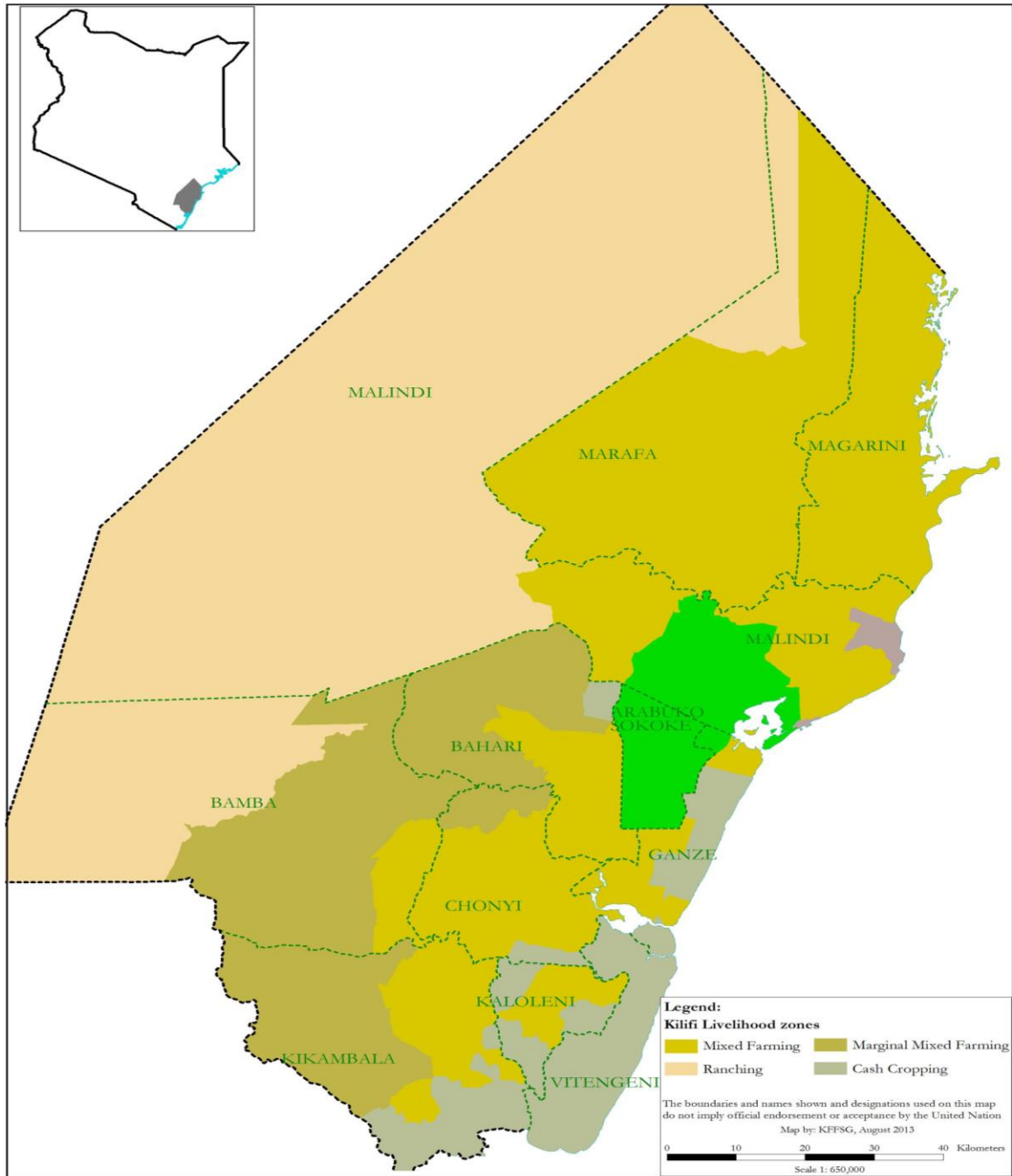


**KILIFI COUNTY
2016 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT**



A Joint Report by the Kenya Food Security Steering Group (KFSSG)¹ and the Kilifi County Steering Group (CSG)

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Executive Summary

Kilifi County is classified under “Stressed” (IPC Phase 2) of food security classification with localized areas such as Ganze (Bamba, Ganze and Sokoke), Kaloleni (Kayafungo and Mwanamwinga) and Magarini (Marafa, Adu and Garashi) in Crisis (IPC Phase 3). The county is facing food consumption gaps with about 70 percent of the households falling under borderline and poor food consumption. The mean coping strategy index is at 9.64 with marginal mixed farming and food cropping livelihood zones scoring the highest CSI of 11.5 and 12.4 respectively. The proportion of children at risk of malnutrition by MUAC was critical at 12.8 percent. The GAM rate was at 4.7 percent

Food security in Kilifi County was affected by three consecutive below average rainfall seasons. During the short rains, low crop production as a result of delayed onsets, poor distribution and early cessation of the rainfall, especially in the mixed farming and food cropping areas, have continued to affect availability of food at household level. There was near total crop failure specifically for maize, cowpeas and cassava, significantly reducing household food stocks to approximately two percent of stocks normally held. As a result, there is increased household reliance on market supplies. Diminishing tropical livestock units and livestock deaths have also continued to impede purchasing power and limiting household food access.

All markets were functioning normally without any disruptions and all food commodities available in the markets despite higher than normal food prices and below average livestock prices. Sale of crop is the main source of income in the mixed farming and food cropping livelihood zone while sale of livestock is the main source of income in the ranching and marginal mixed farming livelihood.

Access to water is limited since open water sources have dried up and households are now depending on boreholes and water trucking. Distance to available water sources increased to 2 – 15 kilometers in all livelihood zones except in the food cropping areas. The cost of water is high and in addition to increased distances has led to reduced water consumption at household level. Water consumption is six and 10 liters/person/day compared to 15 – 20 liters/person/day normally in both the marginal mixed farming and in the ranching livelihood zones.

Household milk consumption ranged between 0.5 – 1 litres compared to the normal of two litres at this time of the year. Household food consumption in the county remained relatively stable across the livelihood zones. However, in marginal mixed farming zone the percent of households at borderline was at 46.7 while in ranching (livestock farming) zone at least 20 percent of the households had poor dietary diversification. Mixed farming, cash cropping and food cropping zones had at least 60 percent of the households with acceptable dietary diversification. On coping strategy, in marginal mixed farming and livestock farming zones, households employed more coping strategies than the rest of the livelihood zones.

