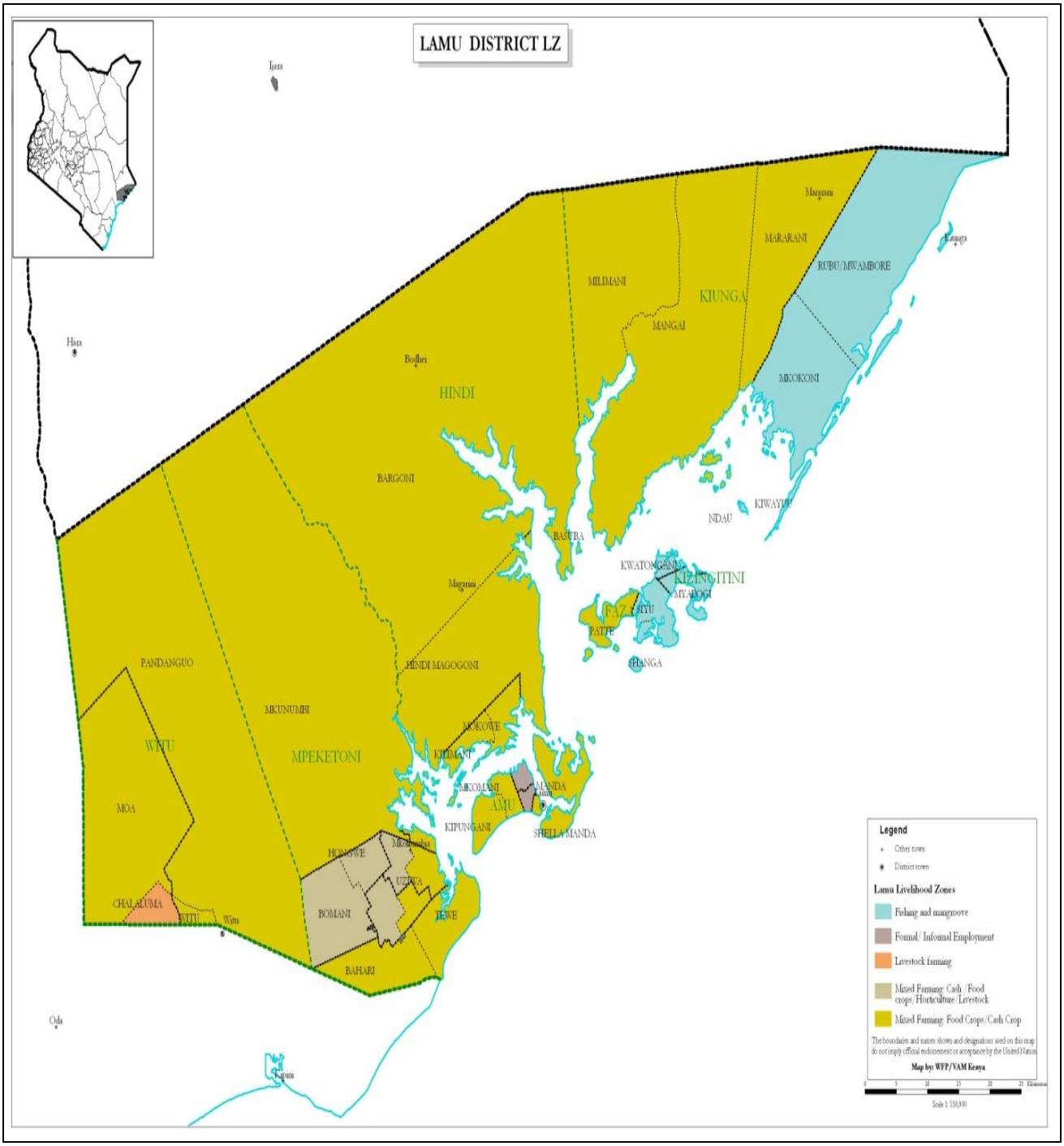
LAMU COUNTY
2018 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



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

August, 2018

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EXECUTIVE SUMMARY

Lamu County is classified under "Stressed" (IPC Phase 2) of food security classification with a majority of the households having minimally adequate food consumption but unable to afford some essential non-food expenditures. However other pockets are in minimal (IPC Phase 1) in the county.

