase 76 kilograms of maize with the sale of one medium-sized goat as compared to 71 kilograms normally and 48 kilogrammes for the same period in 2016 (Figure 6). The improvement in TOT was attributed to rising prices of livestock as livestock body condition improved.

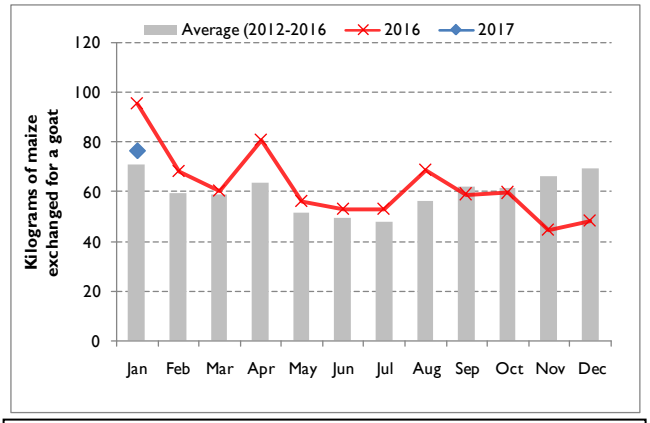

Figure 5. Terms of Trade

3.2.3 Income sources

The main sources of income in the county are varied in the various livelihood zoned. In the fisheries zones, fishing accounts for 60 percent followed by petty trade at 11 percent. In the livestock farming livelihood zones, firewood collection accounts for 27 percent followed by livestock production (including meat, milk, hides, skins, and by products) at 20 percent. Casual/waged labour and petty trade account for15 and 10 percent respectively. In the mixed farming livelihood zones, crop production accounts for 37

percent followed by livestock production (including meat, milk, hides, skins, and by products) and casual/waged labour at 18 and 10 percent respectively. Since there was a total maize crop failure, the household income for the mixed farming livelihood zone has been severely compromised.

3.2.4. Water access and availability

The main water sources are pans/dams, boreholes, piped water systems shallow wells and springs. The open water sources were fairly well recharged with the minimum being 60 percent while others received 100 percent of their capacity (table 10)

Table 10: water access and availability

Sub county / 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[2]**	**Current**	**Normal**	**Current**	**Normal**	**Current**	**Normal**	**Current**	
Livestock farming azone	Pans, Dams,boreholes Piped schemes	Pans, Dams, boreholes Piped schemes	**2-3**	**2-3**	**2-5**	**2-5**	**0-5**	**0-5**	**15-20**	**15-20**	2-3months
Mixed Farming zone	Pans/ Dams,boreholes Piped schemes,	Pans/ Dams,boreholes Piped schemes,	0.5-1	0.5-1	2-5	2-5	5-10	5-10	20-30	20-30	2-3months

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

	springs, wells	springs, wells									

Distance to water sources

The distance to water sources for domestic use remained within the normal range of 2-3 kilometres except Kilimagondo in the livestock farming zones Lungalunga Sub county which increased from the normal two to four occasioned by search for better water as the borehole in that locality is highly mineralized and only fit for livestock consumption. Other areas affected by longer distances and waiting time at sources are Mwereni and Vanga.

Waiting time at the source

Waiting time at the water source has remained within the normal range of 5-10 minutes except Kuraze in the livestock farming zones of Kinango where waiting time increased from five to 10 minutes, which was occasioned by concentration of people at available water points. The higher the number of people relying on a water source indicates congestion, which affects consumption and utilization.

Cost of water

The cost of water per 20 litre jerrican has remained within the normal range of Ksh.2-5 The cost from vendors is however much higher ranging from ksh.50-100 depending on the distance to the water sources and mode of transport.