The factors affecting food security in the county include, poor rainfall performance which has been below normal in three consecutive seasons, poor livestock body conditions affecting terms of trade, increasing food prices limiting households access to food supplies, limited milk consumption and high temperatures.

1.0 Introduction

1.1 County Background

Kilifi County is located in the coastal region. It borders Kwale County to the South West, Taita Taveta to the West, Tana River to the North, Mombasa to the South and the Indian Ocean to the East. Kilifi covers an area of approximately 12,609.7 square kilometres and has a population of 1,399,975 (According to the projected population figure 2016). It comprises of seven sub-counties namely; Malindi, Magarini, Ganze, Rabai, Kaloleni, Kilifi South and Kilifi North. The county has four main livelihoods zones (Figure 1) including Marginal Mixed Farming (MMF) comprising 44 percent of the population, cash cropping/dairy (22 percent), Mixed Farming (11 percent) and ranching (two percent). Other livelihood zones include fishing and mangrove (three percent), formal employment (14 percent) and forest/tourism and casual labour (two percent each).

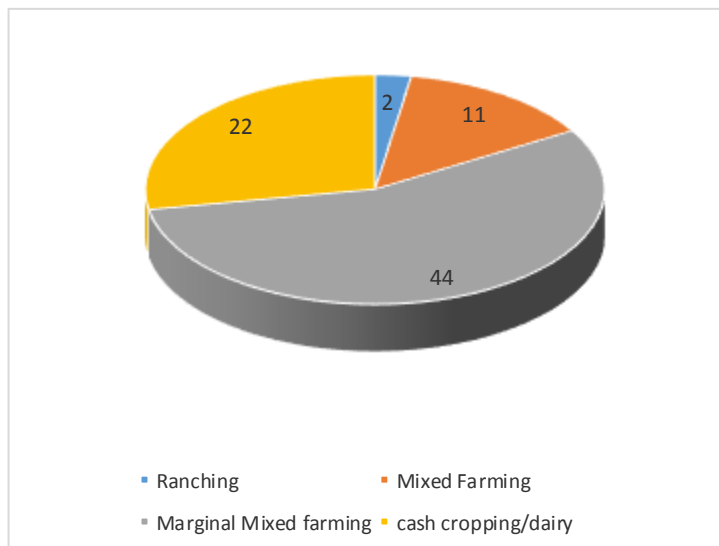


Figure 1: Population by livelihood zones

1.2 Objectives and Approaches

The aim of the short rains assessment was to develop an objective, evidence based and transparent food security situation. The overall processes and methodologies were coordinated by the Kenya Food Security Steering Group, National Drought Management Authority at the county and the Tana River County Technical Working Group. The data was collected through sectoral checklist tools from various sites such as livelihood baseline data, sectoral reports, price data, nutritional smart survey and monthly bulletins before the arrival of national team. An entry County Steering Group meeting (CSG) was conducted to share the initial information with other partners and national team. Thereafter the national team, sectors and partners scheduled the sample sites to be visited during the transect drive where the following areas were agreed upon as interview sites; Lutsangani, Kawala, Bamba market, Vitsapuni. Bofu, Goshi, Dakacha, Kamale and Chakama market.

These sites were selected based on various issues such as below average performance of short rains, areas of conflicts, sites that never visited before, farming areas, livelihood zones, presence of market and health facilities. The assessment was conducted from 23rd to 27th January, 2017 where in the field, the team conducted a minimum of two communities, two key informants and two market interviews in each of the sample site. The team also visited schools and health facilities to gather more relevant information. Visual inspection techniques were also used during the transect drives to obtain qualitative data. The field data was collected, reviewed, analyzed

and triangulated to verify its validity. The assessment process adopted a multi sectoral and multi-agency approach covering agriculture, livestock, health and nutrition, water and sanitation, education and food assistance sectors. Livelihood zones were used as a focal point to understanding the changes in food security and identifying populations that are affected and are in need of assistance. The results from sampled sites were discussed in County Steering Group (CSG) and used to infer other areas not visited. The findings and recommendation were provided for planning purposes.

2.0 Drivers of Food and Nutrition Security

2.1 Rainfall

The onset of the rains was late and started in the second dekad (10 day period) of November compared to the first dekad of October normally. Most parts of the county received 50 – 75 percent of the normal rainfall with the exception of parts of the marginal mixed receiving depressed rainfall of about 25 – 50 percent of the normal rains (Figure 2). Temporal distribution was poor characterized by dry spells and special distribution was uneven. Cessation was early in the third dekad of November compared to the normal third dekad of December.

2.2 Insecurity and Conflicts

Conflicts were reported where pastoralists from Tana Delta had moved with their livestock towards Adu and Chakama in Malindi but resolutions to the conflicts were reached.

2.3 Other shocks and hazards

Human wildlife conflicts were reported in parts bordering the Tsavo National Park especially in Lutsangani where wildlife have been attacking small stock.

3.0 Impacts of drivers on Food and Nutrition Security

3.1 Availability

Food availability in the county is derived from either own production or markets. The low on farm production due to consecutive below average performance of rains has resulted to increased reliance of households on market supplies. Diminishing household incomes from reduced sale of livestock and crop has continue to affect the household food consumption.