The food security assessment was conducted by Lamu NDMA County Coordination Unit and technical working group which comprises of five different sectors collecting secondary data in the county using sectoral checklist covering agriculture, livestock, health and nutrition, water and education sectors, nutrition survey reports and the monthly drought early warning bulletins.
Rainfall performance, floods and insecurity were the main drivers of food security and cumulative effect of the previous seasons. The County received 498 mm of rainfall compared to normal of 345mm during the long rains indicating 69 percent above normal rains, impacting positively on the overall livestock and crop production. However, incidences of flooding of the farms reduced acreage under crops, this coupled with pest fall army worm and negative effects of excess moisture on crops caused a reduction in yield.

There are low maize stocks at the household level while trader's stocks are below long-term averages, a shortage that is driving food prices up. About 20 to 46 percent of the populations have food consumption intake gaps consuming two to three meals a day. Livestock body condition is good for all the species across the livelihood zones. Water situation has improved compared to the previous season and the trekking distances, waiting time and consumption rates are below the long-term average. Milk consumption improved slightly and is higher than the long-term average. The terms of trade (ToT) increased by 19 percent compared to previous month of June. This was higher than the long term average by 83 percent compared to 47 percent that was recorded at a similar period last year. Food utilization is still poor, despite availability access of commodities.

The percentages of population with poor, borderline and acceptable food consumption scores were 16, 30 and 54 percent respectively. The percentage of the population adopting emergency coping strategies stood at 38 percent; 48 percent were adopting crisis coping strategies; 11 percent were adopting stress coping strategies while 3 percent were not adopting any coping mechanisms. The proportion of children with a mid-upper arm circumference (MUAC) less than 135 mm is on the decrease indicating an improving nutrition situation. The forage condition is good except few pockets in mixed farming zone of Bahari ward which is fair to poor.

The morbidity pattern of the county is within normal ranges and no disease outbreak was reported. The average county latrine coverage is 72 percent with the Agro Pastoral/Pastoral zones accounting for the bulk of the households without latrines including the Boni area of Basuba ward.

Though the food security indicators show improvement like expected high crop harvests; livestock forage; good water availability and access, there is minimal net improvement in ease of access to food by the households in all livelihoods zones, this is attributed to poor harvests and low purchasing power.

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1.0 INTRODUCTION

Lamu County comprises of three sub-counties namely Lamu East, Lamu central and Lamu West. It covers an area of approximately 6,273.1 square kilometers consisting of a mainland and 65 islands which form the Lamu Archipelago. The count has a projected population of 128,143 persons (KNBS, 2017). The county has four livelihood zones namely; the mixed farming food /crop/livestock, mixed farming/ cash/food crop, fishing and mangrove and the formal employment/casual waged labour/business livelihood zone (Figure 1).