3.2.5 Food Consumption

Most households in the mixed and livestock farming livelihood zones are consuming 1-2 meals per day compared to the normal three while those in the mixed farming livelihood zones are consuming, 2-3 meals per day compared to the normal three. The most common foods consumed in the last seven days included posho, omena, tea and fruits (mangoes). The current food consumption score is 20 percent for the poor, 46 percent borderline and 34 percent acceptable. In comparison with food consumption score for December 2015 (seven percent of the population was having poor food consumption score , 34 percent borderline and 59 percent), the indication is that the food security situation has worsened as the population having higher meals frequency and dietary diversity with more nutrient value has declined from 59 to 34 percent. Similarly, the trend has also affected those with borderline food consumption score as well as the poor food consumption score. There is a marked deterioration from the same period in the previous year

3.2.6 Coping strategy

Most households in the mixed and livestock farming livelihood zones are skipping of meals, having reduced portions and children taking preference for food .There is also increased population which is venturing into firewood collection as well as charcoal burning. The coping

strategy index is currently 22 compared to 16 for the same period in the previous year, which is a deterioration.

3.3 Utilization

Water consumption in litres per person per day was within the normal range of 15-20 litres per person per day (lpppd) in the livestock farming livelihood zones and 20-30 lpppd across the other livelihood zones.

3.3.1 Nutritional status

Morbidity and mortality patterns

Respiratory diseases, malaria, diseases of the skin, diarrhea and pneumonia are the most prevalent diseases for both the under five as well as the general population from June to November 2016. The trend is similar to that of same period in 2015.

There were no disease outbreaks for the period under review, which is normal at this time of the year. The average distance to nearest health facility is seven kilometers as compared to the recommended distance of three kilometres.

SFP admissions were low due to stock outs at the Health facilities, while OTP has a clear indication of increased admissions across the months, due to the increasing food insecurity and availability of commodities.

Immunization and Vitamin A supplementation

The percentage of fully Immunized child (FIC) declined by 10 percent from 12736(88.5%) to 10,388 (78.7%) for the period July to December 2016 compared with the same period in 2015. Vitamin A supplementation for 6-11month has increased by 51% from 76.5% to 127 % and 12-59 months has increased by 47% from 26% to 73.4%. This has been attributed to (Supplementation in ECDE centers, data review which has led to improved document and data quality, supportive supervision, awareness creation among the caregivers). Improved coverages have led to motivated members of staff hence further improving performance.

Dietary Diversity

Exclusive breastfeeding is currently low across the county (15-20 percent), attributed to the food scarcity and hunger (according to the community members), and mothers are introducing water and thin porridge during the first few days after birth due to lack of enough food However this is a departure from normal when food is available for the lactating mothers. The low percentage is also attributed to cultural practices.

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The proportion of children who are at risk of malnutrition based on Mid Upper Arm Circumference (MUAC <135mm) declined by 0.4 percent in December 2016 to 5.3 percent from 5.7 percent in November of the same year as shown on figure 6. However, the figure is still slightly above the LTA of 5.0 percent.

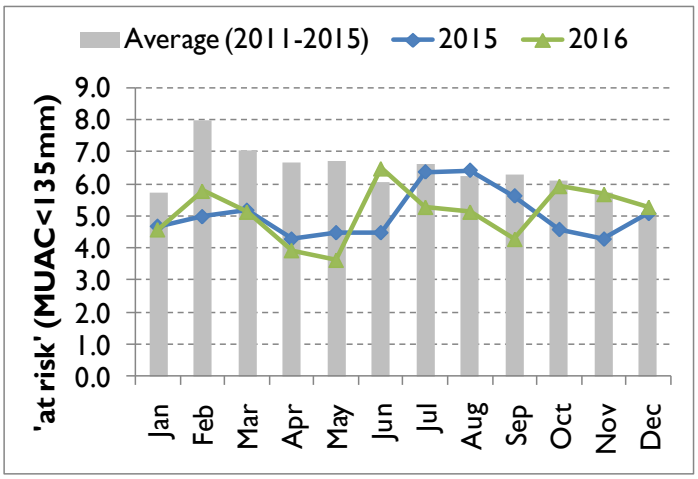

Figure 6. Percentage of children at risk of

The most probable cause of malnutrition in the county is household food insecurity, low intake of diversified diets leading to poor feeding practices, lack of early management of moderate malnutrition due to lack of commodities in the facilities and diseases.