3.1.1 Crop Production

The short rains contributes about 40 percent of the total annual production. In the cash crop/dairy livelihood zone, coconuts, cashew nuts and cassava are the main sources of income contributing 30, 25 and 15 percent of cash income respectively while maize and cassava contribute 40 and 20 percent to food. In the food cropping livelihood zone, maize contributes 25 percent to cash income and 40 percent to food while cassava contributes 18 percent of cash income and 20 percent to food. In the marginal mixed farming zone, cashew nuts and cassava are the main sources of income and contributes 50 and 30 percent to cash respectively. In ranching, maize, cassava and

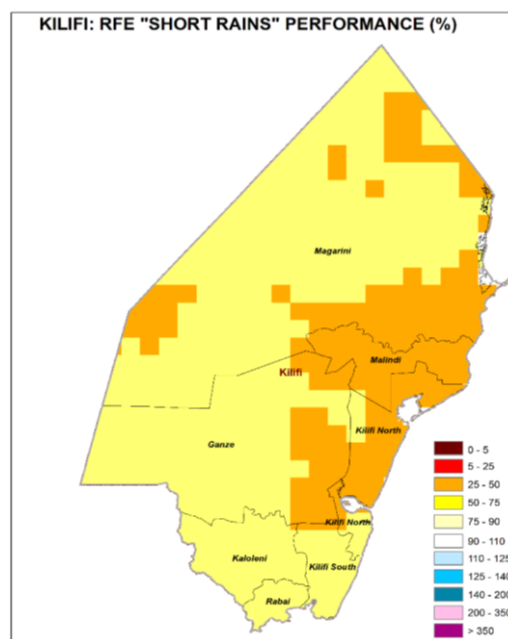


Figure 2: Rainfall performance

cowpeas contributed 20, 10 and 10 percent respectively to food. Maize and cassava contributes 70 percent and 30 percent to food respectively.

Rain Fed Crop Production

The area under maize, cowpeas and cassava decreased by 71, 68 and 75 percent respectively compared to the long term averages. The decline in area was attributed to late onset of short rains, lack of planting materials and high value of maize to cowpeas. The projected production for all the three main crops is expected to significantly decline and negligible harvests were realized compared to long term averages (Table 1). Maize crop in food cropping areas dried at knee height stage and there was poor formation of pod in cowpeas. The substantial reduction in production is attributed to below average performance of short rains, low acreage put to crop, prolonged dry spell and higher than normal land surface temperatures that could not support crop growth.

Table 1: Rain fed Crop Production

Crop	Area planted during 2016 Short rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	Percent change in area covered	2016 Short rains season production (90 kg bags) Projected	Long Term Average production during the Short rains season (90 kg bags)	Percent change in crop production
1. Maize	6,754	23,376	71	200	285,898	100
2. Cowpeas	1,311	4,037	68	151	22,690	99
3. Cassava	670	2,700	75	2,925 tons	41,889 tons	93

Irrigated Crop production

The acreage under amaranthus, tomatoes and Okra reduced by 17, 21 and five percent respectively compared to the long term averages (Table 2). The reduction was associated with water levels going down as a result of the below average amounts rainfall leading to increase in cost of pumping water, temporary closure of some irrigation schemes as a result inadequate water especially the Maghundho scheme in Sokoke. The projected production of amaranthus, tomatoes and Okra declined by 56, 24 and 10 percent respectively compared to the long term average. The reduction was attributed to lack of irrigating water due to low water levels in River Sabaki. Long dry spells and infestation of tomatoes by blight led to reduced production.

Table 2: Irrigated Crop Production

Crop	Area planted during the 2016 Short rains season (ha)	Short Term Average (3 years) area planted during Short rains season (ha)	Percent reduction of the area covered	2016 Short rains season production (90 kg bags) Projected	Short Term Average (3 years) production during 2015 Short rains season (90 kg bags)	Percent reduction of crop production
1.Amaranthus	81	98	83	769	1,755	44
2.Tomatoes	78	99	79	932	1,230	76
3.Okra	19	20	95	126	140	90

Maize Stocks in the county

The overall stocks at the county are 40 percent below the long term average. The decline was attributed to reduced production of maize. Household stocks are almost 100 percent below the long term average due to below normal own farm production. The current stocks held by traders and millers are 16 and 69 percent above the long term average respectively which has been attributed to expected high demand for maize and maize flour (posho). Households in ranching, marginal mixed farming and parts of mixed farming are dependent on market supplies.

Table 3: Stocks 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	1,662	150,991
Traders	162,182	139,435
Millers	20,800	12,300
NCPB	0	13,000
Total	186,644	315,726

3.1.2 Livestock Production

Livestock production contributes 75 percent to cash income in the ranching livelihood zone. In the marginal mixed farming and mixed farming, livestock production, contributes 30 percent to cash income, while in the cash cropping/dairy livelihood zone, livestock production contributes 15 percent to cash income. The main livestock species are cattle, sheep, goats and poultry. In the ranching areas, cattle, goat and poultry contributes 15, 20 and 50 percent respectively to food while in the marginal mixed farming areas they contribute 10, 82 and three percent respectively.

Forage condition

The pasture conditions were poor in the ranching areas especially Mwanamwinga, Sokoke and Adu wards while in marginal mixed and mixed farming livelihood areas, pastures condition was fair to poor (Table 4). Parts of Ganze, Kaloleni, Magarini and Malindi, the pasture conditions are fair to poor. Pasture condition in marginal mixed and mixed farming are likely to last for 1 - 1.5 months depending on the influx of livestock. In the food cropping the pastures are likely to last for 1 – 2 months. Browse conditions are fair in ranching and marginal mixed farming areas and are expected to last for 1 – 2 months.

Table 4: Forage condition by livelihood

Livelihood zone	Pasture condition			Browse condition		
	Current	Normally	Projected Duration to last (Months)	Current	Normally	Projected Duration to last (Months)
Ranching	Poor	Fair	Less than a month (with some areas with no pastures at all)	Fair	Good	1 month
Marginal mixed farming	Fair-poor	Good	1	Fair	Good	1 - 2 months
Mixed farming	Fair with pockets of poor	Good	1 - 1.5 months	Good to fair	Good	1 - 2 months
Food cropping and cash	Good to fair with	Good	1 - 2	Good	Good	1 - 2 months

cropping /dairying zone	pockets of poor					
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Livestock Productivity

Livestock body condition

Livestock body condition for cattle was fair to poor in the ranching and marginal mixed farming areas which was not normal at this time of the year, whereas that of goats and sheep was good which was normal across all livelihood zones in the county (Table 5). In Kaloleni and some parts of Ganze, Bamba and Magarini areas, the livestock body conditions were poor. In the food cropping and cash cropping /dairying zone and parts of mixed farming areas, the body condition of cattle was good to fair. The body condition of cattle and sheep was likely to deteriorate further in 1 – 2 months with depletion of pastures and increased trekking distance to water sources.