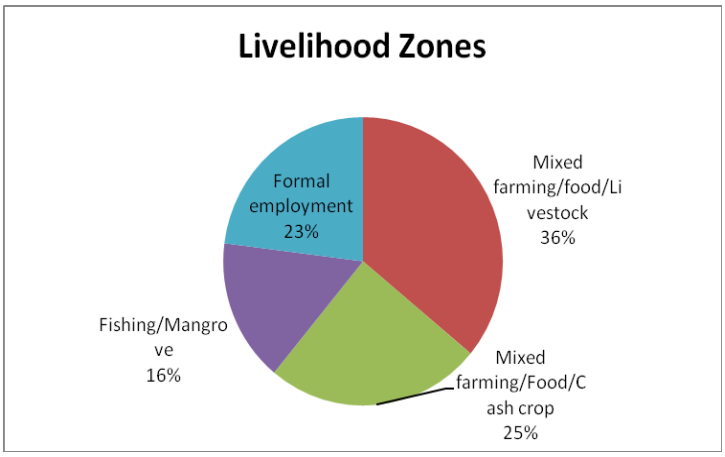

Figure 1: Livelihood zones

1.1 Objectives and Approach

The main objective of the LRA is to conduct an objective, evidence-based and transparent food security situation analysis following the Long Rains season of 2018, in Lamu County, considering the cumulative effect of previous seasons, and to provide recommendations for possible response options based on the situation analysis. The assessment was conducted between 6th and 17th August 2018.

The assessment team used various methodologies in gathering data and information for the assessment. Secondary data was collected from different sectors in the county using sectoral checklist covering agriculture, livestock, health and nutrition, water and education sectors, nutrition survey reports and the monthly drought early warning bulletins. Livelihood zones were used as the unit of analysis. To triangulate the information from the secondary sources, the assessment team collected primary data from the community through key informant interviews, focus group discussions and ocular survey during the transect drive. The team conducted 10 focus group discussions with communities, 16 key informants and market interviews in the key markets across the livelihood zones.

The areas visited during the transect drive were: Koreni, Mkunumbi, Pangani, Bahari (Tewe) and Didewaride in Lamu west sub-county; Mtangawanda, Patte, Siyu, Faza, Bwajumwali and Kizingitini in Lamu East sub-county. These sites were selected based on various criteria such as: performance of the long rains; crops performance; irrigation activities; livelihood zones, and the presence of markets. The assessment findings were presented to the County Steering Group (CSG) for their input which was incorporated into the final draft report.

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

The onset of long rain was early occurring in the first dekad of March compared to the third dekad of March normally. Most parts of the county recorded above normal rainfall. The rain exhibited good spatial and temporal distribution. Most livelihood zones in Lamu received above normal rainfall of about 350 percent, however few pockets of mixed farming livelihood zone received below normal rainfall of between 5-25 percent in Bahari ward (Mulei/Tewe area). The Mixed Cropping; Agro pastoral; Fish and Mangrove livelihood zones received above normal rainfall of between 200-350 percent. The spatial distribution was good with rainfall evenly spread out across the county. Temporal distribution was also good with rains continuously being received in successive dekads. Cessation was in the second Dekad of July which was late in comparison to third Dekad of June in a normal season. The current season is higher in rainfall performance compared to previous season.

