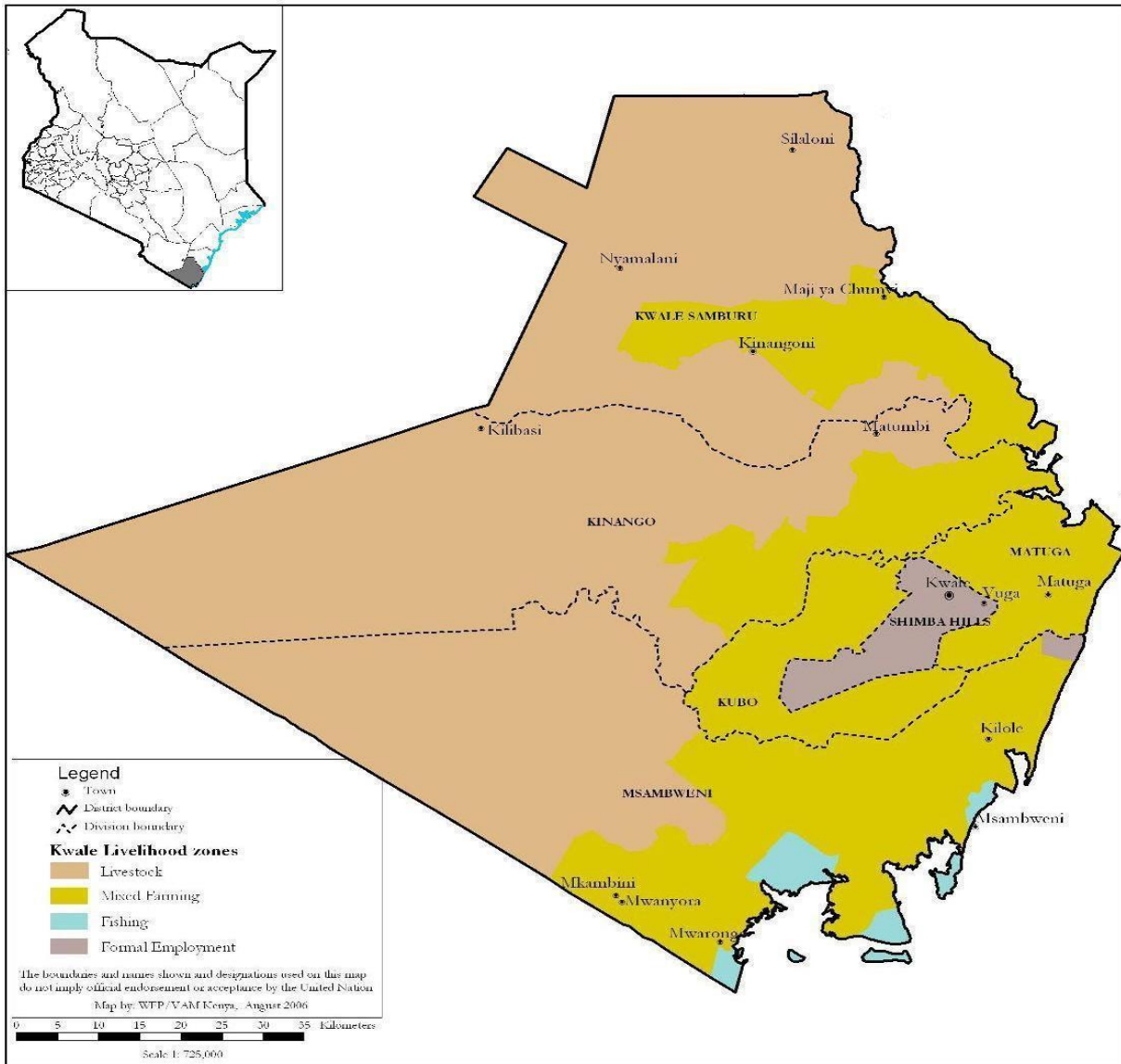


KWALE COUNTY 2018 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



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

August 2018

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EXECUTIVE SUMMARY

The long rains crop assessment was conducted by the Kenya Food Security Steering Group and the Kwale County Steering Group. The main objective of the LRA was to develop an objective, evidence-based and transparent food security situation analysis following the long rains season of 2018 taking into account the cumulative effects of previous seasons and to provide recommendations for possible response options based on the situation analysis.

The main drivers to the current improved food security situation long rains include: above normal rainfall with good temporal and spatial rainfall distribution across the county; support by the Kwale County Government through mechanization and provision of certified seeds; availability of subsidized fertilizer by farmers leading to increased yield of maize per hectare and 70 percent recharge of water sources in all the livelihood zones among other factors. Maize stocks held by household are 88 percent above the long term average (LTA) and is expected to last for the next five months as harvesting is still on-going.

The average price of maize was ksh 33.9 which was below LTA and is expected to remain stable. The terms of trade (TOT) in July 2018 were 22 percent above the LTA and were on the upward trade as the body condition of livestock will remain good due the favourable condition of forage. The body conditions of all livestock species, in both the mixed farming livelihood zone (MFZ) and the livestock farming livelihood zone (LFZ) and are good and are expected to remain stable until the onset of short rains season. However, a slight decline is expected in parts of the Livestock farming zone as the rains subside. The average return trekking distances from grazing area to watering points have reduced to 2-4km in the Livestock farming zone compared to the normal 5-10 km and is expected to last for 3 months. About 15.8, 30.8 and 53.9 percent of households have poor, borderline and acceptable respectively which was an improvement from 2017 at the same time. The improvement can be attributed to increased food availability at household; level reduced food commodity prices, and increased income from casual labour.

The proportion of the population at risk was still 25.4 percent higher than normal compared with the LTA of 5.82 percent but was expected to improve due to the improved food security. Latrine coverage in the County averages 60.8 percent. Poor hygiene and sanitation may be attributed to the high incidence of waterborne diseases across all livelihood zones including typhoid, diarrhoea and dysentery. The increase in the number of ECDE centres that have been put up by the County government coupled with the enhanced school feeding programme has contributed to an increase in enrolment, participation and retention of both boys and girls in schools.

The County is classified in the Minimal Phase (Phase 1) of the Integrated Food Security Classification (IPC). It is expected that some households in Livestock livelihood farming zone will move into Stressed “IPC Phase 2” due to depletion of food stock and deterioration of water, pasture and browse by October to mid-November. However, harvesting of the short rain crop will start by mid- November and this will change this livelihood to Minimal IPC phase classification

1.0 INTRODUCTION

1.1 County background

Kwale County is located in the coastal region of Kenya and constitutes four sub counties namely; Matuga, Msambweni, Kinango and Lungalunga which are further fragmented into 20 wards. The county covers an area of 8,960 square kilometers and has an estimated population of 649,931 (KNBS census 2009). The county borders Taita Taveta County to the west, Kilifi County to the north, Mombasa to the northeast, the Indian Ocean to the east and the Republic of Tanzania to the south. The main livelihood zones are: mixed farming, livestock farming and fishing (Figure 1). The main livelihood zones are Mixed farming (69percent), Livestock Farming (22percent) and Fishing (5percent) and Formal employment (4percent).