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3.3.2 Sanitation and Hygiene

The County's latrine coverage has slightly increased to 53 percent from 50 percent in July 2014. However in major markets of Mwakijembe there were no public latrines as recorded during the community interviews. Household water treatment practices were generally low at approximately 5 - 10 percent of households boiling water as noted at Mwandeo, Mteza and Jimbo with an exception of water from pipeline. Water treatment chemicals are not available at Household level which is not normal.

Food handling and hygiene practices such as washing of hands before cooking and covering of food are generally practiced in all livelihood zones but at low rate of 20-30 percent while household garbage disposal across all livelihood zones is in a pit.

Table 11: Food security trends in Kwale County

Indicator	Long rains assessment, July 2016	Short rains assessment, Jan 2017
% of maize stocks held by households (agro-pastoral)	74% of LTA	14% of LTA
Livestock body condition	Mixed Farming -Good to fair	Mixed Farming - Good
	Livestock Farming -Good	Livestock Farming-Fair-good
Water consumption (lpppd)	Mixed Farming 20-30	Mixed Farming 20-30
	Livestock Farming 10-15	Livestock Farming10-15

Indicator	Long rains assessment, July 2016	Short rains assessment, Jan 2017
Price of maize (Ksh.per kg)	36	43
Terms of trade (pastoral zone)	55	76
Coping strategy index	18	22
Food consumption score	6.3%poor,26.2% Borderline 67.4 %Acceptable	20%poor,46% Borderline 34%Acceptable

3.5 Education

Home grown school meals programme (HGSMP) is currently not operational in all the 43 primary schools in the county as funds have not been disbursed from the national government. It should also be noted that the whole of term three 2017 there was no food in schools. Most schools in livestock livelihood zones of Kinango and Lungalunga have limited access to water and in schools where storage tanks are present, water is almost depleted

- The prevailing weather conditions has affected learning in a number of ways:
- Migration of families with animals in search of pasture; pupils have gone to new areas.
- They are also moving to do charcoal burning with their parents in areas where raw material is available.

Lack of concentration in class is common as children are hungry and has also led to increased absenteeism (30 percent) some children have not transited to high school due to lack of school fees. However, no school in has been closed due to impacts of the drought.

4.0 Food Security Prognosis

4.1 Prognosis Assumptions

- The long rains will be timely both in terms of onset and cessation and amounts will be normal to above normal. Distribution both in time and space will be good and even respectively.
- Food crops production is expected to be good leading to adequate household stocks
- The maize prices are expected to drop significantly while livestock prices are expected to improve.
- Milk availability will improve as pastoralists head back to their normal grazing .
- Water availability and accessibility is expected to improve with the recharge of open water sources as well as reduced distances and waiting time at water ssources.

4.2 Food Security Outcomes in the next three months

The food security situation is expected to worsen in the mixed farming livelihood zone and deteriorate in the livestock farming livelihood zones. Stocks at household level are minimal and are expected to be depleted. Pasture and browse condition is expected to improve and then diminish as migrated livestock is brought back. Livestock body condition is expected to continue on an improving trend then worsen after depletion of pasture and browse. Milk availability is expected to stabilize and then drop as pasture becomes scarce thereby adversely affecting the

nutrition status of children under five years. Milk prices are subsequently expected to continue on an upward trend. Livestock prices are expected to stabilize or decline in both livelihood zones as farmers dispose off due to uncertainty of the season. The prices will decline further as drought takes toll on livestock body condition. Maize prices are expected to rise in both livelihood zones due to increased demand and depleted stocks at household level. Terms of trade are expected to worsen as a result of declining livestock prices and rising maize prices. However, market operations are expected to continue normally and traders will stock more cereals to take advantage of the increased demand.

4.3 Food Security Outcomes for the last three months (May, June, July)

The food security situation is expected to improve from the month of May. Pasture and browse is expected to regenerate across the livelihood zones. Livestock body condition is expected to improve with increased pasture and browse. Livestock prices are expected to improve with improved body condition, leading to an improvement in the terms of trade. However, maize prices are expected to continue on an upward trend. Milk availability and consumption at household level is expected to improve with improved body condition leading to an improvement the nutrition status of the under fives. Milk prices are also expected to drop making it more affordable. Improved water availability and accessibility will lead to better utilization at household level. However, no change is expected in market operations.