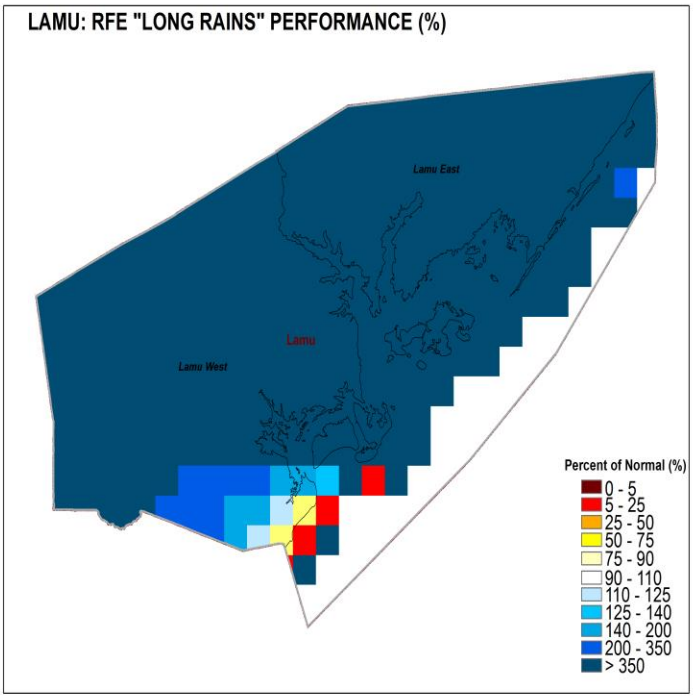

Figure 2: RFE long rains performance

2.2 Insecurity/Conflict

Security has been maintained in the county during the long rain period through security operations, and peace building efforts. However, there was a resurgence of suspected militant activity during the month of July by suspected Al-Shabaab along Hindi- Mpeketoni road in Lamu County. These have affected market supplies since traders cannot access the market freely and also supply from Mombasa has been affected. Movement of livestock from the markets has also been affected leading to low trading volumes. Resource based conflict over rangeland in Hongwe, Bahari and Mkunumbi Wards between crop and pastoral farmers were reported during the period under review.

2.3 Other Shocks and Hazards

Floods were reported in Chalaluma, Moa, Nyongoro, Matabore and Didewaride Villages in Agro pastoral areas of Witu bordering Tana delta being the most affected. The floods rendered more than 100 Households homeless after their houses were swept away and loss of human life.

3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Food Availability

Maize contributes 20 percent of cash income and 37 percent to food in the fishing and Mangrove livelihood zone, Mangoes contributed 30 percent of cash income and 20 percent to food in the formal employment/casual livelihood zones while coconuts contributes 25 percent of cash income and food respectively. In the livestock farming 70 percent of cash income is contributed by Tobacco while Maize contributes 80 percent to food and 20 percent cash income. In the mixed farming maize contributes 60 percent to food while cow peas contribute 27 percent to food

3.1.1 Crop Production3.1.1 Crop Production

Under rain fed agricultural production the area planted with maize, cow peas and green grams was 74 percent, 73 percent and 71 percent respectively while seasonal production was 40 percent, 55 percent and 53 percent respectively. These variations were due to floods which took long to subside (February to June 2018) and delayed land preparation. Pest and diseases, low farmer capacity, poor soil fertility and fall army worm attack also reduced seasonal production.

Table 1: Rain-Fed Crops

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)
Maize	12,600	16,932	127,100	315,712
Cowpeas	2,502	3,413	15,125	27,495
Green grams	2,692	3,781	13,160	24,721

Source: Department of Agriculture & Irrigation, Lamu County

Irrigated Farming

Under irrigated agricultural production the area planted with tomatoes and kales were 83 percent and 74 percent of the long while seasonal production were 50 percent and 44 percent of the long term averages. The variation in area and seasonal production was due to prolong floods and disease and pest infestation, poor soil fertility, low farmer capacity, and fall army worm attack. Drastic changes in night temperatures also affected the crops.

Table 2: Irrigated Farming

Crop	Area planted during 2018 long rains season (Ha)	Long Term Average - area planted during the long rains season (Ha)	2018 longs rains season production (90 kg bags) Projected/Actual	Long Term Average production during the long rains season (90 kg bags)
Tomato	87	105	2010	4055
Kales	95	112	987	2253

Source: Department of Agriculture & Irrigation, Lamu County

3.1.2 Cereals stocks

Maize stocks held by farmers, traders, millers and NCPB/Aid were 66 only percent, 24 percent 45percent and 6 percent of long term averages respectively. Rice stocks were held by traders at 95percent of the long term. Stocks of green grams were only held by farmers and are 41 percent

of long term average. The variations in stocks held were due to terror threats and low seasonal production. The stocks are expected to last for one and half months. There were no food safety issues (such as aflatoxin) reported during this period.

Table 3: Food stocks (Cereals and pulses)Quantities held currently (90-kg bags)

	Maize		Rice		Sorghum		Green gram	
Commodity	**Current**	**LTA**	**Current**	**LTA**	**Current**	**LTA**	**Current**	**LTA**
Farmers	12,717	18,816	35	44	35	154	1,030	2,500
Traders	703	2,943	4,550	4766	7	611	80	100
Millers	113	250	0	0	0	0	0	0
Food Aid/NCPB	161	2,333	70	0	0	0	0	0
TOTAL	13,694	24,342	4,655	4810	42	765	1,110	2,600

Source: Department of Agriculture & Irrigation, Lamu County

3.1.3 Livestock Production

Livestock contributes about 25 percent of incomes in the mixed farming food crop and mixed farming cash crop zones and 16 percent in the fishing /mangroves zones. The pastoral livelihood receives the largest contribution from livestock at 60 percent. The rains impacted positively on livestock productivity resulting in improved body condition and increased milk production and consumption reducing malnutrition levels.

