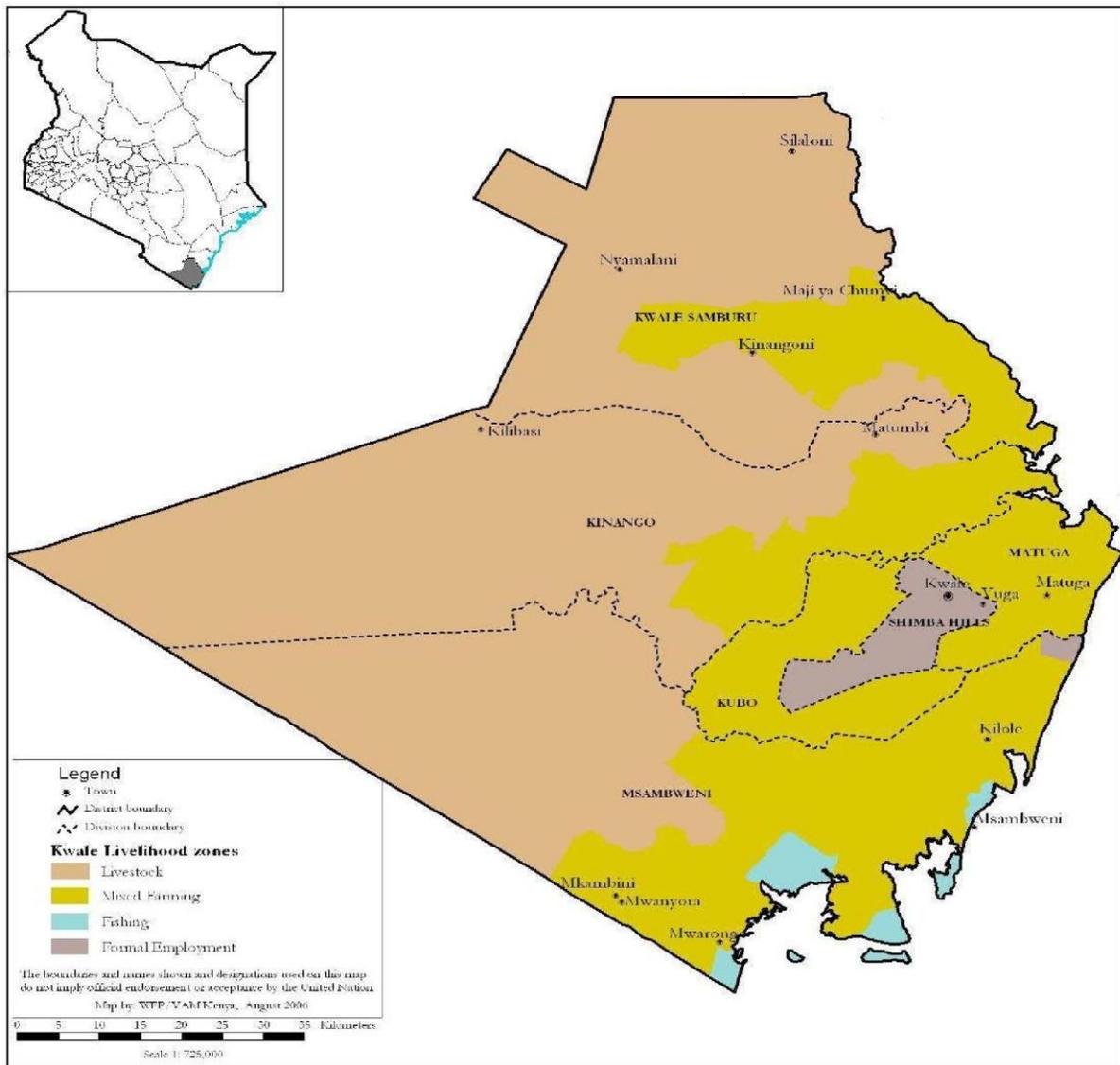


KWALE COUNTY 2017 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report of Kenya Food Security Steering Group¹ and Kwale County Steering Group

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EXECUTIVE SUMMARY

The County is classified in the Minimal Phase (Phase 1) of the Integrated Food Security Phase Classification (IPC). The main drivers to the current improved food security situation compared to the 2017 long rains include; (i) The above normal rainfall with some parts of county receiving up to 140-200 percent of the normal rainfall, good temporal and spatial rainfall distribution across the county, the off-season rainfall in the second dekad of September which prompted a few farmers in mixed farming livelihood zone (MFZ) to plant crops, (ii) timely provision of seeds by Kwale County Government leading to increased area planted above the long term average and (iii) Over 70 percent recharge of water sources in all the livelihood zones among other factors.

Maize stocks held by household are seven percent above the long term average (LTA) and are expected to last for the next 3 – 4 months as harvesting is still on-going. Similarly, the price of maize is expected to remain stable at around the LTA. The terms of trade (TOT) in January 2018 were three percent below the LTA and are expected to stabilise and improve in the next two months as the body condition of livestock will remain good due the favourable condition of forage.

The body condition of all livestock species, in both the mixed farming livelihood zone (MFZ) and the livestock farming livelihood zone (LFZ) are good and are expected to remain stable until the onset of next rainy season as forage condition is favourable. The average return trekking distances from grazing area to watering points have reduced from six to four kilometres in the LFZ and at present livestock are watered daily and the available water sources are expected to last until the onset of 2018 long rains.

Currently, there is no migration of livestock into or out of the County, neither disease outbreaks nor unusual livestock deaths reported. The proportion of children (6-59 months) at risk of malnutrition in December 2017 and January 2018 remained stable at 7 percent compared to the LTA of 5.4 percent but expected to improve due to the improved food security. The leading three common diseases among under-fives and general population; upper respiratory tract infections (URTIs), malaria and diarrhoea are on the decrease with no disease outbreak reported.

However, despite the improved food security situation, the indicators to monitor in the coming months are Fall Army Worm invasion and head smut disease in maize, disease outbreak in humans and livestock, market prices of basic food commodities, health and nutrition status of children and pasture and fodder availability especially in LFZ.