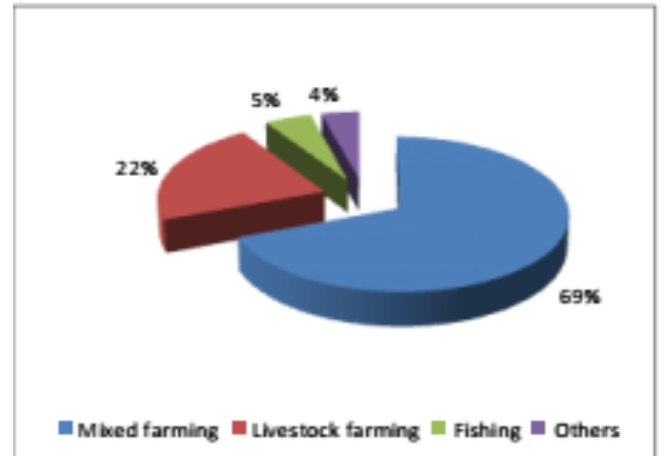


Figure 1 Proportion of population in Livelihood zones

1.2 Methodology and approach

The main objective of rapid long rains food security assessment was to develop an objective, evidence-based and transparent food security situation analysis following the long rains season of 2017, taking into account the cumulative effect of previous seasons, and to provide immediate and medium term recommendations for possible response options based on the situation analysis. The assessment used both quantitative and qualitative methods for data collection. Primary data was collected during the field visits at the County where key informants' interviews, focused group discussions were conducted as well as observations across livelihood zones. Secondary data was obtained from SMART surveys, NDMA bulletins and FSOM data.

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

The long rains season's onset was in the first dekad of March which was normal.

The rains were above normal during the season except for the third dekad of March which was below normal and first dekad of April which was normal. Generally the county received above 350 percent of normal long rains. The rainfall distribution was spatially even and temporally good in both the mixed farming and livestock farming livelihood zone. The long rains season ended in the third dekad of June. However, some areas continued to receive some showers in August which was normal for this time.

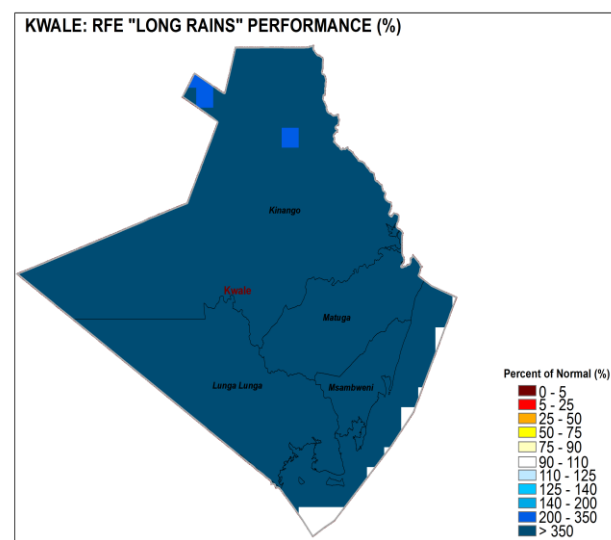


Figure 2 Spatial Distribution of Rainfall

2.2 Current Shocks and Hazards

The main hazards contributing to food insecurity in the county is Fall Army worms that led to destruction of 40 percent of the total acreage under maize across all livelihood the zones

3.0 IMPACT OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

3.1.1 Crop Production

The county depends on the long rains season more for crops production than the short rains season. The main food crops grown in the county are maize, cowpeas, cassava and green grams. Maize accounts for 50 percent and nine percent of food and cash income respectively in the Mixed Farming livelihood zone. In the Livestock farming livelihood zone, maize contributes 28 percent of food income while cowpeas and green grams contribute 14 and 15 percent of the cash income of household income respectively.

Rain-fed crop Production

Rain-fed crop Production increase in the acreage of maize across the livelihood zone was attributed to availability of free County tractor ploughing services that enabled farmers to open up new land for production, the favorable long rains and the county providing farmers with a total of 128MT of free maize seed. Inputs were readily available from stockists as well as subsidized fertilizers sold by NCPB. Maize productivity increased by 3-5bags/ha in the Livestock Farming zones and 7-10 bags in Mixed Farming zones as a result of the above normal rainfall and increased use of subsidized fertilizer available at NCPB store which was fairly affordable to farmers. Production was 44.4 percent above LTA due to increased acreage and yields per hectare.

Fall army worms were present across all the areas in both the livestock and mixed farming zones. They destroyed a total of 30 percent part of the maize in all the wards of the four Sub Counties. However, early planted maize escaped the FAW destruction due to timely control with use of appropriate pesticides hence damage was low compared to same period in 2017. The continuous rains also suppressed the pest infestation hence the damage was less, compared to 50percent damage in the same period of the previous year.

Increased acreage under green grams was attributed to the increased adoption of conservation agriculture especially in the Mwereni ward. In Kinango and Gombato Bongwe wards the early planted cowpeas and green grams performed poorly because of too much rains witnessed in the area. Harvesting of maize is on-going across all livelihood zones and some farmers have taken advantage of the prevailing showers to plant maize. The main on-farm activities included second weeding for the planted maize and harvesting of the early-planted crop long rains crop. The crop condition was good and a near-average harvest was envisaged particularly in the mixed farming livelihood zone. Women and children are still the main suppliers of labour as men search for casual jobs in urban centers.

Table 1. Rain-Fed Agriculture

Crop	Area planted during 2018 Long rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	2018 Long rains season production (90 kg bags) Projected/Actual	Long Term Average production during the Long rains season (90 kg bags)
Maize	60,308	44,739	616,400	426,693
Green grams	7,710	4,760	38,890	33,210
Cow peas	5,137	4892	37,436	33,870

Irrigated

The total area under irrigation in the county is 312 Ha. The major crops grown under irrigation are rice, onion and capsicum. The area under irrigation increased following the establishment of new irrigation sites of the Waa, Kinango, Puma, Kinango/South wards and also due to favorable long rains. The area under rice remained the same compared to long term average, while acreage under onion and capsicum increased by 7 and 12 percent respectively compared to the same time the previous year. The total hectareage under rice scheme in Vanga ward in Lungalunga Sub County was 400 ha but only 260ha was under lowland rice production due operational challenges in irrigation water management.

Of the 30 micro irrigation groups initiated by the County government through the production of horticultural crops, 24 groups were active. This was as a result of poor management of the groups and in some cases the drip irrigation equipment was damaged by floods leading to the stalling of projects. Nyalani irrigation scheme in Kinango Sub County with a total area of 42 ha under micro irrigation groups is involved in growing of okra, tomatoes and watermelon. Micro irrigation has been a source of alternative cash income in the livestock farming zone.

In mixed farming zone variation has been as result of poor conservation of irrigation water leading to reduced levels of water for use while in Livestock framing zone, Machame scheme resumed farming after a period of non operation. It was noted that more irrigation farms were being opened up at the onset of every season. Diki Dam Micro irrigation is a new project that was recently established

Table 2 Irrigated Agriculture

Crop	Area planted during 2018 Long rains season (Ha)	Long Term Average area planted during the Long rains season (Ha)	2018 Long rains season production (90 kg bags) Projected/Actual	Long Term Average production during the Long rains season (90 kg bags)
Rice	260	260	3,900	3,900
Onions	40	N/A	300	N/A
Capsicum	25	N/A	2800	N/A

3.1.2 Cereal stocks

The stocks held by farmers increased due to an increase in harvests across all livelihood zones. Most farmers had harvested approximately 50percent of their farm produce. Stocks held by traders for maize, rice, green grams also increased as traders purchased from farmers at lower prices. Household stocks increased since harvesting was ongoing, though not all the crops had been harvested. Sorghum

increased due to contract farming. In both mixed and livestock zones, farmers are selling maize, cowpeas and green grams to buy other household goods and for other expenses hence stocks are expected to decline. Stocks held by households can last for the next five months assuming that they will not sell to buy other household items, which is normally the norm and if the short rains will be adequate, the stocks could last longer

The total maize stock held by household was 85 percent which was an increase of 88percent compared to the LTA while rice and green grams increased by 11 and 17percent respectively compared to LTA. Due to the reliable rains, increase in adoption of use of fertilizer especially in the mixed farming zone though generally the county recorded increase in yields of maize, cowpeas and green grams, there are pockets of areas in both mixed farming zone like Ukunda, Tiwi,T/Golini and Bongwe Gombato wards where the rains caused water lodging and leaching leading to loss of nutrients. In the livestock zone the yield was not good for farmers who planted late and in the case of Mwereni, Samburu, Macknon road and Kinango wards there was water lodging and leaching of nutrients.