Table 5: Livestock body condition by livelihood

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normally	Current	Normally	Current	Normally
Ranching	Fair - poor	Good	Good	Good	Good	Good
Marginal mixed farming	Fair - poor	Good	Good	Good	Good	Good
Mixed farming	Fair	Good	Good	Good	Good	Good
Food cropping and cash cropping /dairying zone	Good - fair	Good	Good	Good	Good	Good

Milk production, consumption and prices

The average production of milk per household was 0.5 -1 litres per household compared to the normal of 2 – 3 litres of milk. Household milk consumption ranges between 0.5 – 1 litres compared to the normal of two litres at this time of the year (Table 6). Cash cropping/dairying zones has more milk produced and more milk was available for human consumption. Fair to poor livestock body condition contributed to low production of milk and low household consumption especially in the ranching and marginal mixed farming livelihood zones.

Table 6: Milk production, consumption and cost

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres)/Household		Prices (Ksh)/Litres	
	Current	LTA	Current	LTA	Current	LTA
Ranching	0.5 - 1	2 - 3	0.5 - 1	2 - 2.5	60	40
Marginal mixed farming	0.5 - 1	1 - 2	0.5 - 1	2 - 2.5	50	60
Mixed farming	2 - 3	3 - 5	0.5 - 1	2 - 2.5	50	50
Food cropping and cash cropping /dairying zone	0.5 - 2	1 - 2	1	1 - 2	40	35

Birth rates and Tropical Livestock Units

The birth rates are below normal at this time of the year. There has been significant variation on ownerships pattern of livestock types especially in the ranching and marginal mixed farming livelihood zones due to deaths (Table 7).

Table 7: Tropical livestock units

Livelihood zone	Average TLUs/Household	
	Current	Normal
Ranching	6-20	15-30
Marginal Mixed farming	8	12
Mixed farming	4-6	8-15
Food cropping and cash cropping /dairying zone	3.4	4.2

Livestock Migration

Migration of livestock has been reported especially from the ranching livelihood areas in Bamba through Kaloleni then Rabai to Mwakirunge in Mombasa County. Livestock movements in and out of the ranching and marginal mixed farming areas was reported. Migration has also been observed from Tana Delta to areas of Malindi especially along River Sabaki. Migrations in search of pasture and water are likely to continue. Camels from Garissa County have migrated to Mistagani areas. Disease surveillance, vaccination, routine management and controlled movement of livestock are among measures being undertaken by veterinary department to prevent livestock diseases.

Livestock Diseases and Mortalities

There are no major diseases reported in the county apart from few cases of Contagious Caprine Pleuropneumonia (CCPP) in the ranching livelihood zone. Cases of tick borne diseases (East Coast Fever) and Newcastle have been also reported. Some mortality cases were reported in the ranching and marginal mixed areas but were below 1 percent of the total livestock population.

Water for Livestock

The main sources of water for livestock are water pans, boreholes, piped water, shallow wells and river Sabaki. Areas of Tsangatsini, Kayafungo and Mwanamwinga in the marginal mixed farming zone, continued to recorded high livestock trekking distances in search for water and pasture. The return trekking distances is likely to increase with continued depletion of water in the open sources especially in the ranching and marginal mixed farming areas (Table 8).

Table 8: Water for livestock by livelihood

Livelihood zone	Return trekking distances (Km)		Expected duration to last (Months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
Ranching	5 - 15	3 - 5	1 - 1.5	2 - 3	Cattle, sheep and goats are watered alternate days	Once per day
Marginal mixed farming	5 - 15	3 - 5	1 - 1.5	2 - 3	Cattle, sheep and goats are watered alternate days	Once per day
Mixed farming	2 - 5	1 - 2	1 - 2	2 - 3	Cattle, sheep and goats are watered once per day	Normal
Food cropping and cash cropping /dairying zone	2	1	2 - 3	3 - 4	Cattle, sheep and goats are watered once per day	Normal

3.2 Access

Market operations were normal and food items are potentially available in the markets despite marginal increase in prices. Limited sales of livestock and crops potentially affected the household purchasing power.

3.2.1 Market Prices

Market operations and prices

The main commodity markets are Mtwapa, Bamba, Mariakani, Malindi, Mazeras and Oloitiptip in Kilifi North. Other markets are Gongoni and Marereni. For livestock, the markets include Bamba, Vitengeni, Tsangatsini, Mariakani, Gotani Malindi, Mkapuni, Bondora, Kaloleni, Lango baya and Mazeras. All markets were functioning normally without any disruptions. The food commodities available in the market were maize, beans, green grams, cowpeas, vegetables and rice. Livestock available in the markets were sheep, goats and cattle. Poor road access to some markets especially Bamba led to higher prices of food items. In Bamba livestock keepers desperately sold emaciated cattle at low prices due to poor body condition as a result of the drought experienced. There volumes at the market was high but traders were few in the markets.

Maize Prices

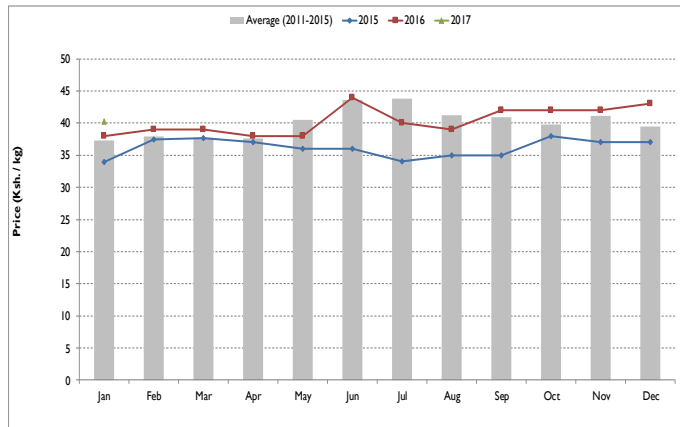


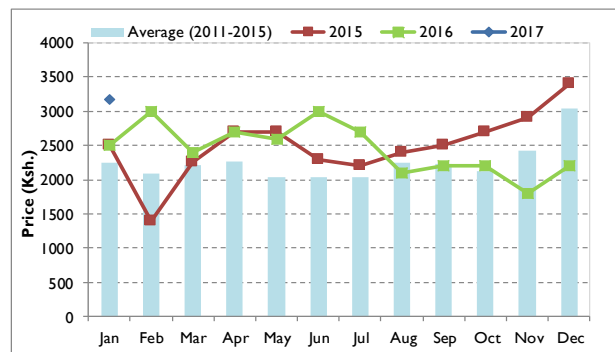
Figure 3: Maize prices in the county

The average maize price was recorded in the marginal mixed farming zone at Ksh. 48 per kilogram while the least prices were recorded in the food cropping zone at Ksh. 38 per kilogram. The price of maize is expected to begin gradually increasing due to high demand of both maize and maize flour.