Pasture and Browse condition

Table 3: Forage Condition

Livelihood zone	Pasture condition		How long to last (Months)		Factors Limiting access	Browse condition		How long to last (Months)		Factors Limiting access
	Current	Normally	Current	Normally		Current	Normally	Current	Normally	
Mixed farming Cash crop	Good	Good	3 months	3 months	Flooded grazing areas	Good	Good	3 months	3 months	Flooded grazing areas
Mixed Farming Food crops	Good	Good	3 months	3 months	Flooded grazing areas	Good	Good	3 months	3 months	Flooded grazing areas
Pastoral Livestock	Good	Good	2,5months	3 months	Flooded grazing areas	Good	Good	3 months	3 months	Flooded grazing areas
Fishing and Mangrove	Good	Good	3 months	3 months		Good	Good	3 months	3 months	
Casual Labour	Good	Good	3 months	3 months		Good	Good	3 months	3 months	

The pasture and browse condition were good in all livelihood zones and above long-term average, and expected to last 3 months however access to pasture and browse was limited in flooded areas.

Livestock productivity

Cattle and small stock body condition was good in all the livelihood zones, as a result of the above normal rains that improved the forage conditions and water availability.

Table 4: Livestock body condition

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normally	Current	Normally	Current	Normally
Mixed farming Cash crop	Good	Good	Good	Good	Good	Good
Mixed Farming Food crops	Good	Good	Good	Good	Good	Good
Pastoral Livestock	Good	Good	Good	Good	Good	Good
Fishing and Mangrove	Good	Good	Good	Good	Good	Good
Casual Labour	Good	Good	Good	Good	Good	Good

Source: Department of Fisheries, Livestock & Cooperatives

Livestock Birth rate, Diseases

Normal birth rates were recorded for all livestock species in all livelihood zones. No livestock notifiable disease outbreaks were reported in the County. There were reports Trypanosomiasis.

Tropical livestock units (Tropical Livestock Units)

There was a recovery in TLUs in mixed food crops; mixed cash crops and fishing and mangroves livelihood zones from the effects 2016/2017 drought for poor and medium income household. This was due to interventions carried out both at emergency and recovery stages of the drought. Medium income livestock owners in the mixed farming food and livestock (pastoral livestock) were yet to fully recover from the 2016/2017 drought. The average tropical livestock units for formal employment casual labour, fisheries /mangroves livelihood and livelihood were as normal both for poor and medium income households at 0.5 and 2 TLUs respectively, while the mixed farming livestock had the highest TLU at 10 which is still below the normal of 14.

Table 5: Tropical Livestock Units

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Mixed farming Cash crop	2	2	3	3
Mixed Farming Food crops	2	2	3	3
Pastoral Livestock	3	3	10	14
Fishing and Mangrove	0.5	0.5	2	2
Casual Labour	0.5	0.5	2	2

Source: Department of Fisheries, Livestock & Cooperatives

Milk Production, Consumption and Prices

Milk production was below the LTA in all the livelihood zones. Subsequently household consumption was also below the LTA. Milk price reduced to between Ksh 50-60 per litre from Ksh 60-100 per litre, with the exception of fishing and mangrove zone where it cost Kshs 100 per litre this is as a result of high demand with low cumulative local production of milk.