1.0 INTRODUCTION

1.1 County Background

Kwale County is situated 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 kilometres and has an estimated population of 820,199 (KNBS Projected 2017) It is subdivided into four sub counties namely; Matuga, Msambweni, Kinango and Lunga lunga.

There are four main livelihood zones; mixed farming zone (MFZ) comprising 69 percent of the population, livestock farming zone (LFZ) comprising 22 percent, fishing zone comprising five percent and the others at four percent. 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 the rainy season. The main livelihood zones are MFZ and LFZ (Figure 1).

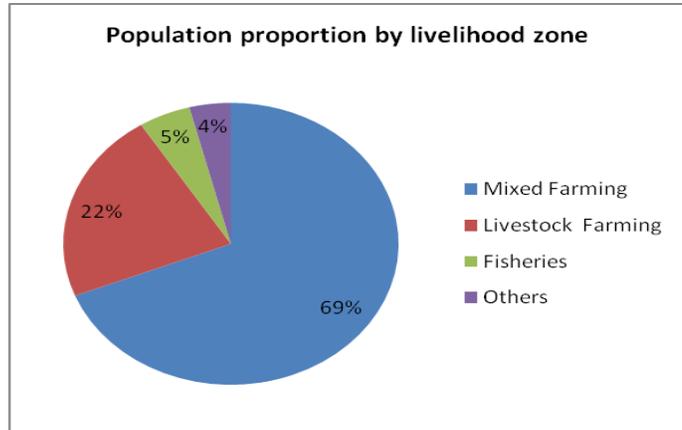


Figure 1. Population Proportion by Livelihood Zone

The assessment concentrated on MFZ and LFZ. In the MFZ, 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 LFZ, 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 is to undertake an evidence-based and transparent food security situation analysis following the Short Rains Season of 2017 and considering the cumulative effect of previous seasons and to provide recommendations for possible response options based on the situation analysis. The short rains 2017 assessment methodology involved checklist administration by county sector heads followed by initial briefings by the County Security Group (CSG) and Kenya Food Security Steering group (KFSSG) representatives. The CSG and KFSSG embarked on two days transect drive to validate the initial briefing findings considering in mind coverage of the major livelihood zones. The team went through Matuga, Msambweni, Lunga lunga and Kinango Sub Counties 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 onset of the 2017 short rains was in the third dekad of October in most parts of the County compared to the normal 1st dekad of October. However, the County received off-season rainfall in the second dekad of September which prompted a few farmers in the MFZ to plant crops. Temporal distribution was good and spatially even across the County. The Northern (upper part) livestock farming zone (Kinango) received between 90-110 percent of normal rainfall while the lower part received between 125-140 percent of the normal rainfall (Figure 2). The larger part of mixed farming livelihood zone (Matuga) received between 140-200 percent of normal rainfall. Cessation was early in the first dekad of December compared to the last dekad of December normally.

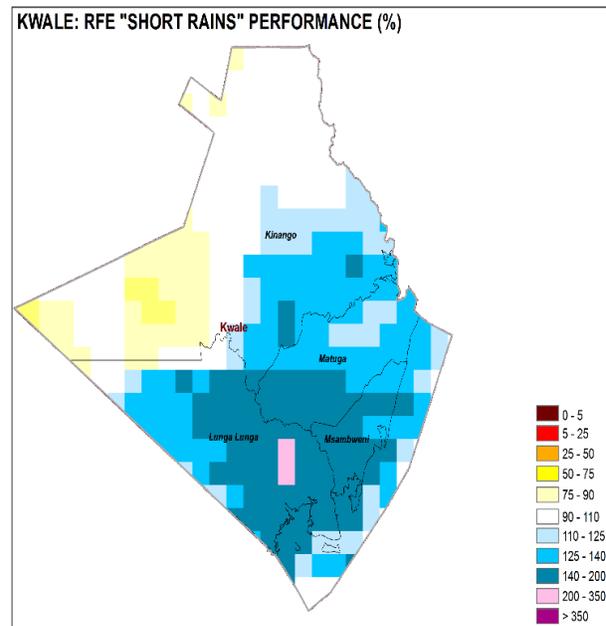


Figure 2. Rainfall Performance

2.2 Current Shock and Hazards

Low latrine coverage of less than 50 percent has led to poor hygiene and sanitation especially in Kinango Sub County exacerbating the risk of water-borne diseases. Late onset of the rainy season led to delayed planting which is projected to result in a reduction in crop production since the rains also ceased earlier than usual. Despite the slightly higher production of milk above the LTA and good livestock body condition of all livestock across the livelihood zones, the sale of milk and livestock in the households is entirely a decision to be made by men. This eventually means lack of access and control over resources by women resulting to food insecurity in some households. In both the MFZ and LFZ, the number of communal grazing lands have reduced due to increased human population eventually reducing the grazing grounds for livestock. Harvesting of maize is still ongoing but the yields are expected to reduce as a result of head smut infestation.

3.0 IMPACT OF IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

3.1.1 Crop Production

Crop Production

Crop production in the County depends more on the long rains than the short rains. The major crops grown under rain-fed agriculture include: maize, cassava, cowpeas and green grams. The percentage contribution of crops to household food and cash income is shown in Table 1.

Table 1. Percentage of Crop contribution to cash and food in both livelihood zones.

Livelihood	Main Crop	Contribution	
		Cash (%)	Food (%)
Livestock Farming Zone	Cassava	10	20
	Cow Peas	14	15
	Green Gram	15	10
Mixed Farming Zone	Maize	9	50
	Cassava	10	12
	Green Gram	15	15

Rain fed crop production

The three major crops grown under rain-fed agriculture in both livelihood zones are: Maize, Cowpeas and Green Grams. Area planted during 2017 short rains season increased by 16 and 42 percent for both Maize and Cowpeas respectively compared to the LTA. However, area planted under Green Grams greatly reduced by 49 percent compared to the LTA attributed to the above normal rains as the crop does not do well under wet condition, the seeds are expensive and is prone to pests and diseases thereby making farmers to concentrate more on maize and cowpeas. The increase in acreage was attributed to the off-season rains in the second dekad of September that prompted farmers to prepare lands early enough. In the LFZ, farmers reported to have opened more land for crops to increase harvests since there has been poor crop performance over time.