Most farmers especially in the livestock zone continue to store their maize using traditional methods like uchaga (in the kitchen on top of the cooking area) using herbs to smoke and suppress the weevils. In the mixed farming zone, some farmers have adopted the use of hermetic bags with others using actellic super to dust the grains before storing them in gunny bags. The county does not have millers. The stock of maize held by NCPB in Matuga was relief maize for needy in the County. This was lower than the LTA due to adequate household food stock in the county.

Table 3 Cereal stock

Commodity	Maize		Rice		Green gram	
	Current	LTA	Current	LTA	Current	LTA
Farmers	320,000	170,000	1,500	800	1,200	1,000
Traders	50,000	41,300	2,400	2,000	1,800	1,200
Millers	0	0	0	0	0	0
NCPB	44	3800	0	5	0	0
Total	370,044	215,100	3,900	2,805	3,000	2200

3.1.3 Livestock Production

The main livestock kept in the county are cattle, goats, sheep and poultry. In the mixed and livestock farming livelihood 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 in the mixed farming livelihood zone

Pasture and Browse Condition

An above-average trend in vegetation greenness was maintained in the county. Both Mixed farming and Livestock farming livelihood zones had good grass and browse conditions due to the extended rains though it had started deteriorating in the livestock farming zone due to the decline in rainfall in June. Women and Children in Livestock farming zones graze the animals while in mixed farming zones there was a lot of tethering of the animals. All the four sub-counties maintained above-normal vegetation condition. The projected duration for the available pasture was expected to last between four and five months in the livestock farming and mixed farming livelihood zones respectively while browse is projected to last four to six months in Livestock farming and Mixed farming zones respectively.

Table 4 Pasture and Browse Condition

Livelihood zone	Pasture					Browse				
	condition		How long to last (Months)		Factors Limiting access	Condition		How long to last (Months)		Factors Limiting access
	Current	Normal	Current	Normal		Current	Normal	Current	Normal	
Mixed farming:	Good	Good	5	4	None	Good	Good	6	5	None
Livestock farming	Good	Fair	4	3	None	Good	Fair	5	4	None

Livestock Productivity

Livestock Body condition

The body condition of all livestock species was good due to adequate pasture and browse as well as availability of water. This was normal at this time of the year. Birth rates are high in most of the livestock as most high birth rates have been recorded as well as twinning cases recorded in sheep and goats. The current good pasture and water condition is expected to last for 5 months up to the beginning of January 2019. The body condition trend is expected to be stable in the next 4 months and then decline to fair as the rains subside.

Table 5 Livestock body condition

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normally	Current	Normally	Current	Normally
Mixed farming Zone	Good	Good	Good	Good	Good	Good
Livestock farming	Good	Good	Good	Good	Good	Good

Average number of livestock (Tropical Livestock Units -TLUs)

There was an improvement in TLU's due to the ongoing availability of pastures, browse and enough water for livestock. The animals are recovering from the drought of 2016/17 which saw many farmers lose their animals.

Table 6 Tropical Livestock Units by Wealth Grouping

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Mixed zones	3	2	5	5
Livestock Farming	5	3	8	8

Milk production, consumption and pricing

The average milk production was 5.8 litres in July which was above LTA and the production trend was stable at household level. However, this was an above-average trend as compared to the LTA. The sustained availability of pasture and water during the season was attributed to increased milk production that maintained above-normal trend from the onset of the season to date.

The livestock farming livelihood zones of Kinango Sub County and parts of Lungalunga Sub County had more livestock and thereby producing more milk than the Mixed Farming Zones. Most milk is sold leaving little for consumption. The price in the livestock farming livelihood zones is also lower than in mixed farming zone due to lower population than in mixed zones. The mixed zones are found near major towns in the county and have a relatively high population. This explains why the prices of milk are higher than in Livestock farming zones. In Livestock farming zone selling of milk is largely handled by women while in Mixed farming with particularly zero grazed animals, the business is mainly done by men. The decision on the milk sale proceeds is mainly made by women in livestock livelihood zones and men in Mixed farming zones.

Table 7 Milk Production, Consumption and Prices

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres)per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Mixed Farming	5	3	2	1	50	40
Livestock farming	3	2	2	2	40	30

Migration, Livestock Diseases and Mortalities

Currently there are no livestock migrations into or out of the County, except movement to and from market from different areas. There were no livestock diseases reported during the month that posed a significant threat to food security. However, Foot and Mouth Disease (FMD), Contagious Bovine Pleuro-Pneumonia (CBPP) and New Castle Disease (NCD) were reported in Ndavaya ward in Kinango sub-county. Some cases of Anaplasmosis, Heart water, ECF and hemonchosis were also reported in mostly livestock farming livelihood zones. The county was still on high-alert for Rift Valley Fever outbreak and plans were underway to vaccinate approximately 80 percent of the total livestock in the county in Kinango, Vanga, Gombato, Kubo South, Kinondo and Ramisi wards.

Mortalities in livestock were minimal during the season under review.

Table 8 Livestock Mortality

Livelihood zone	Cattle		Sheep		Goats	
	Current.	Normal	Current.	Normal	Current.	Normal
Mixed farming	5percent	8percent	5percent	7percent	3percent	5percent
Livestock Farming	7percent	10percent	5percent	7percent	5percent	7percent

Water for livestock

The average distance from watering points to grazing areas was 3.4 km in July. Most water sources have a lot of water currently due to the heavy rains received; hence water availability for cattle and goats is normal. Water for livestock will last more in Mixed Farming zone due to less evaporation and relatively smaller number of livestock compared to Livestock Farming zones where there are more livestock and high rates of evaporation due to low tree cover.

Table 9 Water Availability and Access

Livelihood zone	Sources		Return distances (km)		Expected duration to last (months)		Factors Limiting access
	Current	Normal	Current	Normal	Current	Normal	
Mixed Farming Zone	Rivers, streams, earth pans, taps, Boreholes, dams	Rivers, streams, earth pans, taps, Boreholes, dams	1-3	2-4	5	4	None
Pastoral Zone	Rivers, Earth pans, Boreholes Taps	Rivers, Earth pans, Boreholes	2-4	5-10	3	2	None

3.2 Access

3.2.1 Market Operations

Ukunda open air market was moved from its original site but despite the move, there was no market interruptions since a new site had already been identified. A mature 3-year old bull was trading at Kshs 24,750 in July having increased by 42.8 percent from Ksh 17,333 recorded in June. The increase in prices could be attributed to a low supply in the market since most households were harvesting hence with food stocks increasing farmers were not disposing off their livestock for sale. Another factor was the improved body condition for the livestock.

Farmers were harvesting and selling maize, cowpeas and green grams hence there is minimal purchases since farmers were harvesting and selling maize, cowpeas and green grams. Most of the food commodities were sourced locally within the county. From the community interviews in Mwangulu, Kinango and Samburu (Livestock farming zone) it was reported that there were minimal purchases due to good harvest. However, a limited number of households were selling maize, cowpeas and green grams to cater for other requirements. The prices of maize, cowpeas and green grams at farm level had gone down due to surplus harvest in both mixed and livestock zones. However, the prices were expected to increase as the commodities decline at farm level in the Livestock farming zone.