Table 6: 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 Cash crop	1.0	1.5	1.2	2	50-60	60-100
Mixed Farming Food crops	1.2	1.3	1.3	2.2	50-60	60-100
Mixed farming Livestock	1.1	1.3	1.7	2.5	50-60	60-100
Fishing and Mangrove	1.0	1.3	1.1	1.8	50-100	60-100
Casual Labour	1.0	1.3	1.2	1.9	50-80	60-100

Source: Department of Fisheries, Livestock & Cooperatives

Water for Livestock

Water sources for livestock improved, recharge of existing water source was above capacity resulting in reduced trekking distance to water except, in Pastoral livelihood zone.

Table 7: Livestock access to water

Livelihood zone	Sources		Return distances (km)		Expected duration to last (months)		Factors Limiting access
	Current	Normal	Current	Normal	Current	Normal	
Mixed farming Cash crop	Wells, Lake, ponds water pans	Wells, Lake, ponds, water pans	<1 km	< 1 km	2 months	2 months	
Mixed Farming Food crops	Wells, water pans ponds	Wells, water pans ponds	1.8km	< 2km	2 months	2 months	
Pastoral Livestock	Water pans, river, Lake wells, bore holes	Water pans, River, Lake, wells, boreholes	4 km	2-5 km	2 months	2 months	
Fishing and Mangrove	Djabias, wells, desalination plant	Djabias, wells, desalination plant	<1km	< 1 km	2 months	2 months	
Casual Labour	Piped water, wells,	Piped water, wells	<1 km	< 1 km	2 months	2 months	

Source: Department of Fisheries, Livestock & Cooperatives

Migration and conflicts

There was in migration of livestock from Ijara to mixed farming areas of Bargoni, and out migration from Lamu to Tana River in April and migrated back areas of Didewaride and Chalaluma of Witu ward. Minor conflicts were reported in Lumshi area of Hongwe ward.

3.14 Impact on availability

3.2 Access

Markets were functioning normally; with findings showing that food insecurity remains an issue of household driven by low purchasing power and lack of food stocks. Findings also show that all livelihood zones deprived area in all aspects of access to food.

3.2.1 Market operation

The main market in the mixed farming livelihood zone is Mpeketoni. Agro pastoral Livelihood zones markets are Witu, Mokowe, Hindi and Amu while fishing /mangrove livelihood zone are Faza, Patte, kiunga and Kizingitini. Other alternative markets for livestock are Garsen in Tana River. There was no market disruption and all food commodities including livestock were available in the market, prices for staple cereals like maize were low and affordable, livestock prices were increasing and thus terms of trade favored livestock keepers. The maize and green gram traded on was from the county and exported outside the county while rice is usually outsourced.

Market Prices

Maize price

In July Maize prices reduced by 16 percent from Ksh 44 to 37 with a reduction lower than the long term average of kshs 43.The decrease was attributed to long rain harvest that were witnessed in the month of July. (Figure 3). The highest prices were recorded in Fishing and Mangrove livelihood zone with Ksh 50 while the Mixed farming livelihood zones recorded the least price at Ksh 25. . However, price ranges is determined by maze supply in the different markets. Maize prices are likely to decrease as harvest are expected to continue untill August .