The projected 2017 short rains season production (90 kg bags) increased by 16 and 42 percent compared to the LTA for Maize and Cowpeas in both livelihood zones respectively. However, green grams projected production greatly reduced by 59 percent compared to the LTA. The above normal rainfall, adoption of technologies such as manure application by most farmers and on time provision of seeds by the County Government are some of the factors that contributed to the increased projected production of Maize and Cowpeas. However, due to reduction of area planted for green grams and above normal rains, the actual production also reduced by 59 percent compared to the LTA (Table 2). Farmers in the LFZ around Mwereni and Kinango Sub County reported Fall Army Worm infestation.

Table 2. Rain fed Crop production

Crop	Area planted during 2017 Short rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	2017 Short rains season production (90 kg bags) Projected/Actual	Long Term Average production during the Short rains season (90 kg bags)
Maize	20,868	17,931	313,020	268,965
Cowpeas	3,403	2,390	34,030	23,900
G/grams	1,595	3,095	12,760	30,950

Irrigated crops production

The main crops grown under irrigation in the County are; Rice, Tomatoes, Okra, Capsicum and other Green Leafy Vegetables. The area planted during the 2017 short rains for all the above crops reduced by 17, 37, 33 and 40 for Tomatoes, Okra, Capsicum and Kales respectively compared to

the LTA. The above normal rains greatly affected the irrigation structures especially in the livestock farming zone thereby reducing the acreage. Some of the structures affected include; Nyalani, Kisimani, Gulanze irrigation schemes in Kinango Sub County and Kaindi irrigation scheme in Lunga Lunga Sub County. Consequently, the projected/actual production (TONS) also reduced for all the crops by 17, 37, 33 and 40 for Tomatoes, Okra, Capsicum and Kales respectively compared to the LTA (Table 3).

Table 3. Irrigated Crop

Crop	Area planted during the 2017 Short rains season (ha)	Short Term Average (3 years) area planted during Short rains season (ha)	2017 Short rains season production (Tons) Projected/actual	Short Term Average (3 years) Short rains production (Tons)
Tomatoes	5	6	5	6
Okra	5	8	5	8
Capsicum	4	6	4	6
Kales	6	10	6	10

3.1.2 Cereal Stocks

The main staple foods consumed in both livelihood zones are; Maize, Cassava, Green Grams and Cowpeas. The stocks of maize held by households in the County are above the LTA by 7 percent attributed to the above normal rainfall, early land preparation by famers prompted by off season rains experienced in the second dekad of September and timely provision of seeds to famers by the County Government. Harvesting of Maize is still on going across the livelihood zones. The stocks held by traders are below the LTA by 38 percent attributed to reduced demand from households. Notably is the National Cereals Produce Board (NCPB) which has zero stock as at now. Currently, the stocks held by households, traders and NCPB is 16 percent below the LTA (Table 4).

Table 4. Stocks held in the County

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	134,560	126,296
Traders	70,500	113,800
Millers	0	0
NCPB	0	3,800
Total	205,060	243,896

3.1.3 Livestock Production

The main livestock kept in the County are cattle, goats, sheep and poultry. In both zones, livestock production contributes 18 and 20 percent respectively to cash income. Poultry farming is also practiced across the livelihoods and contributes about 8 percent of the cash income. The main livestock species in the County are Cattle, Goat, Sheep and Poultry kept in both livelihood zones of the County.

Forage Condition

Pasture and browse condition for the MFZ has remained stable and is expected to last four months compared to the normal three months and browse is expected to last five months compared to the normal four months. In the LFZ, pasture and browse condition has simultaneously improved from the normal fair to the current good. Pasture is expected to last three months compared to the normal two months and browse is expected to last four months compared to the normal three months as shown in table 5 below attributed to the above normal rains.

Table 5: Pasture and browse condition

Livelihood zone	Pasture condition		How long to last (Months)		Browse condition		How long to last (Months)	
	Current	Normally	Current	Normally	Normally	Normally	Current	Normally
Mixed Farming	Good	Good	4	3	Good	Good	5	4
Livestock Farming	Good	Fair	3	2	Fair	Fair	4	3

Livestock Productivity Body condition

Body condition of all livestock in the MFZ has remained stable for all species whereas the cattle and sheep in LFZ has improved from fair to good and stable for goats. Generally, there was very little variations as both zones received above normal rains resulting to improved forage condition hence better livestock body conditions. The body conditions of livestock in both the livelihood zones are expected to remain stable until the next rain season as forage condition is favourable (Table 6).

Table 6. Livestock Body Condition

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normally	Current	Normally	Current	Normally
Mixed Farming	Good	Good	Good	Good	Good	Good
Livestock Farming	Good	Fair	Good	Fair	Good	Good

Milk Availability

In the MFZ, milk production is mainly from the dairy and zebu cows whereas in the LFZ, indigenous cattle and improved goat breeds are the main species for milk production. There was a slight increase of milk production in both the livelihoods compared to the LTA with MFZ producing eight litres compared to the normal seven and LFZ producing three litres compared to the normal two litres (Table 7).

Table 7. Milk Availability

Livelihood zone	Milk Production (Litres)/Household	
	Current	LTA
Mixed Farming	8	7
Livestock Farming	3	2

Tropical livestock units (TLU) and Birth rate

The tropical livestock units (TLU) for poor income households for both the livelihood zones have remained stable as shown in table 8 below however, the TLU for the middle-income households have slightly reduced but still within the normal range. The reduction in TLUs for the middle-income households was attributed to the effects of the drought in 2016.

Table 8. Tropical Livestock Units and Birth Rates

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Mixed Farming	2	2	4	5
Livestock Farming	3	3	5	6

Livestock Diseases, Mortalities and Migration

No livestock disease outbreak nor unusual deaths was reported. The endemic livestock diseases reported were Foot and Mouth Disease (FMD), New Castle Disease and Contagious Caprine Pleuro pneumonia (CBPP) in both Ndavaya and Kasemeni wards respectively. The endemic diseases reported have minimal implications on the food security in the area. However, vaccinations of all livestock species in both the livelihoods zones was on-going. No out or in migration was reported too.