Maize price

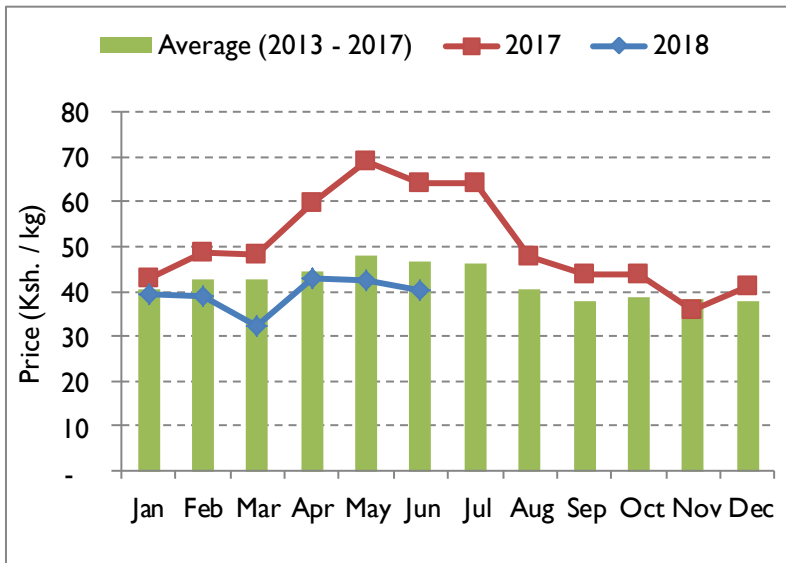


Figure 3 Trends of maize prices

The average selling price of a kilogram of maize was Ksh 33.9 in July having decreased by 14.8 percent from Ksh 39.8 in June. The slight decrease in price could be attributed to the fact that harvesting was on-going in the county and therefore the demand for the commodity had slightly reduced. The price was 30.4 percent below the 2015-2017 LTA of Ksh 48.7 as shown in the graph below.

Goat Prices

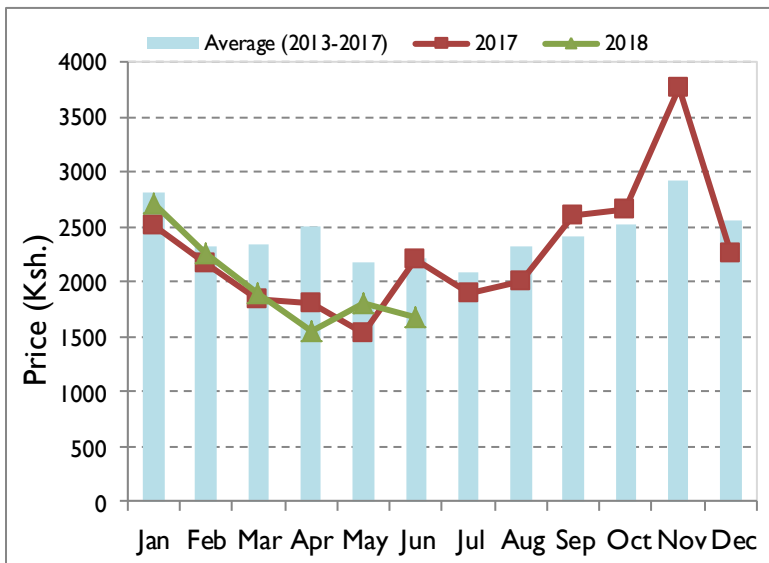
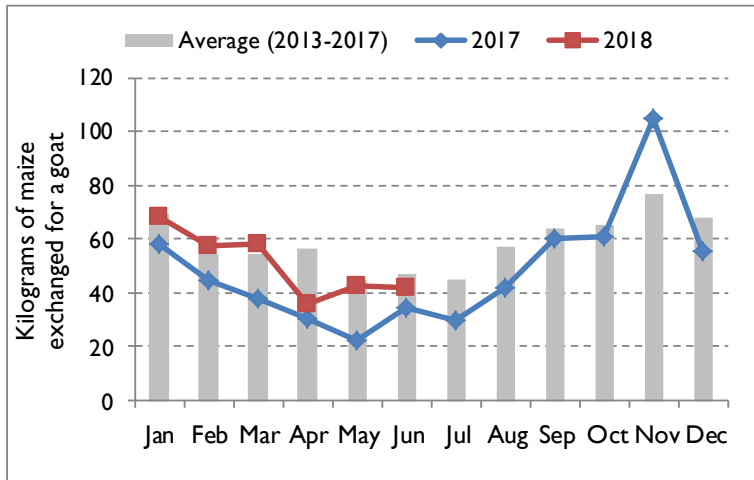


Figure 4 Trends of Goat prices

A medium-sized three-year old buck was trading at Ksh 1,997 having remained fairly stable compared with Ksh 1,685.9 posted in June. The current price of an average sized goat retailed at Ksh. 1,686 compared to ksh. 2,209 recorded same period last year and the long term average price of Ksh. 2,216. The prices were expected to increase as the body condition was expected to remain good as the forage condition continued to be good across the livelihood zones.

3.2.2 Terms of trade

The terms of trade (TOT) increased slightly by 17.2 percent from 46.5 last June to 54.5 in July and were



also 22.2 percent higher than the long-term average of 44.6. The increase in TOT meant that a higher amount of maize could be purchased by households with the proceeds of casual labour this month compared with last month. This was an indicative of increased household purchasing power. The enhanced purchasing power could be attributed to increased income from casual labour as many households engaged in on-farm labour against reducing maize prices.

Figure 5 Terms of trade

3.2.3 Income Sources

The main source of income in the Mixed farming was the sale of livestock and crops products and casual labour that accounted for 18, 15 and 10 percent proportions. Casual labour opportunities were available in the sugarcane and irrigation farms. Others were small business and poultry farming at lower proportions. In the Livestock farming zone, sale of livestock and casual labour accounted for 15 and 20 percent of the cash income. There was minimal sale of crop products since most of it is grown at subsistence level.

3.2.4 Water Access and Availability

Major water sources

The current major water sources in Kwale County for domestic uses are Boreholes, shallow wells, Pipelines and Dams/Pans. The livestock livelihood zone also borders the Shimba hills. In Matuga Sub county sources of water include boreholes, rivers, dam,/pans, springs and pipeline.

In Msambweni and Lunga Lunga Sub Counties rivers, water pans, Dams, Pipelines, Shallow wells and bore holes are the major sources of water. In Kinango Sub County water sources are dams, water pans, pipelines, rivers and boreholes. Dams and pans are the prevalent means of accessing water in Kinango Sub County and the drier parts of Lunga lunga Sub County. Most of these water sources are mainly utilized for livestock purposes, although some inhabitants of these areas access the water for domestic use.

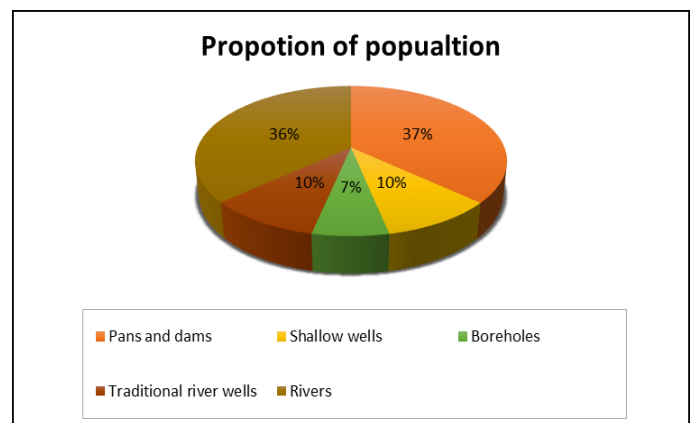


Figure 6 Proportion of Population using water sources

This is in part either because they find the costs of piped water high, or the proximity to the piped water is quite distant. In Matuga and Msambweni, larger population relies on boreholes and shallow wells. The water sources that are significantly impacted by the volumes, frequency and consistency of rains are the water pans and dams. In Matuga Sub county the major dams and pans filled up to between 65 and 80 per cent. However, most parts of Matuga Sub County rely on boreholes for most part of the year. In Msambweni Sub County major water sources are shallow wells and boreholes which are not notably affected by rains. In Lunga Lunga Sub County, the major dams and pans filled between 60-75 per cent. Small pans and dams were recharged fully by long rains but the levels have since gone down as the rains have subsided.