Maize prices have been stable from September 2016 to January 2017 (Figure 3), and was attributed to supplies into the market from other source markets including Tanzania. The prices have slightly reduced from Ksh. 43 in December 2016 to Ksh. 40 per kilogram in January 2017. However, prices have marginally remained above the long term average from September 2016 and are currently five percent above the long term mean and are still higher than the prices in the last two years. The highest

Goat Prices

The average goat prices increased from December 2016 (ksh. 2,200) to January 2017 (Ksh. 3,164) by 44 percent (Figure 4). Prices were also above the long term average for the first time since October 2016 by 41 percent. The increase in goat prices was attributed to good body condition and high market demand due to low volumes. The difference in goat



10 Figure 4: Goat prices

prices across the livelihood zones was occasioned by variation in body sizes and breed.

3.2.2 Terms of Trade

The terms of trade have been below average from November to December 2016. In January 2017, the terms of trade have improved and is 32 percent above the long term average (Figure 5). Currently households can purchase approximately 80 kilograms of maize from the sale of a goat compared to 60 kilograms normally. The improvement in terms of trade was attributed to stable maize prices and the increase in goat prices. The TOT was expected to

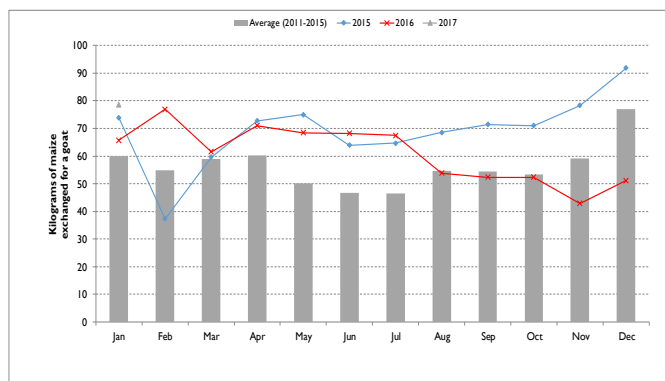


Figure 5: Terms of trade

improve further with stable maize prices and increasing goat prices. However, the number of goats owned by most households is low limiting their ability to take advantage of the favorable terms of trade. There was variation in terms of trade across livelihood zones due to varying average price of maize and body condition of goats

3.2.3 Income Sources

The main source of income in the mixed farming and cash cropping livelihood zones is crop production contributing 60 and 35 percent respectively. The sale of livestock is the main source of income in the ranching (75%) and marginal mixed farming (30%) livelihood zones (Table 9).

Table 9: Income sources in the county

Livelihood zone	Sources of income	Contribution (%)
Marginal mixed farming	Livestock production	30
	Firewood collection/charcoal burning	15
	Casual waged – labour income	5
	Small business and trading	15
	Cash crop production	20
	Remittance and gifts	2
	Formal waged labour	6
	Others	7
Mixed Farming	Food crop production	50
	Livestock production	10
	Cash crop production	10
	Petty trading	10
	Casual waged – labour income	10
	Formal waged labour	10
Ranching	Livestock production	75
	Firewood collection/charcoal burning	10
	Formal waged labour	1
	Casual waged – labour income	2

	Small business and trading	5
Cash Cropping Dairy	Cash Crop production	30
	Casual waged labour income	15
	Livestock production	15
	Food crop production	5

3.2.4 Water access and availability

The main water sources in the county are boreholes, pans, pipelines and permanent rivers. In marginal mixed farming and mixed farming zones, all the pans are dry and households depended on boreholes and water trucking. In food cropping zone, households depend on pipelines. The distance to water sources has increased between 2 – 15 kilometers in all livelihood zones except in the food cropping zone where it is still normal at 1 kilometer. Water consumption has also reduced in the marginal mixed farming and ranching zones from 15 - 20 liters/person/day to between six and 10 liters/person/day. In the food cropping and mixed farming livelihood zones, consumption has remained within normal ranges with the exception of a few areas where it has reduced. The cost of water increased up to Ksh. 50 for a 20 litre jerrican from the normal Ksh. 5 and in the ranching zone, water costs between Ksh.30 and 50 for a 20 litre jerician from the normal Ksh.5 per 20 litre jerician (Table 10).

Table 10: Water for domestic use

Livelihood zone	Distance to Water for Domestic Use (in km)		Cost of Water (in Ksh)		Waiting Time at Water Source (in Mins)		Average HH Use (in liters/p/d)	
	Normal	Current	Normal	Current	Normal	Current	Normal	Current
Food cropping	1	1	3	5	30	30	50	40
Marginal mixed farming	2 - 3	4 - 15	4 - 5	5 - 50	10 - 15	15 - 40	15 - 20	6 - 10
Mixed farming	1 - 2	1 - 15	3 - 5	5 - 30	5 - 10	10 - 40	15 - 25	7 - 20
Ranching zone	1	10 - 15	5	30 - 50	15	60	15 - 20	6 - 8

3.2.5 Food Consumption

Overall there are household food consumption gaps in the county with 69.2 percent of the households having either a borderline or poor food consumption in the month of January 2017. Food cropping, livestock farming and mixed farming livelihood zones had between 20 and 43 percent of the households who had poor food consumption. However, more households had a borderline food consumption in all livelihood zones (Figure 6). The food consumption gap in the county could put the households at risk of malnutrition.