Water for Livestock

The main water sources in the LFZ within the County are water pans, rivers and dams whereas the main water sources in the MFZ are rivers, boreholes, springs, water pans and dams which are normal sources at this period of the year. Most water pans in the County have adequate water with reduction in trekking distances in both zones. The livestock trekking distance in MFZ remained the same; 2-3km whereas in the LFZ, it reduced to 4-5km compared to the normal 5-8km. Due to adequate recharge of the water sources in both the livelihood zones, water is expected to last for about three months as shown in table 9 below hence maintaining the trekking distance until the onset of 2018 long rains.

Table 9. Water for Livestock

Livelihood zone	Sources		Return distances (km)		Expected duration to last (months)	
	Current	Normal	Current	Normal	Current	Normal
Mixed Farming	Rivers, Dams, Earth pans, Piped water	Rivers, Dams, Piped water, Earth pans	2-3	2-3	4	3
Livestock Farming	Rivers, Earth pans, Shallow wells, Boreholes, Dams	Rivers, Earth pans, Shallow wells, Boreholes, Dams	4-5	5-8	3	2

Watering frequency

Water frequency for all species in both the livelihood zones has improved significantly (Table 9).

Table 10. Water Frequency in days

Livelihood zone	Cattle		Goats		Sheep	
	Current	Normal	Current	Normal	Current	Normal
Mixed Farming	Ad libitum	7	7	6	Ad libitum	7
Livestock Farming	6	5	5	4	6	4

Gender and Livestock Sector

Grazing of livestock in LFZ are mainly done by men normally but sometimes by women and children too whereas milking is normally done by women. Even though selling of milk is done by women, the decision to sell and the amount is solely done by men. In most cases, men make decisions for sale of the large stock or when many small stocks are being sold while women make decisions on small stock as well as on poultry. This is mainly when food stocks are very low or for payment of school fees. Sale of livestock is done if the number of animals has increased and labour becomes a limiting factor and when households want to do some investments in other businesses such as purchase of motorcycle.

3.1.4 Impact on availability

The stocks of maize held by households in the County are currently above the LTA by 7 percent and are expected to last for the next 3-4 months. Harvesting of maize is still ongoing but the yields are expected to reduce as a result of head smut infestation. Projected/actual production of cowpeas is also above the LTA by 42 percent. There is a notable increase in milk production in both the livelihood zones resulting to increased households access to food in the household that will eventually improve nutrition status of the population in the County.

3.2 ACCESS

3.2.1 Markets- prices – functioning

The major markets in the County include Samburu, Kinango, Vigurungani, Mwakijembe, Taru and Mwangulu. Other important markets that feed the major markets are Ndavaya and Mkangombe. Staple foods sold in the markets were Maize, Green Grams and Beans while the livestock sold included Cattle, Goats and Sheep. Markets are well provisioned and are functioning normally across all livelihood zones both for food and livestock hence no market disruptions reported. The main sources for livestock traded were local supply while that for food commodities remained the same and some were from neighbouring counties including Mombasa and Taita Taveta Counties. Market supplies and traded volumes for livestock were below normal attributed to the recent harvests and stable or rather no increase of TLU's following recent drought.

Maize Prices

The average maize price in January 2018 was one percent above the LTA and eight percent below the same time in 2017. The maize prices reduced as from August up to November 2017 due to both the government subsidy (which ended in October) as well as harvests by farmers. There was a slight increase in price in December as most farmers were busy on their own farms and had green maize to consume as food but the price stabilized in January as shown in figure 3. The prices are expected to remain stable at around the LTA price as household's stocks are still available for the next 3-4 months.

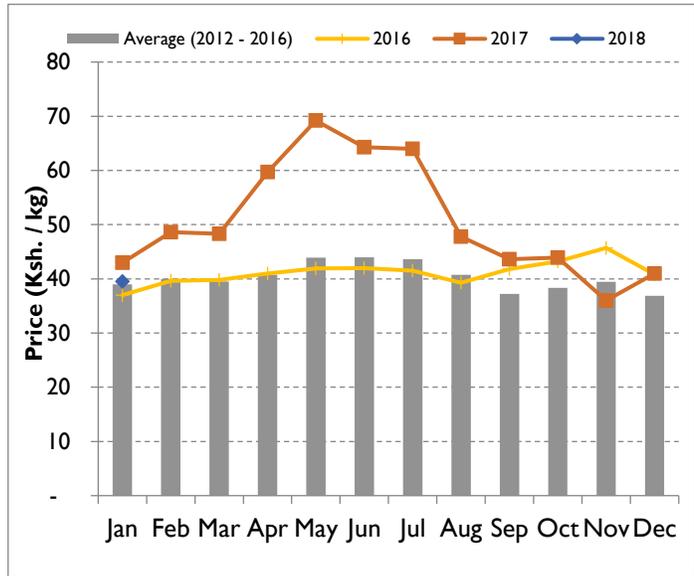


Figure 3. Prices of Maize

Goat Prices

The goat prices as at January 2018 were two percent below the 2012–2016 LTA and eight percent above Ksh. 2511 reported during the same time in 2017. In September and October, the prices were 13 percent slightly above the LTA with a notably sharp increase in November; about 44 percent above LTA as shown in figure 4. This was due to improved body condition as the bucks could fetch more competitive prices than the previous months. However, a sharp decrease of about 11 percent below the LTA in prices was noted in the month of December attributed to the Foot and Mouth Disease incidences that weakened goats' body condition in some parts of LFZ consequently leading to less competitive prices at market level. The prices as expected to increase as the body condition is expected to remain good as the forage condition continues to be good across the livelihood zones.