The major water sources are in good operating state and recharged up to an average of 60 per cent. The water sources impacted by the rains have slightly increased water levels at this time of the year, an indication that the recharge capability is considerably high. The evaporation rate is also low compared to other periods at this time of the year. In Matuga Sub County the non- operational water sources include: off- take disconnection of the Marere-Mwaluphamba pipeline in Mkongani; Kakwajuni Water pan embankment both in Mkongani ward; dysfunctional Kaya bombo Reservoirs in Waa/Ng'ombeni ward. Water pump breakdown was also reported in Tiwi, Waa/Ng'ombeni, Tsimba/Golini, Mkongani and Kubo.

In Msambweni Sub County; a pipeline burst along Maphombe- Tuliani (Dzombo) persists today; pump breakdown was also reported at Bongwe/ Gombato, Kinondo, Ramisi, Pongwe /Kikoneni, Ukunda & Dzombo boreholes. In Lunga Lunga; there was a water pump breakdown in Vanga while the water pan at kwa kamanza was washed away by rains in Mwereni. Ngathini dam embankment broke in Vanga. In Kinango the following pipelines are dilapidated due to lack of maintenance. Nzovuni- Kibandaongo pipeline, and Kinango –Amani pipeline were also reportedly faulty. Reported cases of embankment in Kinango have been cited in the following dams: Bekadzo and Mwaluvuno while pans not functioning were Mlafyeni, Kwa Charo and Chikwakwani. Dzihirini borehole system had also collapsed in Ndavaya ward.

Distances to Waters Sources

Current average return distances across all the livelihood zones have reduced considerably owing to the prolonged periods of MAM rainfall. Current return distance in Matuga have reduced from the normal distance range of 1-1.5km to 0.5-1km attributed to increased number of water points that have been opened thus reduced proximity. Distances in Kubo ward have not changed from the normal range of 1-2 km. In Lungalunga, distance to water sources were within the range of 1-2km which is normal. In Msambweni normal and current distances remained unaffected at less than 1 km return distance.

In Kinango Sub County, a change in return distances are noted in Kinango, Puma and Ndavaya wards where normal distance of 4km is covered at a time like this to water sources, as opposed to current distances of 3 km. This was a significant drop in the distance covered to fetch water. Small water points close to many homesteads recharged by rains and development of new water projects have been attributed to the recorded reduction in current return distances. In Samburu ward, distances covered to water sources were still high though they have reduced from normal 6km to 4km. In Mackinnon road, normally the return distance was normally 3km as opposed to current 2 km; the reasons are the same as in Kinango, Puma and Ndavaya. In Kasemeni the return distances remained unchanged at 2km.

Waiting Time at the Source

In Matuga sub-county, waiting time has reduced across the Sub-County attributed to the reduced number of people at any water point, the normal waiting time in Matuga ranging from 10-15 minutes but currently the waiting time ranges from 5-10 minutes while in Kubo south a normal waiting time of 10-15 min has gone down to 8-12min.

In Msambweni and Lunga Lunga Sub Counties no changes have been recorded and the normal and current waiting time of two and three minutes respectively remains. However, those who use water from pans and dams for domestic use do not wait at sources. In Kinango Sub-County the waiting time of normal 10 min are unchanged currently. In Samburu low availability and poor distribution of water points has led to congestion at the source hence increased waiting time of 15 min which apparently did not also seem to vary much currently. The constant waiting time may be because of unchanged lifestyles.

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Costs of water

Matuga – costs of water across Kwale County at water kiosks remained unchanged for normal and current recordings, being three shillings per 20litre jerrycan and five shillings in Kubo. In Msambweni the water prices were three shillings, Lunga Lunga at four shillings and in Kinango at five shillings per 20 litre jerrycan. The cost of water in livestock zones of Kwale County remained high due to low water levels compared to the rest of the county. Water from most water pans and dams do not attract charges.

Water consumption

The average water consumption has improved from the previous season. Households in the Mixed farming livelihood zone are consuming between 35-40 litres while in the Livestock farming zone they are consuming between 15-20 litres per person per day. In Matuga consumption normally is 30 litres per person per day and currently is 35 litres, in Kubo against the normal of 25 litres and current 30 litres water consumption has gone high as a result of increased water from long rains and new water points.

Consumption in Msambweni and Lunga Lunga normal and current did not vary at 40 litres and 20 litres respectively Kinango water consumption also remained unchanged for normal and current at 15 litres per person per day. However, in Samburu water consumption currently has gone high from the normal of 10-15 litres per person per day. Water consumption in mixed farming zones was expected to remain stable for the better part of the year owing to the onset of the OND which is expected to recharge the surface water sources.

Contamination of sub-surface water is reported due to poor human waste disposal methods and use of untreated water. Although health facilities advise the community on basic domestic water treatment,

management methods and practices on these practices are yet to be fully embraced. Out breaks of water borne diseases in cyclic fashion during and after rainy season firmly establishes the relationship between diseases, hygiene and sanitation practices. In particular, this was occasioned by widespread surface water and open well contamination by surface run off during the rains.

3.2.5 Food Consumption

About 15.8, 30.8 and 53.9 percent of households have poor, borderline and acceptable food consumption score respectively which was an improvement from 2017 at the same time. The improvement can be attributed to increased availability of food at household level, reduced food commodity prices and increased income from casual labour which is a major source of income in the county. The average milk consumption at household level remained relatively stable in the county as it was aggregated at 1.7 litres in July compared to 2.0 litres in June. There was therefore a relative stability in the food consumption patterns as all food consumption groups had recorded minimal changes in July compared to June.

The stability could be due to the increased availability of food at household level as harvesting was ongoing. The staple's price (maize) had reduced and was below-normal and terms of trade were generally favourable thus making food access tenable. At livelihood zone level, there were slight variations as the mixed farming and livestock farming livelihood zones recorded an average food consumption score of 46.5 and 37.1 respectively, according to NDMA report for July 2018. The implication was therefore that households in the latter livelihood zone had more food consumption gaps than the former due to consumption of food of reduced dietary diversity, food frequency and nutritional value. More households in the livestock farming livelihood zones had poor food consumption (consuming only vegetables and a staple) than in the mixed farming one.

3.2.6 Coping Strategies

According to the NDMA survey, the mean coping strategy in July was 10.3 compared with 9.17 in June therefore displaying a stable trend. The stability was also displayed at the livelihood zone level where indices of 10.7 and 10.0 were recorded in the mixed farming and livestock farming livelihood zones respectively in July compared with 7.0 and 11.3 posted in the respective livelihood zones in June. The highest prevalence of consumption-based coping strategies was reliance on less preferred and/or less expensive food (least severity) at 67.2 percent and the least was reduction on the quantities of food consumed by adults/mothers at 14.4 percent (highest severity). The prevalence of these strategies is shown in the graph below. Most households were therefore using lesser severe coping strategies to bridge food consumption deficits which could be attributed to the continued availability of food at household level.

3.3 Utilization

3.3.1 Morbidity and Mortality

There was a general increase in URTI and malaria cases. This is attributed to the improved reporting rates as compared to last year. Despite mass nets distribution in the county, malaria cases have increased. This was attributed to failure to utilize the nets by the beneficiaries. The community members in all the livelihood zones visited reported that they sought health interventions whenever they felt sick. Most common illnesses reported were fever and chills like malaria and URTI. In livestock zones, skin conditions were reported, that mainly affected children. Distances to health facilities vary from one livelihood zone to another. In the mixed farming zones, people trek for about four hours return distance

to the health facility. Livestock zones walk for longer distances to health facilities. None of the livelihood zones reported unexplained deaths for children below five years.