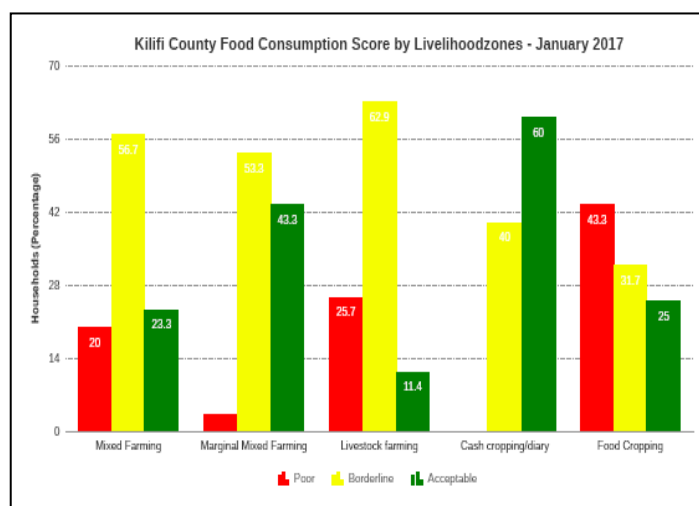


Figure 6: Food consumption by livelihood

3.2.6 Coping Strategy

Table 11: Coping strategy

Livelihood Zones	October	November	December	January
Mixed Farming	9.2	8.4	7.5	8.5
Marginal Mixed Farming		10.8	14.3	11.5
Livestock (Ranching)	10.5	9.9	10.3	5.5
Cash Cropping		4.4	4.7	8.3
Food Cropping	23.4	10.8	8.5	12.4
Mean CSI	14.87	8.88	9.11	9.64

The mean coping strategy index for the county has been stable but marginally increasing from November up to January 2017 at 9.64. This implies that the frequency with which households are employing consumption coping strategies has been increasing. In the month of January, the coping strategy index was higher in the food cropping (12.4) and the marginal mixed farming (11.5) livelihood zones (Table 11). The ranching zone had the least number of households who were using the consumption coping strategies.

3.3 Utilization

Dietary diversity by most households was influenced by the availability and access of food items in the markets. Water utilization continue to be limited especially in handwashing practices.

3.3.1 Nutritional Status

The proportion of children at risk of malnutrition by MUAC was critical at 12.8 percent in the month of January 2017 from 4.9 percent in December 2016 (Figure 7). The proportion of children is significantly higher than the long term average and also compared to the last two years.

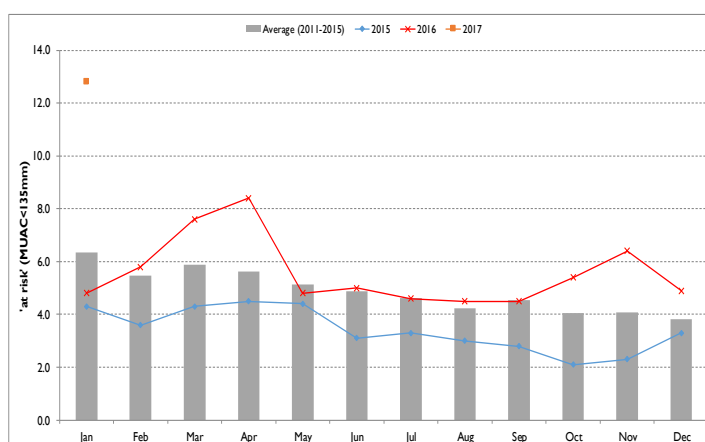


Figure 7: Proportion of children at risk of malnutrition

Morbidity and mortality patterns

The most prevalent disease among the under-fives in the county was Upper Respiratory Tract Infection (URTI) due to dust and wind. Households also reported skin diseases among the adults due to reduced water usage.

3.3.2 Sanitation and Hygiene

According to the Nutritional Survey conducted by Kilifi County Government (Ministry of Health) supported by UNICEF, International Medical Corps and European Union in November 2016, about 50 percent of the households in the drought affected areas practiced open defecation compared to only nine percent in the non-drought areas. A further 18 percent of households in

the non-drought affected areas practiced handwashing at critical times while less than one percent did it in the drought affected areas. Less than 10 percent of the households treated their drinking water.

3.4 Trends of key food security indicators

Table 12: Food security trends

INDICATOR	Long rains assessment, July 2016	Short rains assessment, Feb 2017
Household food stocks	25 percent of the LTA	Household stocks is projected to be 99 % below the LTA. Traders stocks is about 16 percent above the LTA. Most household depend on the market supplies.
Crop Production	Projected maize and cowpeas was expected to reduce by 30 and 20 percent respectively compared to the LTA	Near total crop failure. Projected production under rain fed for the three main crops is expected to reduce by almost 100% for all the crops (maize, cowpeas and cassava reduced by 100, 99 and 93% respectively compared to LTA
Livestock body condition	Good to fair	Fair to poor
Ranching Livelihood zone	Poor to fair	Poor for cattle, Goat and sheep good (parts of Mwanamwinda, Kayafungo wards in Kaloleni Sub County and Bamba and Sokoke wards in Ganze Sub County
Mixed Farming Livelihood zone	Good	Cattle-good to fair, Goats and Sheep are good
Marginal mixed farming livelihood zone	Good	Fair to poor
Cash Cropping/Dairy Livelihood zone	Good	Cattle-good to fair, Goats and Sheep are good
Return distance to grazing		
Ranching	5-15 kilometres	5 to 15 Km
Marginal mixed farming	5-10 kilometres	5 to 15 Km
Mixed farming livelihood zone	5-7 kilometres	2-6 km
Cash cropping/dairy	1-2 kilometres	2-4 Km
Price of maize (per kg)	Ksh.40 per kilogram	Ksh.40.3 per kilogram
Terms of trade	68 kilogram	79 kilogram
Water consumption (liters per person per day)		
Marginal mixed farming zone	15 liters/person/day	6 liters per person per day

INDICATOR	Long rains assessment, July 2016	Short rains assessment, Feb 2017
Ranching zone	10 liters/person/day	6 liters per person per day
Mixed Farming zone	15 liters/person/day	8 liters per person per
Cash cropping and dairy zone	17 liters/person/day	10 liters/person/day
Food consumption score	(May 2016)	
Mixed Farming	Poor - 6.3 percent, Borderline - 26.2 percent	82% Acceptable, 13% poor and 5% borderline
Marginal mixed farming	Acceptable- 67.4percent	53.3% Acceptable, 46.7% borderline
Livestock Farming		46.7% Acceptable, 33.3% borderline, 20% poor
Cash Cropping		93.3% acceptable and 6.7% borderline
Food cropping		60% acceptable, 26.7 borderline and 13.3% poor
Coping Strategy Index	18 (May 2016)	
Mixed Farming		7.4
Marginal mixed farming		14.3
Livestock Farming		10.3
Cash Cropping		4.7
Food cropping		8.7
Percentage of children at risk of malnutrition	3.8	12.81 (Kakuyuni, Mwanamwinda and Jaribuni sample sites in the marginal mixed farming zone recorded high proportion of children at risk of malnutrition with 11.8%, 9.3% and 6.7% respectively of all children sampled falling at the at risk cohort)
GAM	4.0	4.7