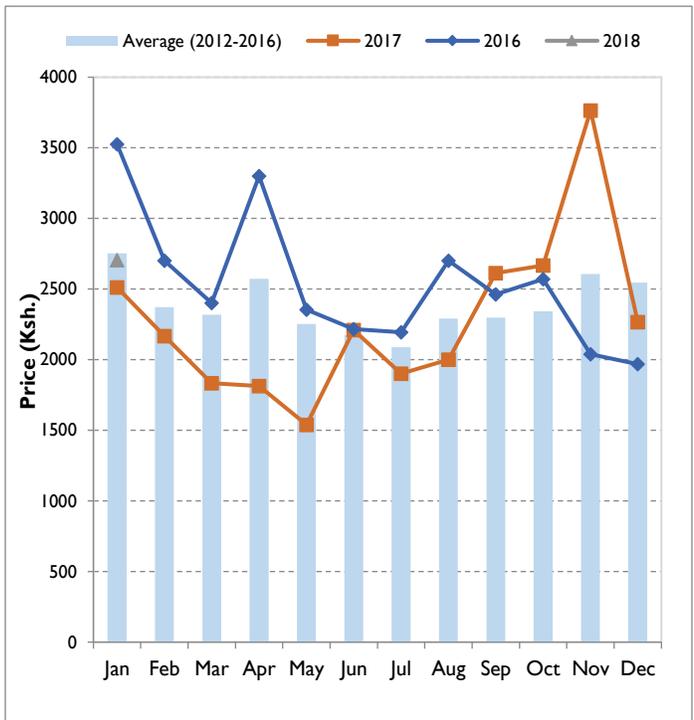


Figure 4. Goat Prices

3.2.2 Terms of trade

The terms of trade (TOT) in January 2018 were three percent below the LTA and 19 percent above when compared same period in 2016. TOT's were stable in September and October compared to the LTA and a sharp increase of 59 percent above LTA was noted in November as shown in figure 5. This was attributed to increased availability of casual labour thereby improving the purchasing power of households. A sharp decline of 20 percent below LTA was recorded in December attributed to the fact that households were busy on their own farms and had green maize to consume as food and therefore did not need to engage in casual labour to buy food. TOT's are expected to stabilise and improve in the next two months as the body condition of livestock will remain good due to the favourable condition of forage.

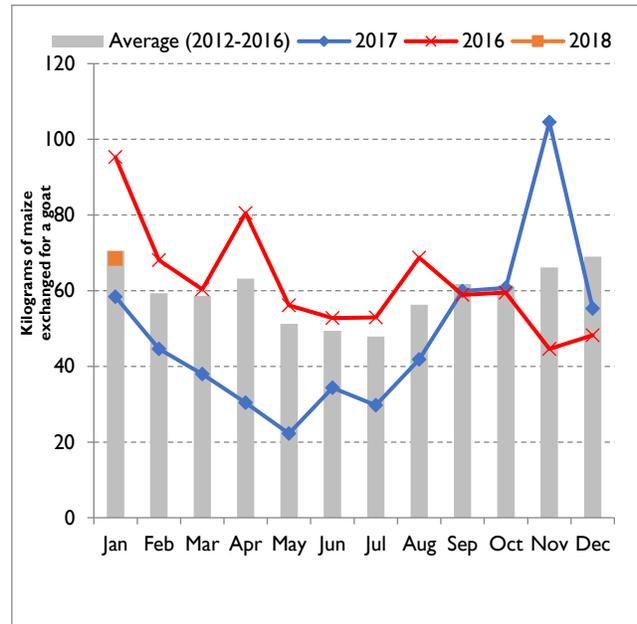


Figure 5. Terms of Trade

3.2.3 Income Sources

In the LFZ, the main income sources include firewood collection contributing about 27 percent, livestock production (including meat, milk, hides, skins, and by products) contributing about 20 percent and casual waged labour income contributing about 15 percent of total income sources. In the MFZ, main income sources include cash crop production contributing about 22 percent, food crop production contributing 15 percent and livestock production (including meat, milk, hides, skins, and by products) contributing about 20 percent to the total income sources.

3.2.4 Water Access and Availability

Major water sources

The major water sources for domestic use in the County are rivers, dams, boreholes, springs and piped water in kiosks. Most dams across the livelihood zones were recharged to more than 70 percent of their capacity in all Sub Counties. Rivers are mainly in the LFZ. Surface water storage facilities in Msambweni, Matuga and Northern parts of Lunga Lunga Sub Counties fared slightly better with an average 70 percent replenished owing to the above normal rainfall of 140-200 percent. All major water sources are operational and all pans and dams are fully recharged

Most of Matuga Sub County relies on pans and dams most of which are currently at 70 percent replenished. Water in the pans and dams is 70 percent capacities and will last for 3-4 months in most areas of the LFZ while in MFZ zone it would last for approximately 5-6 months which is above normal attributed to adequate recharge levels. However, localized areas of Taru, Mwereni, Silaloni, Mbita and Nyango it will last for approximately 2-3 month.

Distance to water sources

Average return distances to domestic water sources have significantly reduced from the normal 3 – 6 km to a range of 2 – 4 km in the LFZ whereas in the MFZ are normal ranging from 0.5 to 1 km and can be attributed to availability of water from the normal sources.

Waiting time at the source

The current waiting time at the water source across all livelihood zones is within the normal range of between 10 to 15 minutes due to full recharge of the water sources. However, during the community interviews waiting time at localized places of Mwereni, the waiting time was 20 - 30 minutes. Most household water sources are separate from those of livestock and where they both rely on the same source, there is a separate collection point for livestock and domestic use.

Cost of Water

Due to good recharge of all sources, water is readily available thus most households are relying on free open water sources such as shallow wells, water pans, rivers and springs. In MFZ, most households have reserved rain water purely for drinking and cooking. A small proportion is buying water at Ksh. 2-3 per 20 litres jerrycan and few boreholes selling at Ksh. 5 mainly for drinking and cooking.

Water Consumption

The average water consumption has improved from the previous season. Households in the MFZ are consuming between 25 and 40 litres while those in the LFZ are consuming between 15-20 litres per person per day. The current consumption level is normal at this period of the year. Consumption levels are expected to remain stable until the next rainy season in both livelihood zones.

3.2.5 Food Consumption

According to the National Drought Management Authority (NDMA) drought early warning bulletin of Kwale, the food consumption score has been on the improving trend as from October 2017 up to January 2018. The bulletin clearly indicates that the percentage of households with acceptable food consumption score as from October 2017 to January 2018 has increased by over 10 percent from 59.8 percent to 67 percent. This outcome implies that more than half of the population was consuming a staple and vegetables daily coupled with a frequent consumption of oil and pulses and occasionally dairy products, meat and fish.