Table 10 Morbidity for Under Fives and General Population

Disease		Jan	Feb	Mar	Apr	May	Jun		Jan	Feb	Mar	Apr	May	Jun
URTI	2018	17827	17189	16205	12047	13250	13752	2018	55152	47868	41503	32506	40554	42412
	2017	13955	12574	13037	9611	9906	4015	2017	39047	32503	31973	23322	30752	11697
	2016	6162	6089	5186	6132	6892	9717	2016	7654	8763	9673	15378	19488	26229
Diarrhoea	2018	3140	2750	2849	3047	3034	2468	2018	6255	5188	5245	4960	5451	4431
	2017	3633	2868	3832	2881	3172	1566	2017	6366	5248	9632	5217	6282	2720
	2016	2022	2401	3071	2776	3966	3333	2016	3369	4272	5389	4795	6764	5605
Malaria	2018	3873	4988	3068	3508	4960	5266	2018	41047	19669	11489	13934	21727	23980
	2017	4550	1982	1741	1359	2896	1440	2017	16615	8064	5694	4293	11489	5562
	2016	5480	4406	3466	1658	4015	5109	2016	20335	15575	10803	5684	16060	21050

3.3.2 Immunization and Vitamin A supplementation

There was a remarkable improvement on the coverage for immunization and VAS in both under ones and 12 to 59 months across the livelihood zones. This could be attributed to the intensified supplementation of vit A in ECDE centers and community supplementation during malezi bora period in the month of May. FIC for 2018 was 86.6 percent which was a great improvement compared to 58.2percent in 2017. There was a remarkable improvement in data entry for the HMIS system.

Table 11 Vitamin A supplementation

Year	Children 6-11 months		Children 12 to 59 months	
	Received vitamin A supplementation	Total Population (6-11 months)	Received vitamin A supplementation	Total Population (12-59 months)
January to July 2018	21430- 146 percent	15064	151843-118percent	128455
January to July 2017	15482- 106percent	14575	68736-55percent	124297

3.3.3 Nutrition and dietary diversity

The nutritional status of children aged below five years improved slightly in July by 12 percent as was evidenced in the reduction of the proportion of this cohort at risk of malnutrition from 8.3 percent in June to 7.3 percent in July.

The slightly improved nutritional status could be attributed to improved terms of trade and food availability owed to the on-going harvests. There was also increased food consumption by 7.3 percent in the mixed farming livelihood zone for households who had acceptable food consumption which could also have contributed to the improvement.

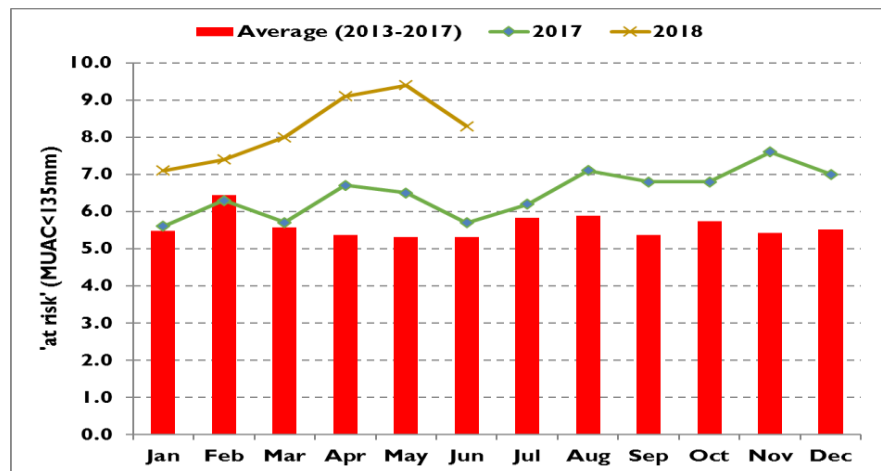


Figure 7 Percentage of children with MUAC below 135mm

However, despite the minor improvement compared the month of June, the proportion at risk was still 25.4 percent higher than normal compared with the LTA of 5.8 percent as shown in the graph below. Nevertheless, the prevalence of the global acute malnutrition (GAM) by MUAC remained stable at 1.8 percent in July compared with 1.9 percent in June. The percentage of children at risk of malnutrition was 25 percent above-normal for this time of the year. Breastfeeding was universal with almost all the children (99.5percent) having ever breastfed and 86.4percent of one year olds were still breastfeeding. Similarly, a majority (83.7 percent) of the children were initiated to breastfeeding within one-hour of birth as per the WHO recommendations (WHO, 2010). The exclusive breastfeeding practice rate was 73.4 percent Minimum Meal Frequency (MMF) was 56.7 percent. Disaggregated by age; 52.8 percent of children 6-11 months old attained the MMF compared to 63.1percent of children 18-23 months old and 54.8percent 18-23 months old.

The percentage of children 6-23 months old who received a Minimum Acceptable Diet (MAD) was 30.5percent implying that about two-thirds of the children were not receiving diverse diets and also the meals were not as frequent as they should be. Findings from community interviews show that Children access three meals in a day across all the livelihood zones. Common foods mainly consumed include fish (especially the fishing livelihood zone) tea, Milk, *Ugali*, Cassava, Rice, Beans and Vegetables (mnavu and mchicha. In the mixed farming zones, caregivers reported that the most common meals are ugali, cassava and green vegetables, hence indicating 2 food groups which were below the recommended number. On rare occasions, eggs are also offered.

3.3.4 Sanitation and Hygiene

Latrine coverage in the County averages 60.8 percent. Matuga and Msambweni Sub Counties recorded the highest coverage of 77 and 73 respectively while in Kinango and Lunga lunga the coverage remained low at 41 and 52 percent respectively. Poor hygiene and sanitation may be attributed to the high incidence of waterborne diseases across all livelihood zones including typhoid, diarrhoea and dysentery. The Fishing and mixed faming livelihood zones access water from taps and boreholes while the livestock zones access from water pans. About 60percent of the households are aware of importance of water treatment and practice it, while the other 40percent does not treat water at all. Low latrine coverage especially in livestock livelihood zones has been attributed to loose soils and poor

workmanships in the visited households, the latrines were sinking. Hand washing facilities at community level are not available, though it was reported that they wash hands after visiting the toilet. Hand washing at four critical times was not observed. In mixed farming zones, it was reported that washing hands depends on how dirty they feel based on what was previously handled. The households lack designated areas for waste disposal, across livelihoods, though some in mixed farming dispose through burning and compost pits.

Figure 8 Latrine Coverage

Sub County/Livelihood zone	Latrine Coverage	
	January to June 2018 percent Coverage	July to December 2017 percent Coverage
Matuga	77	77
Msambweni	73	74.2
Kinango	41	41
Lungalunga	52	55

3.4 Trends of key food security indicators

Table 12 Comparison of current food security indicators with SRA 2018

INDICATOR	LRA AUG 2018	SRA Feb 2018
Percent of maize stocks held by households (Agro-pastoral) compared to the LTA	88 of LTA`	7% above LTA
Livestock body condition; Mixed farming (horticulture and dairy) & irrigated zones	Good for all Goats, sheep and Cattle	Good for Goats, Sheep and Cattle
Livestock body condition; Mixed farming (food crop and livestock)	Good for Goats, Sheep and Cattle	Good for Goats, Sheep and Cattle
Price of maize (Ksh per kg)	Kshs 33.9	39/kg
Household water consumption (Mixed farming (horticulture and dairy) and irrigated zones)	35-40	25-40
Household water consumption Mixed farming (food crop and livestock)	15-20	15-20
Terms of trade as at July	54.5 Kilogram/goat	69 Kilogram/goat
Coping strategy index in July 2018	10.3	10.75
Food consumption score (%)	Poor 15.3 Borderline 30.4 Acceptable 53.9	Poor: 8.4 Borderline: 24.6 Acceptable: 67

3.5 Education

3.5.1 Enrolment

The total enrolment in term 1 of 2018 in ECDEs, primary and secondary schools were 73,256, 204,894 and 34,203 respectively and 78,181, 219,770 and 35,475 respectively in term 2. There was a remarkable increase in enrolment which could be attributed to provision of food in the ECDEs and primary schools and free day secondary school funding by the National government. Other factors for increased enrolment were the Government policy on 100 per cent transition from primary to secondary schools and increased establishment of ECDE centres by the County government of Kwale. Enrolment for boys is higher in all tiers