3.5 Education

Most schools have recorded low turnout in schools for lack of feeding programmes in schools. The primary schools have not received their cash transfers for term one 2017, contributing to the low turnout in schools. Some older children have also been attending schools erratically as they at times assist in casual labor to get additional income to provide food to the household. There has been very low transition from ECD to primary. Most children who should join class one are either not going to school or are back in ECD where they can get some food. From the community interviews, parents are still with their children who should be joining form one for lack of school fees as they prioritize expenditure on food. The most affected schools are in Ganze.

4.0 Food Security Prognosis

4.1 Prognosis Assumptions

The prognosis will likely hinge on the following assumptions:

- The March to May 2017 long rains are likely to start late and be below average in performance.
- Higher than normal land surface temperatures.
- Market supplies are expected to continue supporting most households with relatively higher prices compared to last seasons.
- Livestock migration will gradually increase before March increasing the likelihood of diseases and conflict.

4.2 Outlook for the next six months

Food Security Outcomes (February - April)

The below average performance of the short rains, resulted to total crop failure in most parts of Kilifi compounded by two consecutive poor seasons, previously. Most households will likely continue depending on market supplies to support food consumptions while facing declining household incomes and limited on farm labor opportunities. Poor livestock body conditions especially in the ranching and parts of marginal mixed farming areas had resulted to less incomes from sale of livestock. Increase in staple food prices is likely to be exhibited especially due to low supplies in the market and high demand. Increased in-migration of livestock especially from other counties towards the riverine areas is likely to intensify increasing the probability of resource based conflict. Majority of the poor households in these areas are likely to intensify their coping mechanism especially charcoal and firewood selling in order to bridge their food gaps. Most of the households in the most affected areas such as Ganze (Bamba, Ganze and Sokoke), Kaloleni (Kayafungo and Mwanamwinga) and Magarini (Marafa, Adu and Garashi) are likely to be in Crisis (IPC 3) food insecurity phase.

Food Security Outcomes (May - July)

Based on the forecasted March – May rainfall, marginal improvements are expected through May. Own farm productions are expected to be below average. Low incomes are also likely to be experience though minimal demand for farm labour is expected. Livestock productively is likely to minimally recover with modest improvement of pastures and water especially the ranching and marginal mixed farming areas. Livestock related labour activities are likely to improve marginally. Most poor households in ranching and marginal mixed farming livelihood areas, will still continue to rely on market supplies. Households in the mixed farming and food cropping livelihood zone, will likely improve their consumption with early maturing crops are likely to be available by July. Majority of the households are likely to remain at Stressed (IPC Phase 2).

5.0 Conclusion and Interventions

5.1 Conclusion

The county was classified in the Stressed food security phase (IPC Phase 2) with localized areas of such as Ganze (Bamaba, Ganze and Sokoke), Kaloleni (Kayafungo and Mwanamwinga) and Magarini (Marafa, Adu and Garashi) in Crisis (IPC Phase 3). Food security situation is likely to worsen especially in the ranching and parts of marginal mixed farming areas. Several key factors need to be monitored as responses and interventions are outlined. The factors include, increased distance to water sources resulting to increased water trucking, livestock death especially in the ranching areas, absenteeism in schools and malnutrition levels which are likely to worsen. Others

are livestock pests and diseases, prices of food items and market functions, insecurities especially crime related to lynching of elderly and political hostilities.

5.1.1 Phase Classification

The county was classified in the Stressed (IPC Phase 2) food security with localized areas in Crisis (IPC Phase 3) such as Ganze (Bamba, Ganze and Sokoke), Kaloleni (Kayafungo and Mwanamwinga) and Magarini (Marafa, Adu and Garashi).

5.1.2 Summarize the key findings

Below average performance of March – May over seasons have led to low household stocks and high temperatures will affect water sources by evaporation. Below crops production over three seasons have significantly reduced household stocks. Labour from incomes have also been diminishing over seasons. Household are expected to continue to intensify coping mechanism, if the situation continues, malnutrition levels will be affected. Most households will remain in Stressed (IPC Phase 2) with localized areas in Crisis (IPC Phase 3).

5.1.3 Sub County Ranking

Table 13: Sub county ranking

Sub County	Food security rank (1-10- worst to best)	Main food security threat (if any)
Ganze	1	Total crop failure, below average performance of short rains, livestock mortalities, fair to poor livestock body condition, poor pasture conditions, livestock diseases (CCPP, NCD), increased distance to water sources, high food prices, limited sources of income, livestock migration
Kaloleni	2	Total crop failure, depleted (poor pasture), water scarcity, fair to poor livestock body conditions
Magarini	3	Limited access to water, livestock body condition poor
Malindi	4	Low turn of tourism
Rabai	5	Access to labour is better
Kilifi North	6	Employment opportunities, income generating activities in the quarries, cash crops (coconut)
Kilifi South	7	Employment opportunities, income generating activities, cash crops (coconut)

5.2 Ongoing interventions

5.2.1 Food Interventions

Cash for Assets beneficiaries are 12,200 households receiving Ksh.2000 per month in seven months in a year. Kenya Red Cross supports 1000 households in Ganze sub county with Ksh.6000 per month since October 2016. Other forms of cash transfer include county government supporting 750 households, 50 per ward, the elderly, orphans and people living with disability.