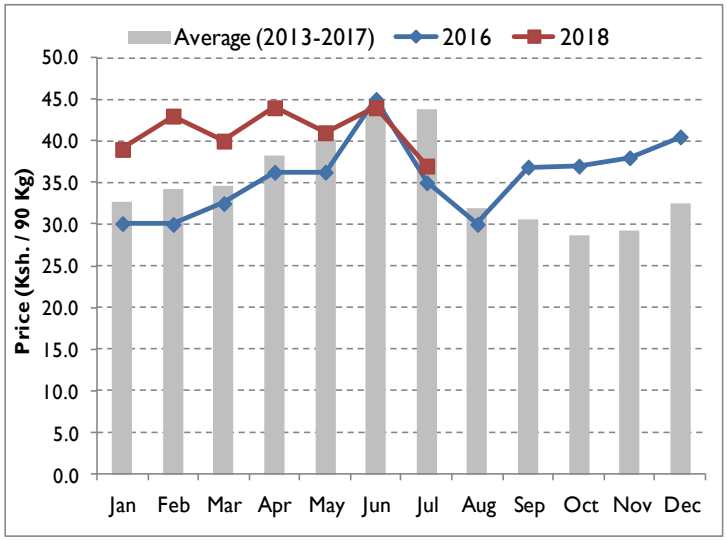

Figure3: Maize prices

Goat prices

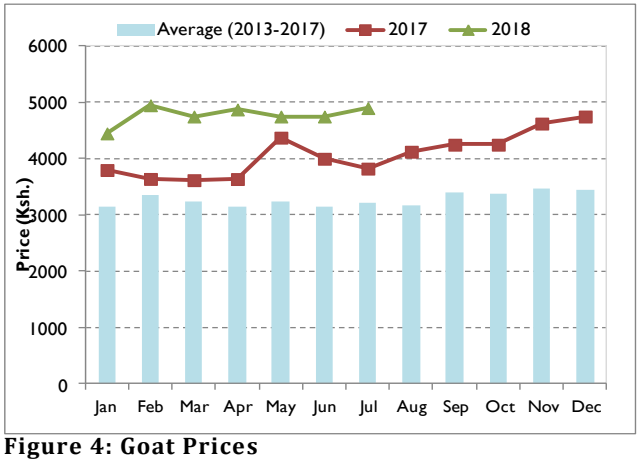

Figure 4: Goat Prices

Goat prices increased by three percent in July compared to pervious month of June. The price was higher than the long term average by 53percent and the price recorded in previous year at a similar time and following seasonal trends (Figure 4), attributed to good body condition. The highest prices were recorded in Fishing and Mangrove livelihood zone at Ksh5700 while the Mixed farming livelihood zones recorded the least price with Ksh. 3,000.

Goat prices are expected to increase due to Eid festival in the next one month.

3.2.2 Terms of trade

The terms of trade (TOT) increased by 19percent compared to previous month of June. This was higher than the long-term average by 83percent and 47 percent that was recorded at a similar period last year (Figure 5). Sale of a medium goat in July would cost a household about 134kg of maize. This showed the exchange ratio increased in favour of goat sellers to crop farmers. However, this was determined by high demand due Eid festival and follows subsequent seasonal trend with low supply in the different markets. The increase implied that households could currently purchase more maize with the proceeds from the sale of a goat compared with normal times. The terms trade was lowest in Fishing mangrove livelihood zone 113kgs and highest in the mixed farming and Agro pastoral livelihood zone with 148kgs implying high households' purchasing power. A stable trend is foreseen in households' purchasing power as goat prices are expected to increase in the back-drop of relatively low maize prices.