Table 13 Comparison of enrolments for term I and II of 2018

Sub-County	Enrollment	Term I 2018			Term II 2018 (includes new students registered and drop-outs since Term I 2018)		
		Boys	Girls	Total	Boys	Girls	Total
Kinango	ECD	14,124	13,012	27,136	14,635	13,212	27,847
	Primary	34,456	33,722	68,168	36,728	36,131	72,859
	Secondary	4,280	3,187	7,467	4,326	3,231	7,557
Lunga	ECD	12,345	10,456	22,801	14,345	10,956	25,301
	Primary	20,886	20,240	41,126	22,886	20,740	43,626
	Secondary	2,128	2,356	4,485	2,228	2,507	4,735
Matuga	ECD	6,065	5,623	11,688	6,065	5,623	11,688
	Primary	20,031	19,645	39,676	20,031	19,645	39,676
	Secondary	6,940	6,397	13,340	6,040	6,397	13,340
Msambweni	ECD	3,695	3,337	7,032	2,174	4,442	6,616
	Primary	14,613	14,381	28,994	10,674	10,830	21,504
	Secondary	2,592	3,385	5,977	2,291	2,735	5,026

3.5.2 Participation

School feeding has proven to be a major incentive to participation children into schools and retaining them. Participation was stable across the County for both boys and girls

Table 14 Average monthly school attendance

Indicator	Term I 2018						Term II 2018					
	January 2018		February 2018		March 2018		May 2018		June 2018		July 2018	
	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls
School attendance												
ECDE	1,639	1545	1,885	1,776	1,714	1,615	1810	1,588	2,082	1,826	1,893	1,660
Primary	4,684	4,224	5,386	4,858	4,896	4,416	4,844	4,710	5,571	5,417	5,065	4,924
Secondary	761	725	875	834	795	758	780	761	897	876	815	776

3.5.3 Retention

There was minimum dropout rate in all tiers of education across the 3 Sub Counties. However, Lunga lungu recorded the highest dropout numbers in the all the tiers. Dropout rate for boys in Lunga lungu Sub County was at 630 pupils in primary category. The reasons for the dropout in this category were early marriages, lack of food in schools and parents moving away from the school catchment area in search of alternative form of livelihood. Also attributed to this were children being engaged in domestic chores and family labour responsibilities for income. Another reason was lack of parental support where parents did not encourage their children to pursue education. Similarly, among the ECDE learners, the dropout rate among the boys was high. The causes of this high dropout rate in Lunga lungu Sub-County is attributed to a number of factors including: floods, migration by parents, lack of drinking water, lack of food in schools at the beginning of the term and cost implications (funds levied in the ECDE section) Retention in ECDE is mainly attributed to sustenance of feeding programmes, construction of ECDE centres by the County Government, availability of teachers and improved infrastructure including desks and chairs. It is worth noting that the County government of Kwale had recruited and deployed ECDE instructors in majority of the ECDE centres.

In secondary schools the dropout rate was mainly recorded in the first term of the year and the same declined in term two. This was attributed to the school fees/levies charged for funding feeding programme, catering for salaries for cooking staff and teachers employed by the school Board of Management and migration/ moving away from school catchment area. Also cited were early marriages /pregnancies due to lack of proper guidance and lack of role models in the society. Peer influence is also high among secondary school students who tend to follow or copy bad behaviour from their peers

3.5.4 Transition

Transition rate from ECDE to Primary school averaged 99 per cent while transition rate from primary to form one was at 100 per cent. This was mainly achieved as a result of enforcement of the government policy on a hundred per cent transition through the ministries of education and Interior and coordination of National Government. This was achieved through community mobilisation, ministry of education officials and area chiefs. Provision of support in form of bursaries provided by the National Government CDF and County Government also made the 100 per cent transition possible. Drop out in primary schools for boys was largely due to engaging in *Bodaboda* businesses and engaging in beach activities (beach boys). Girls drop out was mainly due to early pregnancies, family labour engagement for income and early marriages.

3.5.5 School Meals Programme (SMP)

The total number of schools with school feeding was 775. Most of the public ECDE centres had a school meals programme where pupils were provided with porridge through support of the County Government. Home grown school meals were the most practiced in all public primary schools across the County and had benefitted 184,925 pupils. This was possible due to the government initiatives in providing food to schools. Where the schools received the food late, some pupils missed classes. The HGSM programme had contributed to improved retention and attendance of pupils to schools across the County.

3.5.6 Inter Sectoral links

Latrine coverage is Low County wide and this applies to most schools with Kinango and Lungalunga recording the lowest coverage. Among the school going children the lack of latrines has led to an increase in diarrhea diseases which is among the three leading diseases in the County. Among the ECDE learners school dropout rate was attributed to lack of food in schools at the beginning of the term. A number of schools have been connected to the water pipeline and thus had access to clean drinking water. In turn this minimizes the incidences of consumption of contaminated water. It was however noted that majority of the schools had not harvested water from the roofs and thus a lot of water was going to waste. In Mwapala primary school in Shimba Hills for example, the school's classrooms are being damaged by the excess water coming from the roofs of the classes that generally did not have gutters.

Increased enrollment, participation and retention of both boys and girls has been attributed to the increase in the number of ECDE centres that have been put up by the County government coupled with the enhanced school feeding programme. The National government; county department of health services and development partners have been involved in vitamin A supplementation in the county with special target to schools both public and private. This was particularly carried out extensively during the malezi bora month that targeted Vitamin A supplementation and deworming in ECDE centres. This has ensured a wider coverage for the exercise while at the same time ensuring that the gap between health facilities and clients is minimized.

The health and nutrition interventions that were undertaken in the County ensured that an issue of absenteeism from the schools was addressed because the administration of the same was done in schools. These interventions went a long way in boosting the immunity of the children and thereby minimizing incidences of morbidity. In the long run this ensured that boys and girls were retained in schools without having to necessarily miss school due to illnesses related challenges.

The good crop production and availability of food at household level also enabled high retention, participation and enrollment of boys and girls in schools. With prices of livestock remaining average, parents were able to pay for school fees and other requirement which also increased transition to secondary school and retention of children in schools. In Kwale County there were no related cases of conflict which would otherwise affect enrollment, participation and retention in schools for both boys and girls compared to the previous year.

4.0 Food Security Prognosis

4.1 Prognosis Assumptions

Kwale County food security prognosis for the next six months is based on the assumptions that rains will continue until August and the onset of the short rains is likely to be timely and with above average. Farm inputs including certified seed stocks, fertilizers and tractor services are likely to be available in good time and subsidized by the County Government. The fall army worm will be contained and that crop damage will be insignificant. The long rains production is expected to be above normal as acreage under both rainfed and irrigation production is expected to increase through farm mechanization and campaigns to enhance food production that is ongoing in the county. The off season maize currently in the field will be ready by November. Trade on food commodities will include imports from other regions therefore increasing food stock by traders within the County and outside the County.

Based on the good long rains harvest in both mixed and livestock zones, the food stocks held by households will last up to December assuming that they will not sell to buy other household items and it is appropriately preserved. Maize prices across the county are likely to remain below long term average up to October in the Mixed farming zone however, in the Livestock Farming Zone the prices are expected to increase slightly by end of September as the food stocks decline at household level. Increased in food stock in the county is likely to increase through imports by traders, and this is likely to push prices of maize and other basic commodities down.

The projected duration of the current good pasture and water condition is expected to last between four and five months in the livestock farming and mixed farming livelihood zones respectively while browse is projected to last four and six months in Livestock and Mixed farming zones respectively. The body condition for all livestock species is expected to be stable up to the next December except in the livestock Farming zone where pasture is declining at a faster rate as the rains subside. The prices of goats are expected to remain on an upward trend up to December due to good body condition and limited sales as most households have adequate food stock and therefore no crisis sales. Milk prices will increase in the livestock farming zone due to reduced productivity as the supply of forage becomes limited. In the Mixed farming zone there will be no change in milk prices since supply will be sustained by available forage and water. Terms of trade will remain high as prices of food commodities such as maize remain low due to current high stocks and other food stock such as rice.