Milk Consumption

Consumption of milk in the MFZ remained the same compared to the LTA whereas in LFZ, consumption improved to two litres compared to the LTA of one litre. Despite the slight improvement in milk production, milk prices have remained stable in both livelihoods compared to the LTA as shown in table 11 below. The noted increase in production in the LFZ is expected to increase households' access and consumption that will eventually improve nutrition status of the population in the zone.

Table 11. Milk Consumption and Price

Livelihood zone	Milk consumption (Litres)per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA
Mixed Farming	2	2	40	40
Livestock Farming	2	1	30	30

3.2.6 Coping strategy

According to the NDMA January 2018 drought early warning bulletin, the coping strategy index (CSI) for the County was 10.75 having improved from 11.8 recorded the previous month. The improvement is attributed to ongoing harvesting of maize, cow peas and green grams in several parts of the County hence households are employing less of consumption-based coping strategies. Most common consumption related coping strategies employed by households were; relying on less expensive or less preferred foods and reducing the quantity of food consumed by adults to ensure that children had enough to eat.

3.3 Utilization**3.3.1 Morbidity and mortality patterns**

The three most common diseases among under-fives and the general population are Upper Respiratory Tract Infections (URTIs), Malaria and Diarrhoea. A general decrease trend in all the three major disease cases for both under-fives and general population is noted. This could be attributed to the under reporting during the national nurse's strike of last year May-October 2017. During the reporting period, diarrhoea cases were more in Kinango Sub County attributed to low access to clean water, increased water contamination resulting open defecation on bushes coupled with lack of hand washing during critical times. The Crude Mortality Rate (CMR) and under-five mortality rates (U5MR) in the period under review were within the seasonal norms.

Immunization and Vitamin A supplementation

The proportion of fully immunized children from July to December 2017 was 59.1 percent which was a decline compared with 81.4 percent between July and December 2016 which is below the national target of 80 percent. This could be attributed to the service disruptions during the national nurse's strike of May-October 2017. A total of 15,833 children aged less than one year had received Vitamin A between July and December 2017 compared to 14, 850 in the same period in 2016 indicating slight increase of nine percent. There was a two percent trivial increase of children aged between one and five years who received Vitamin A between July and December 2017 compared to the same period in 2016.

3.3.2 Nutritional status and dietary diversity

The proportion of children under five at the risk of malnutrition based on mid upper arm circumference (MUAC <135mm) was seven percent in January 2018 and higher than 5.6 reported in January 2017 and significantly higher than the LTA of 5.4 percent. The MUAC levels for August to December 2017 were generally above the LTA with a significant increase noted in November 2017 indicative of a depreciated nutrition situation during that month (Figure 6). However, the MUAC levels stabilized as from December and January and is expected to improve due to the food security situation in the County.

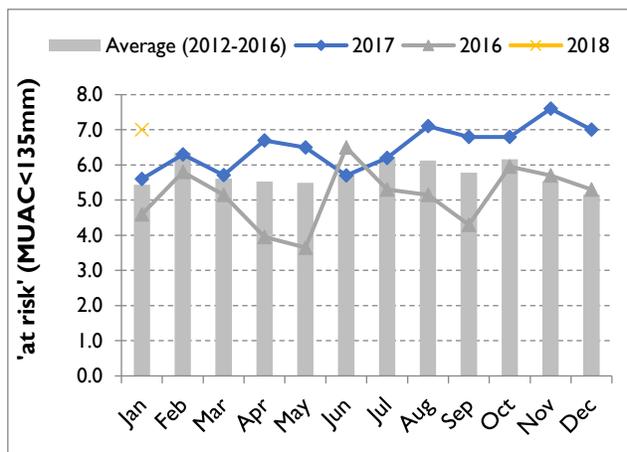


Figure 6. Percentage 'at risk' (MUAC<135mm)

Qualitative assessment conducted showed that the meal frequency was 3-4 meals per day in most parts of Matuga and Msambweni Sub County and 2-3 meals in most parts of Lunga Lunga and Kinango Sub County. Common foods mainly consumed across the livelihood zones include Tea, Milk, *Ugali*, Cassava, Fish, Rice, Beans and Vegetables (*mchicha*). Supplementary Feeding Programme (SFP) admission criteria from June to December 2017 indicates a decreasing trend as compared to same period 2016 and the LTA. However, it is worth noting that the service disruption by the national nurse's strike of last year had a negative impact on data submission and accuracy in many health facilities.

3.3.3 Sanitation and Hygiene

The latrine coverage in the County is as shown in Table 12 below indicating a slight improvement in all the four Sub Counties but a slight decrease in Kinango Sub County hence the increased reported cases of diarrhoea for both under-fives and the general population. A significant improvement was noted in Lunga lunga Sub County (predominantly LFZ) of about 14 percent increase in coverage.

Table 12. Latrine Coverage

Sub County/Livelihood zone	Latrine Coverage	
	January to June 2017	July to December 2016
	% Coverage	% Coverage
Matuga	77%	75%
Msambweni	56%	52%
Kinango	41%	42%
Lunga lunga	55%	41%

3.4 Education

Enrolment

There was a slight general increase in enrolment of pupils in Early Childhood Development Education (ECDE) and Primary and a slight decrease in Secondary level in term I 2018 compared

to term III 2017. A 13.3 percent increase in ECDE was realised with a total of 83,861 pupils enrolled in term I 2018 compared to 74,014 in term III 2017. In the primary level, there was a one percent increment with a total of 169, 662 enrolled in 2018 term I compared to 168,724 in term III 2017. There was a slight decrease in enrolment of two percent in secondary level with 19,376 enrolled in term I 2018 compared to 19, 626 in term III 2017. In ECDE and Primary levels, more girls have enrolled in 2018 term I as compared to term III 2017 same period while the number for boys in ECDE has gone down by about 10 percent and that of Boys in Primary has slightly increased by about 3 percent. In secondary level, the number of Boys has slightly increased while that of girls have gone down by about 3 percent (Table 13).