5.2.2 Non Food Interventions

Table 14: Nonfood interventions

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Livestock							
Fodder production conservation and construction of hay store.	Reduction of drought effects on Livestock by maintaining body condition and milk production.	County wide	75 households	5.0 M	500 households	December 2016-April 2017	KCG, Dept of Livestock,
Livestock Feed supplementation and distribution	Prevent livestock deaths	Mariakani, kayafungo and mwanamw inga, Malindi, Ganze and Magarini	400 livestock farmers			By Feb.2017	Dept of Livestock KCG, NDMA
Construction of cooling plant in Ruruma- Kawala	Strengthen marketing	Rabai	Sub County wide	5.0 M	Sub County wide	December 2016-April 2017	KCG, Dept of Livestock,
Agriculture							
Supply of farm inputs (Seeds, fertilizers to the schemes and group irrigated farms	Increasing production per unit area	County wide	19000 farm families	30.0 M	19000 farm families	Jan-April 2017	Department of agriculture
Establishment of Dagamra, Burangi, Uhai Marikano, Mdachi and Magudho Irrigation scheme	Increase production	Magarini, Ganze, Lango baya	1800HH	44.0 M	1800HH	Jan-April 2017	Department of agriculture
Conservation Agriculture	Increase crop production and agribusiness	County wide	560 groups	25.0 M	560 groups	July 2016-June 2017	FAO/ Dept of Agriculture

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Health and Nutrition							
Vitamin A, Deworming and Iron Folate among pregnant women supplementation	Reduces morbidity and mortality rates	Countywide	Under-fives for Vitamin A, All children under 14 years deworming	25.0 M	300,000	2016-2017	MOH/UNICEF/IMC
MYCN Interventions (EBF and Timely Intro of complementary Foods)	Reduce morbidity and mortality rates among the under fives	Countywide	Under five years old and pregnant and lactating women	3.0 M	300,000	2016-2017	MOH, UNICEF, WV, CISP, IMC, PS Kenya
Management of Acute Malnutrition (IMAM)	Reduce morbidity and mortality rates among the under fives	Countywide	All Under five years old	15.0	1500	2016-2017	MOH/UNICEF/KEMSA
Mass screening and integrated outreaches	Identified cases are put on nutrition intervention	Kayafungo, Mwana mwinga and Bamba Wards	Under five years old and pregnant and lactating women	1.0 M	Under five years old and pregnant and lactating women	2016-2017	DOH, NDMA, UNICEF
Education							
Training of schools board of management and communities	Improve management of schools on sustainable feeding programme	Malindi	Malanga, Girimacha, Marikano, Sosobora	5.0 M	200 COMMUNITY 4BOMs-60 Members	2016-2017	MOE
Water							
Water tracking, borehole drilling and pipeline extension	Reduction of water borne diseases.	countywide	Boreholes=12 Water trucking=10	600.0M	100,000	July 2016-2017	KCG, Coast Water Services

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
	Reduction of conflicts on animal/human/wildlife		0 points Pipeline extension=100				

5.3 Recommended Interventions

5.3.1 Food Interventions

Table 15: Population in need of food assistance

Sub county	Population by county	Pop in need (% range min – Max)
Ganze	173,669	35-40
Kaloleni	175,735	25-30
Magarini	223,597	20-25
Malindi	205,568	15-20
Rabai	143,339	5-10
Kilifi North	261,879	5-10
Kilifi South	216,489	0-5

5.3.2 Non-food interventions

Table 16: Non Food interventions

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Agriculture							
County wide	Development of irrigation schemes in Bungale and Balagha schemes	Magarini	15000	Department of Agriculture,	40.0M	1.0M	2017/2018
County wide	Farm relief seeds and fertilizers support	County wide	10000	Department of Agriculture,	15.0M	0.2M	2017/2018
County wide	Farmers capacity building on kitchen gardening,	County wide	10,000	Department of Agriculture,	5.0M	1.0M	2007-2018

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
	pests and diseases management						
County wide	Farm mechanization (10 tractors)	County wide	10	Department of Agriculture,	50.0M	0	2017/2018
Livestock							
County wide	Early warning and climate change capacity building	Ganze, Kaloleni, Magarini and Malindi	3000HH	KCG, NDMA and other partners	5.0M	0.2M	2017-2018
County wide	Livestock Off take	Ganze, Kaloleni, Magarini and Malindi	2500HH	KCG, NDMA and other partners	60.0M	0.2M	2017-2018
County wide	Livestock support on disease surveillance and vaccination	County wide	All livestock heads	KCG, NDMA and other partners	55M	0M	2017
County wide	Feed supplementation and establishment of feed reserves	Ganze, Kaloleni, Magarini and Malindi	3000HH	KCG, NDMA and other partners	5.0M	0M	2017-2018
Health and Nutrition							
Countywide	Scale up mass screening and integrated outreaches	Countywide	Children aged below five years and P&L women	MOH,NDMA, UNICEF, IMC, PSK, AFYA Pwani, KRCS	30.0M	0M	2017
Countywide	Initiation of Community integrated management of Acute malnutrition	Countywide	Children aged below five years	MOH,NDMA, UNICEF, IMC, PSK, AFYA Pwani, KRCS	5.0M	0M	2017
Countywide	Conduct a smart survey	Countywide	Under five years old and pregnant	KCG, MOH,NDMA, UNICEF, IMC, PSK,	2.5M	0	2017

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
			and lactating women	AFYA Pwani, KRCS			
Countywide	Micronutrient powders support	Countywide	Children aged below five years	MOH and Partners	15M	0M	2017
Education							
Countywide	School meals programme	Countywide	170616	250 public primary schools and ECDEs	100.0M	0	2017-18
Countywide	Provision of Water Tanks and Gutters Installation and construction toilets in Ganze, Kaloleni, Malindi and Magarini	Countywide	250 public primary schools and ECDEs	250 public primary schools and ECDEs	100.0M	0	2017-18
Countywide	Food for assets	Countywide	250 public primary schools and ECDEs	250 public primary schools and ECDEs	100.0M	0	2017-18
Countywide	Water trucking to schools	Countywide	250 public primary schools and ECDEs	MOEs and partners	100.0M	0	2017-18
Water and Sanitation							
countywide	Water tracking, borehole drilling, construction and expansion of water pans and pipeline extension	Countywide	200,000	KCG, Coast Services Board, National Gvt, KRCS, WVI, World bank	2.0B	600.0M	2017-2018

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
countywide	Purchase and distribution of water treatment chemicals and bio filters	Countywide	30,000HH	KCG, Coast Services Board, National Gvt, KRCS, WVI	2.0M	0M	2017-2018
countywide	Purchase of water boozers	Countywide	100,000HH	KCG, Coast Services Board, National Gvt,	20.0M	0M	2017-2018