4.2 Food security Outlook- August to September 2018

Harvesting of the long rains crop is expected to continue up to the end of August in both Mixed Farming and Livestock farming zones. Availability of food stock at household level is expected to increase, further reducing the food prices against increasing income from casual labour. The overall food security situation is expected to improve especially in the Mixed farming zone as food consumption gaps availability and access improves. Households are unlikely to employ several consumption-based coping strategies in increased frequency.

In the livestock farming livelihood zone, forage is likely to last at least up to September. Livestock body condition is projected to remain relatively good and prices are projected to increase. Milk will be available both for sale and consumption therefore income from livestock production is likely to increase thus improving food access for the market-dependent households. Poor households are also likely to continue employing the normal consumption-based coping strategies in lower frequencies. In addition, the nutritional status of children aged below five is also projected to improve due to improved food access and availability. Based on this scenario, there is a low likelihood of significant food consumption

gaps in this zone. The County will be classified in ICP Phase 1 as more than 80% of households will be able to meet basic food needs without atypical coping strategies

Food security Outlook -October to December

The forecasted above average to average timely October to December short rains will begin in October improving food security as crop production activities increase providing wage labour opportunities and income at household level. Availability of milk at the household level across the county is expected to improve while food consumption gaps will be expected to reduce. Price of food commodities is likely to reduce after the harvests starting at the end of November. Prices are expected to remain stable up to November as the food stocks remain stable at household level. Based on the seasonal calendar, harvesting of the short rain crop will start by mid- November. Casual wage labour income earning opportunities are likely to increase. Most households will be experiencing improved food consumption and dietary diversity as availability and access to food improves across all livelihood zones. Households remain in “IPC Phase 2” phase in all the livelihood zones. The county will be classified in the Minimal (IPC Phase 1) Phase

5.1 Conclusion

5.1.1 Phase Classification

The County is currently classified under the “Minimal” (IPC Phase 1) phase due to good harvests and livestock productivity, typical access to income earning opportunities and near normal household purchasing capacity. More than four in five households (HHs) are able to meet essential food and non-food needs without engaging in atypical, unsustainable strategies to access food and income, including any reliance on humanitarian assistance.

5.1.2 Summary of Findings

The long rains performance was good in terms of spatially and temporal distribution across all the livelihood zones. The main drivers to food insecurity in Kwale County include fall Army worms, water logging, leaching of soils, poor hygiene and sanitation practices. An increase in acreage and well as productivity of rainfed crops such as maize, green grams and cowpeas resulted in increased food stock at household level by 88percent compared to the LTA. Both Mixed farming and Livestock farming livelihood zones had good grass and browse conditions due to the extended rains The average price of maize was ksh 33.9 per kilogram, which was significantly below the LTA and the terms of trade (TOT) were 22.2 percent higher than the long-term average of 44.6. The proportion at risk was still 25.4 percent higher than normal compared with the LTA of 5.82. However, despite the improved food security situation, the indicators to monitor in the coming months are Fall Army Worm invasion 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.

5.1.3 Sub-county food security ranking

Table 15 Sub-County Food Security Ranking (Key 1- most food insecure 4- least food insecure)

Sub County	Food rank security	Main food security threat/ reasons
Kinango	1	<ul style="list-style-type: none"> • Use of uncertified seeds affected the yields • Fall armyworms destruction • Heavy rains caused water logging of farms • Poor farming methods (late planting, late cultivation, lack of farm inputs) • Low produce selling prices emanating from fear of post-harvest losses • Inadequate alternative coping strategies • Low livestock holding/Low Tropical Livestock Units
Lunga Lunga	2	<ul style="list-style-type: none"> • Fall armyworms destruction • Heavy rains caused water logging of farms • Poor farming methods (late planting, late cultivation, lack of farm inputs) • Low livestock holding/Low Tropical Livestock Units • Leaching
Msambweni	3	<ul style="list-style-type: none"> • Fall armyworms destruction • Leaching
Matuga	4	<ul style="list-style-type: none"> • Fall armyworms destruction

Table 16 Percent vulnerable population

Sub County	population	percent vulnerable population	Proposed intervention
Kinango	209,560	15-20percent	CFA
Lunga Lunga	164,098	10-15percent	FFA
Msambweni	124,295	2.5-5percent	N/A
Matuga	151,978	0-2.5percent	N/A

5.2 Ongoing Interventions

Table 17 Ongoing Interventions

Sub County	Intervention	Ward	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost	Time Frame
Agriculture							
KWALE	Food security(certified maize seed provision)-128MT	All wards	16000	CG-KWALE	Increased food security /household	10m	Long rains
	Capacity building on agronomic practices	All wards	20000	CG-Kwale	Increased food security /household	800000	Long rains
	Ploughing of 1 acre for maize production-6590 Acres	All wards	6590	CG-KWALE	Increased food security /household	5m	Long rain period
	Micro irrigation-10 groups	Some wards	600	CG-KWALE	Increased food security /household income	10m	12months
	Marketing initiatives- Grain stores	Dzombo and Vanga	30000	CG-KWALE	Increased food security /household income	10m	6months
Livestock							
Kwale	Meat goat improvement	County	2000 farm families (Each family has 4people)	County Government of Kwale	Increase in meat goat production	27	continuous
Kwale	Meat goat improvement	County	2000 farm families	County Government	Increase in meat goat	27	continuous

			(Each family has 4people)	of Kwale	production		
Kwale	Dairy farming	County	296 families	County Government of Kwale	Increase in milk production	41	continuous
Kwale	Beef production improvement	County	230 families	County Government of Kwale	Increase in beef production	27	continuous
Kwale	Local poultry	County	200	County Government of Kwale	Increase in local poultry production	3.6	continuous
Kwale	Bee keeping	County	50 farm families	Base Titanium Limited	Increase in honey production	2	continuous
Kwale	Dairy Goats farming	County	400 families	County Government of Kwale	Increase in milk production	15	Continuous
water							

5.3 Recommended Interventions

Table 18 Recommended food interventions

County	Intervention	Ward	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Kwale	Micro irrigation-up scaling	county wide	300	KG-Kwale	10m	10	1yr
kwale	Farmer training(extension services)	County wide	20,000	KG-Kwale	5m		

A. Recommended Interventions

Intervention description/type	Location	No of beneficiaries		Cost in Ksh	Implementers /actors	Remarks ✓ Implementation status (ongoing, completed, not completed) ✓ percent completion status
		Male	Female			
Beef cattle improvement	Mwereni, Ndavaya, Puma, Kinango, Mackinon Road, Samburu Chengoni, Mwavumbo, Kasemeni And Ramisi.	112	64	8000000	CGK	Completed
Dairy Improvement	Kubo South, Mkongani, Tsimba/Golini, Tiwi, Waa/Ngombeni, Gombato, Ramisi, Pongwe/Kikoneni, Dzombo, Vanga and Kasemeni.	106	54	7500000	CGK	Completed
Meat Goat Improvement	Mwereni, Ndavaya, Puma, Kinango, Mackinon Road, Samburu Chengoni,	340	260	9750000	CGK	Completed

	Mwavumbo, Kasemeni, Ramisi tiwi, Waa/Ngombeni, Mkongani, Ukunda, Gombato and Kinondo					

Table 19 Recommended non- food interventions

Intervention description/type	Location	No of beneficiaries		Cost in Ksh	Implementers /actors	Remarks - Implementation status (ongoing, completed, not completed) - percent completion status
		Male	Female			
Milk value addition provision of milk coolers	Pongwe/Kikoneni Kinango	118	84	1000000	CGK	completed
Kinango livestock market- construction of Kinango market	Kinango	2000	1000	10m	CGK	Not yet completed