5.0 Conclusion and Iintervention

5.1 Conclusion

5.1.1 Phase classification

The food security situation in the county is stable but on a declining trend The county is currently in the stressed food insecurity phase classification (Phase 2), implying that even with any humanitarian assistance, household groups have minimally adequate food consumption but are unable to afford some essential nonfood expenditures without engaging in irreversible coping strategies. In this regard, action is required for disaster risk reduction and to protect livelihoods

5.1.2 Summary of the findings

The onset of the 2016 short rains was late followed by a timely cessation. The distribution in time and space could not sustain the growth and maturity of maize thus total crop failure was witnessed. Only 18 percent of household stocks are remaining and most farmers especially in the livestock farming zones are accessing the commodity from the markets. Although food was available in the markets, the households' purchasing power has been greatly eroded by the poor terms of trade. Pasture and browse is available but expected to diminish as the drought sets in. Water for both domestic and livestock use is available but not accessible to learning and health institutions. Market operations are normal with an oversupply of livestock which is adversely affecting their prices. The terms of trade are poor and unfavorable to the livestock farmers. The ongoing drought has affected learning in schools with absenteeism estimated at 30 percent. Reduced meal frequency and dietary diversity has adversely affected the population status of children under five years of age.

5.2 Sub-county ranking

Table 12; Sub-county ranking

Sub county	Rank	Sub county ranking(worst-best)
Kinango	1	• Poor rainfall performance • Inadequate pasture and browse • Poor livestock prices • High poverty levels
Lungalunga	2	• Poor rainfall performance • Inadequate pasture and browse • Poor livestock prices
Matuga	3	• delayed onset and poor temporal distribution • Total crop failure
Msambweni	4	• delayed onset and poor temporal distribution • Total crop failure

5.3 Ongoing Interventions

5.3.1 Food interventions

Table 13: Ongoing food interventions

Sub county	Intervention	population	Population targeted(%)	Implementers	Time frame
Kinango	GFD	209,560	40	National/County government,	November 2016-May 2017
Lungalunga	GFD	164,098	30	National/County government	November 2016-May 2017
Matuga	GFD	151,978	20	National/County government	November 2016-May 2017
Msambweni	GFD	124,295	10	National/County government	November 2016-May 2017

5.3.2 Non-Food Interventions

Table 3: Ongoing Interventions Sub County	Intervention	Location	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost	Time Frame
Agriculture Sector							
Matuga, Msambweni, Kinango and Lungalunga	Capacity building on best agricultural practices.	County wide	120,000	County Government (MOAL&F) and other stakeholders	Sensitization and awareness creation		October-December 2016
Matuga, Msambweni, Kinango and Lungalunga	Promotion of micro irrigation	County wide	400	County Government (MOAL&F) & other stakeholders	Increased food production hence food security		October-December 2016
Matuga, Msambweni, Kinango and Lungalunga	Promotion of mechanized agriculture	County wide	120,000	County Government (MOAL&F)	More land under agriculture hence food security		October-december 2016
Livestock							
Lunga lunga and Kinango	Provision of livestock feeds and supplements		350	NDMA/Livestock	sustained health of breeding herds in drought stricken areas of Samburu/Chengoni, Mackinon Road, Puma, Ndavaya and Mwereni	4.4M	FEB-MARCH 2017
Kinango	Livestock disease surveillance		5250	NDMA/Veterinary	Timely notification of any disease outbreaks and/or conflicts and ensure	1.24M	FEB-MARCH 2017