Table 13. Enrolment

Enrollment	Term III 2017			Term I 2018 (includes new students registered and drop-outs since Term III 2017)		
	№ Boys	№ Girls	Total	№ Boys	№ Girls	Total
ECDE	38284	35730	74014	34414	49447	83861
Primary	85305	83419	168724	85505	84157	169662
Secondary	9713	9913	19626	9756	9620	19376

Provision of porridge in ECDE by county government and building of more ECDE centres are some of the reasons for general increase in enrolment and Home-grown school meals programme in some public primary schools has also contributed to the notable increase in enrolment. The short rains crop harvests and above normal rainfall leading to good forage has also stabilised or rather impacted positively towards enrolment especially in the LFZ of Kinango and Lunga Lunga Sub County.

Drop Out

There was a notably substantial reduction in drop out in term I 2018 in primary level compared to term III 2017 but an increase in drop outs in secondary level in term I 2018 compared to term III 2017. In primary level, a significant number of girls drop out more than the boys whereas in secondary level there was more less equal drop-out rates among boys and girls as shown in table 14 below. Lack of food in school, some households not seeing the value of schooling, family labour and responsibilities and early marriages are some of the reasons for drop outs in primary level. In addition to the mentioned reasons, lack of school fees in secondary level has also contributed to the drop-out rates (Table 14).

Table 14. Drop-out rate

Indicator	End of Term II 2017		End of Term III 2017	
	№ Boys	№ Girls	№ Boys	№ Girls
Students dropped out from school				
Primary	41	54	562	691
Secondary	51	45	30	27

School Meals Programme

All ECDE centres have access to school meals programme supported by the County Government with the meal composing of porridge. There are two types of school meals in the County; Home Grown School Meals Programme (HGSM) and Expanded School Meals Programme (ESMP). A total of 19, 681 pupils in public primary school are currently under the HGSM and 26,857 under ESMP. However, both the two meals Programmes are not being implemented in all the public primary schools in the County. Late disbursement of funds, food deficit due to surplus children and food delivery delays are some of the challenges of HGSM. Availability of meals at the schools has led to increase enrolment, attendance and participation as well as retention in school.

3.5 Trends of key food security indicators

Table 15. Trends in Key food security indicators

Indicator	Long rains assessment, July 2017	Short rains assessment, Feb 2018
% of maize stocks held by households (agro-pastoral)	No stocks available	7% above LTA
Livestock body condition	Shoats were good across the County, Cattle is fair.	Good for Goats, Sheep and Cattle
Water consumption (litres per person per day)	25-40 litres in crop and livestock zone: 15-20 litres per person per day	25-40 litres in crop and livestock zone: 15-20 litres per person per day and expected to remain until next season.
Price of maize (per kg)	Average Ksh. 70/kg	Average Ksh. 39/kg
Terms of trade (pastoral zone)	39Kilogram/goat	69Kilogram/goat
Coping strategy index	Mean CSI: 11.4	Mean CSI: 10.75
Food consumption score (NDMA October -January)	Poor: 6.7 percent Borderline: 33.5 percent, Acceptable: 59.8 percent	Poor: 8.4 percent Borderline: 24.6 percent, Acceptable: 67 percent

4.0 FOOD SECURITY PROGNOSIS

4.1 Prognosis Assumption

- Maize prices are expected to remain stable if not slightly reduce through to April/May as households have enough stock to last them to the next 3-4 months. Improvements in livestock productivity in the two main livelihoods zones from the 2017 short rains, is currently providing alternative food sources thereby reducing demand on maize.
- Fall Army Worm control measures will be implemented in good time to save crops

- Pasture and browse condition is expected to remain stable until the onset of the next season rains.
- Prices of livestock may remain high due to the availability of pasture.
- Markets will continue operating normally without any disruptions with prices of commodities remaining stable.

4.1 Food Security Outlook

February - April

In the months of February through to April, household food consumption is expected to increase with the ongoing short rains maize harvest which will also increase dietary diversity and incomes from on farm casual labour. Food consumption might reduce from April as household food stocks reduce and they revert to market dependence. Milk availability is expected to be stable owing to the good forage condition which is expected to last the next 3-4 months. Market prices of maize are expected to remain stable because of less demand resulting from availability of food at household level. The livestock distances to water sources, water consumption and availability of pasture and browse and livestock body conditions are expected to remain stable until onset of the long rains in March 2018.

May - July

With the projected below average to average rainfall, rejuvenation of pasture and browse is likely to occur across all livelihood zones impacting positively on livestock productivity. Water sources are expected to recharge leading to improved water availability and accessibility. Terms of trade are expected to remain stable across the livelihood zones up to July 2018. Dietary diversity and subsequently the nutrition status for children under five years are expected to remain stable following the availability of milk in the household.

5.0 CONCLUSIONS AND INTERVENTIONS

5.1 Conclusions

The County food security classification largely is Minimal (IPC Phase 1). The indicators to monitor in the coming months are the spread of Fall Army Worms, disease outbreak in humans and livestock market prices of basic food commodities, health and nutrition status of children and pasture and fodder availability especially in livestock farming livelihood zone.

5.2 Summary Recommendations

- Surveillance by Ministry of Livestock for livestock diseases
- Emphasis on monitoring of food stock and on farm crop harvesting at household level with specific focus on the impact of head smut disease on maize production.
- Promotion of drought tolerant crops like cassava and post-harvest management training
- Sustainable management of water practices exemplified by rainwater harvesting
- Strengthening Community Led Total Sanitation Integrated Outreach especially in the LFZ areas like Kinango and parts of Lunga Lunga Sub County.