					appropriate interventions are done to cushon the community from economic losses		
Kinango	Provision of fuel subsidy and fast moving spare parts to strategic boreholes and installation of roof catchment facilities		8,500	NDMA/Water	Steady availability of water during water stress period	0.75M	FEB-MARCH 2
Water and Sanitation							
MSAMBWENI	Bodo Water Project	Shirazi	2,800	CGK	increased water supply	8.5m	2015/16
L/LUNGA	Construction of L/Lunga-Mgombezi pipeline	Mwena	3,400	CGK	improved water supply	1.6m	2015/16
	Construction of Tsuini-Horo Horo pipeline	L/LUNGA	12,000	KWAWASCO	improved water supply	14m	2015/16
Health and Nutrition							
	Vitamin A Supplementation	Kwale	127,672	MOH	Vitamin A boosts immunity, hence low disease occurrence hence	4,014,991	Continuous

					adequate food utilization.		
	Zinc Supplementation	Kwale		MOH	Reduces severity and occurrence of diarrhea.	309,184	Continuous
	Management of Acute Malnutrition (IMAM)	Kwale	5,618	MOH	Reduces risks of morbidity and mortality.	7,229,229	Continuous
	MIYCN Interventions (EBF and Timely Introduction of complementary Foods)	Kwale	177,894	MOH	Promotes the general health of children.	5,620,000	Continuous
	Iron Folate Supplementation among Pregnant Women	Kwale	177,894	MOH	Promotes the good health of mothers translating to proper health of babies.	2,570,734	Continuous
	Deworming	Kwale	112,823	MOH	Promotes proper utilization of foods.	1,150,783	Continuous
	Sensitizations on Food Fortification	Kwale		MOH	Increases availability of micronutrients.	840,000	Continuous

Ongoing Nonfood Interventions but not in 2016 LRA

Intervention description/type	**Location**	**No of beneficiaries**		**Cost in Ksh**	**Implementers /actors**	**Remarks** - **Implementation status (ongoing, completed, not completed)** - **% completion status**	-
		Male	**Female**				
Renovation of Auction Yards.	Mwangulu and Mwakijembe	200	**150**	10 M	Livestock Production Division	100% Complete	
Completion of Milk Cooling Centres and installation of Milk cooling Equipment.	Kinango and Pongwe Kikoneni (L/lunga)	400	300	8M	Livestock Production Division,Cooperatives And Markets	100% Complete	
Animal feed supplementation with Range pellets and Molasses	Kinango ,Lungalunga, Matuga	2000	100	4.1 M	National Government, County Government, Livestock Production Division	ongoing 100% complete	

5.3.1 Recommended Food Interventions

Sub county	**wards**	**population**	**Proposed % people in need**	**Remarks**
Kinango	All	209,560	35-40	CFA
Lungalunga	Mwereni and Vanga	164,098	30-35	CFA
Matuga	T .Golini and Mkongani	151,978	25-30	CFA
Msambweni	Ramisi and Kinondo	124,295	5-10	GFD

Annexes.

Table 3: Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required resources	Available resources	Time Frame
Agriculture Sector							
Matuga, Msambweni, Kinango and Lungalunga	Conservation Agriculture	County wide	3000	County Government (MOAL&F) and FAO.	Extension officers[TOFS]& tools and equipment	Extension officers[TOFS]& tools and equipment	March-April & may 2017
Matuga, Msambweni, Kinango and Lungalunga	Promotion of micro irrigation	County wide	400	County Government (MOAL&F) & other stake	Extension officers& irrigation kits	Extension officers & irrigation kits	January-February & March.

				holders			
Matuga, Msambweni, Kinango and Lungalunga	Promotion of mechanized agriculture	County wide	120,000	County Government (MOAL&F)	Tractors & staff.	Tractors & staff.	February to May.
Matuga, Msambweni, Kinango and Lungalunga	Provision of relief seeds	County wide	120,000	County Government (MOAL&F)	seeds	seeds	Febuary& March
Livestock							
	Provision of more Livestock health providers	Kinango Lunga lunga subcounties	300	County Government (MOAL&F) NDMA	5M		February-June 2017
	Provision of Agrovet outlets	Kinango Lunga lunga subcounties	700	County Government (MOAL&F) NDMA	5M		February-June 2017