5.3 Sub-county ranking

Table 16: Sub-County Food Security Ranking

Sub County	Food security rank	Main food security threat (if any)
Kinango	1	○ Low livestock house holdings (Low TLU's)
Lunga Lunga	2	○ Destruction of irrigation infrastructure
Matuga	3	○ Maize crop attacked by army worms
Msambweni	4	○ Maize crop moderately infested by army worms

Ongoing interventions

Intervention	Objective	Specific Location	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Agriculture						
Capacity building on best agricultural practices.	Sensitization and awareness creation	County wide		120,000	October-December 2017	County Government (MOAL&F) and other stakeholders
Promotion of micro irrigation	Increased food production hence food security	County wide		400	October-December 2017	County Government (MOAL&F) & other stakeholders
Small horticulture empowerment and promotion project for local and up scaling	Availability of vegetables during the dry period for local consumption & for sell.	All wards		200	Continuing	National government, JICA, County government & farmers
Cotton promotion	Alternative livelihood, for sell to purchase food commodities.	Lunga Lunga (Mwereni ward)		102	Continuing	COG-Kwale Base titanium & local farmers
Livestock						
Dairy Cattle Improvement		Matuga and Lunga Lunga	30	400	Continuing	COG Kwale
Beef Cattle Improvement		Kinango, Mzambweni and Lunga Lunga	20	200	Continuing	COG Kwale
Dairy Goats Improvement		Kwale County	10	1000	Continuing	COG Kwale

Meat Goat Promotion		Kwale County	9	2000	Continuing	COG Kwale
Bee Keeping		Matuga	3.5	200	Continuing	COG Kwale
Local poultry		Kwale County	3.5	1000	Continuing	COG Kwale
Water						
Construction of water storage tank		Kinango(Chanzou);	3.6	1,800	2017/JAN2018	CGK
		Msambweni/Lungalunga(Dzirihini)	3.2	3,000	April 2018	CGK
Borehole drilling		Kinango (Chituu, Kuranze, Gangani Primary School)	6	1,800	2017/JAN2018	CGK
		Matuga(Zibani, Tumbula, Patanani)	6	2,300	Feb 2018	CGK
		Mzambweni/Lungalunga(Makwenyeni, Matoroni, Magoma)	6	2750	Feb 2018 START TIME?	CGK
Construction of a pump house for the booster station		Kinango (Mazola)	2.8	3,000	APRIL 2018	CGK
Borehole construction		Matuga(Zibani)	2m	800	FEB 2018	CGK, GOK
Borehole construction		Matuga (Tumbula)	2m	1000	FEB 2018	Gok

Borehole construction		Matuga (Patanani)	2m	500	FEB 2018	CGK
Water tank rehabilitation		Matuga (Tsimba)	=	1500	FEB 2018	CGK
Establishment of a communal water point		Msambweni/ Lungaluga (Mwananyamala)	-	2400		CGK
Construction of dam		(Nimbodze)	-	5,000	MARCH 2018	CGK
Water tank and kiosk construction		Msambweni/ Lunga Luga (Dzirihini)	3.2M	3,000	APRIL 2018	
Borehole construction		(Makwenyeni)	2M	800	FEB 2018	
		(Matoroni)	2M	750	FEB 2018	
Borehole construction		Magoma	2M	1200	FEB 2018	
Water pipeline construction		Kinango (Nyalani-Vigurungani, Kinango-mazola, Kinango-mazola Marere – Ndavaya, Maola [Puma] Sapo-Mbuluni, Busho-Kilibasi)	92.5	13,500	2017/2018	Coast Water/ GoK
		Matuga (Mbegani simanya, Marere – mkongani, Burani – milimani)	39.7	29,500	2017/2018	CGK

		Msambweni/ Lunga Lunga (Kigaleni)	13.5	3,000	2017/2018	CGK
Construction of dam		Msambweni/ Lunga Lunga (Makwenyeni)	7.5	30,000	2017/2018	NIB/GOK
Health and Nutrition						
Vitamin A Supplementation		Kwale County	4.0	127,672	Continuous	MOH/UNICEF/ PARTNERS
Zinc Supplementation		Kwale County	3.1	N/A	Continuous	MOH
Management of Acute Malnutrition (IMAM)		Kwale County	4.0	5618	Continuous	MOH/UNICEF
MIYCN interventions, including Baby Friendly community initiative		Kwale County	4.0	177894	Continuous	MOH/UNICEF
Iron Folate Supplementation among Pregnant Women		Kwale County	3.2	33,123	Continuous	MOH
Deworming		Kwale County	1.4	112823	Continuous	MOH
Promotion of proper child care practices, sanitation and hygiene		Kwale County	-	876,529	Continuous	MOH/UNICEF
Nutrition Coordination		Kwale County	2.0		Continuous	MOH
Education						

Porridge to ECDE	Improved enrolment, attendance and retention	Matuga County(All ECDE Centres)	School going Children	1,444	Ongoing long term	
HGSMP	Improved enrolment, attendance and retention	Matuga	Primary School going children	4179	Ongoing long term	WFP-GOK
ESMP	Improved enrolment, attendance and retention	Matuga(13 Primary Schools)	Primary Schools going children not covered by HGSMP	14,266	During drought emergencies	GOK

Recommended Interventions

Intervention	Objective	Specific Location	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Livestock						
Construction of tannery		Kinango (Samburu)	5			COG KWALE
Modern Slaughter house		Lunga Lunga	1000			COG KWALE
Water						
Replacement of pipelines washed away by short rains		Kinango (Nzovuni, Samburu, Maji ya Chumvi)		3200		CGK
Repair of tanks and construction of		Kinango (Nzovuni)			Feb 2018	CGK

communal water points						
Health and Nutrition						
Conduct Nutrition assessment and integrated outreaches for malnutrition cases to the most affected areas in all children below 5 years (Mass screenings and outreaches)		COUNTY	3,000,000	143,519	By April 2018	MOH, UNICEF, KRCS /NDMA
Scale up Vitamin A Supplementation		Kwale	6,014,991	127,672	By March 2018	MOH/UNICEF/PARTNERS
Zinc Supplementation		Kwale	309,184	N/A		MOH
Scale up Management of Acute Malnutrition (IMAM) through training of HCWs.		Kwale	1,600,000	160	By April 2018	MOH/UNICEF
Training on MIYCN and Baby Friendly community initiative		Kwale	4,000,000		By June 2018	MOH/UNICEF
Develop and review Nutrition contingency plans		Kwale	200,000		By March 2018	MOH/UNICEF/KRCS
ON Job Trainings		All sub counties	150,000		By March 2018	MOH/UNICEF
Data quality audits		All sub counties	120,000		By March 2018	MOH/UNICEF
Education						

School feeding program (Home Grown School Meal Program)	To improve access, participation, retention, and transition rate.	The 221 Schools spread in Lunga Lunga , Mzambweni, Matuga sub Counties.	85,000		By May 2018	GOK
School feeding program for ECDE centre	To improve access, participation, retention, and transition rate.	The 221 Schools spread in the four sub counties.	80,000		By May 2018	COG- Kwale