	Range rehabilitation and Pasture conservation	Kinango Lunga lunga subcounties	1500	County Government (MOAL&F) NDMA	8M		February-June 2017
Water and Sanitation							
L/LUNGA	Dam Construction	Vanga	400	CGK	5M	County machinery	FEB-APRIL 2017
	Provision of water treatment chemicals	Vanga	600	CGK	0.5M	Water chemicals	FEB-APRIL 2017
KINANGO	Installation of water purification unit	Macknon road-Makamini	500	CGK	3M	WATER	FEB -APRIL 2017
	Purchase and install water Storage tank	Samburu, Kilibasi	300	CGK	2.5M	WATER	FEB-APRIL 2017
Health and Nutrition							
	Conduct Nutrition assessment and integrated outreaches for malnutrition cases to the most affected areas in all children below 5 years		6,400	MOH, UNICEF, IMC, WFP, KRCS,KR	2,000,000	0	By end of March 2017

	(Mass screenings and outreaches)			DP/NDMA			
	Comprehensive Health and Nutrition survey		305,566	MOH, UNICEF, IMC, WFP, KRCS,KRDP/NDMA	6,000,000	0	End of 2017
	Conduct Supplementary feeding to children under 5yrs		4,448	MOH, UNICEF, WFP, KRCS,KRDP/NDMA	244,464,000	0	Continuous
	Scale up coverage of High Impact Nutrition Interventions in Kwale county to reach at least 80% of the target population		305,566	MOH,, UNICEF, IMC, WFP, KRCS,KRDP/NDMA	3,900,300	0	Continuous
	Strengthen and train Health workers on CLTS		120	MOH, UNICEF, IMC, KRCS,KRDP/NDMA,PLAN	2,000,000	0	June 2017

Procure and distribute water treatment chemicals		350,000	MOH,/Water/NDMA/Plan international	1,000,000	0	Continuous until May 2017	Procure and distribute water treatment chemicals
Water tracking in Health facilities.		40	NDMA/MOW/CG	5,000,000	0	Jan 2017 to April 2017	Water tracking in Health facilities.

IMPLEMENTATION STATUS OF PROPOSED NON-FOOD INTERVENTIONS

(September 2016 – February 2017)

Intervention description/type	**Location**	**No of beneficiaries**		**Cost in Ksh.**	**Implementers /actors**	**Remarks** ✓**Implementation status (ongoing, completed, not completed)** ✓**% completion status**
Water Pan	Chengoni	5,590		15m	NDMA/CGK	Completed
Busho-Kilibasi Pipeline	Mackinon Rd	10,000		44m	CGK	Not started
Meli Kubwa Dokata Pipeline	Mackinon Rd	10,000		8.9m	CGK	90%
Water Pan	Gandini	13,315		15m	CWSB	
Mtaa Dam	Kasemeni Ward	4,500		6m	CGK	Completed
Bofu Nunguni Pipeline	Kasemeni Ward	13,000		2.3m	CGK	Not started
Water Pan	Gonzani	6,200		15m	CWSB	
Kinango-Mazola Pipeline	Mazola	14,000		9m	CGK	55% complete

Intervention description/type	Location	No of beneficiaries		Cost in Ksh.	Implementers /actors	Remarks ✓Implementation status (ongoing, completed, not completed) ✓% completion status
Diversion canal	Mahame Irrigation	200			CGK	Not started
Pan desilting	Phuni Irrigation	100			GoK	Not started
Drilling two boreholes	Mwalewa	400		0.3m	CGK	Not started
Drilling borehole	Makwenyeni	200		0.1m	CGK	Completed
Dam construction	Mwatsefu	400			County Government of Kwale	Not started
Pipeline extension	Mwakigwena-Ibiza	5,500			CGK	Not started
Drilling borehole	Vukani	200		0.1m	CGK	45%
Rehabilitation of Mwaluphamba-Mkongani pipeline	Mwaluphamba	15,000		12m	CGK	80%
Rehabilitation of Majimboni Water Supply		15,000		11m	CGK	10%
Msulwa borehole rehabilitation	Jorori	300		0.45m	CGK	Complete