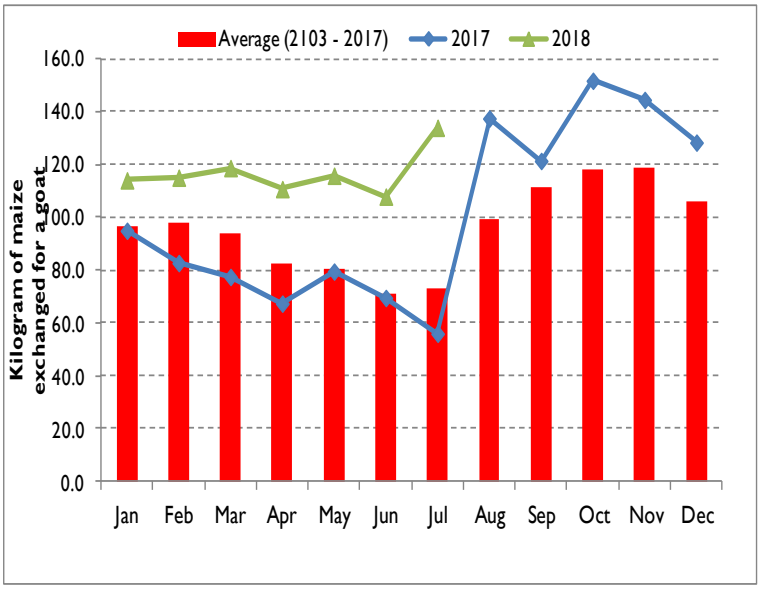

Figure 5: Terms of trade

3.2.3 Income sources

The main household income for the month of July include casual labour at 64percent, Employment 15 percent, trade 14percent and sale of Livestock/Livestock products percent as in figure 5 below. Other sources of income in the county include cash crop farming, charcoal burning, petty trading and poultry production. Other important sources of income in the County include gifts and remittances from relatives, formal employment, poultry production and petty trade.

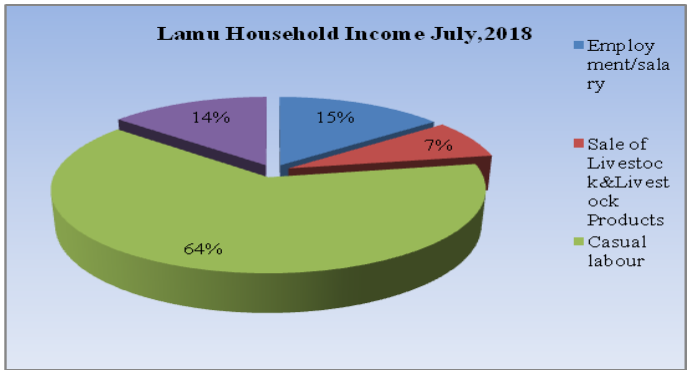

Figure 6: Household sources of income

3.2.4 Water Access and Availability

The major water sources available are; Shallow wells, Water pans, Djabias, Piped water, Desalination plant, Rivers, lakes. The long rains managed to recharge water sources at 80-95percent level... Most areas in the county currently have water with the exception of Mtanga-wanda where the shallow are saline. Water is expected to last 2- 4 months in all livelihood zones, this is normal at this period of the year with the exception of Mtanga-wanda where Djabias will last for less than two months.

Table 8: Distance, Cost, Waiting time and Average Household use by livelihood zone

Sub county/ livelihood zone	Sources of water	Distance to Water for Domestic Use (Km)		Cost of Water (Kshs./20litres)		Waiting Time at Water Source (Minutes)		Average HH Use (Litres/person/ day)		Projected duration of water availability in current water sources (months)
	Normal	Normal	Current	Normal	Current	Normal	Current	Normal	Current	
Mixed farming/ food/Cash crop/Livestock	lakes, shallow wells, rivers, boreholes piped water	0.1-0.5	1-2	3-5	5-10	15-30	20-30	15-25	15-20	2-3 Month
Mixed farming /food/cash crop	lakes, shallow wells, boreholes piped water	0.1-0.5	0.5-2	3-5	5-10	15-30	20-30	15-25	15-20	2-3 Month
Fishing and mangrove	shallow wells, boreholes	0.1-0.5	1-2	5-10	10-20	10-30	10-60	15-25	10-15	1-2 months
Formal employment/ casual waged labour/business	Lakes, dams. Shallow wells boreholes piped water	0.1-0.5	0.5-2	3-5	5-10	5-10	10-30	15-25	15-20	2-3 Month

Distance to water sources

The average household watering return distance was 0-1 Km compared normal of 1 –2km. The decrease is attributed to good rains that led to increase in water table levels and recharge of open water sources.

Waiting time at the source

The current waiting time at the water source is 10 to 30 minutes depending on the source of the water available. This is normal at this of the year.

Cost of water

The current cost of water per 20 litre Jerrican was Kshs 5 – 10 in most livelihood zones except Mtanga-wanda, Bahamisi and Manda Maweni where it costs up to Kshs 20 -25.

Water consumption

The current water consumption per person per day is 15-20 litres. However in areas such as Mtangawanda and Bahamisi water consumption per person per is 5-10litres which is below

normal, water for domestic use is available and this normal at this period of the year, as the water sources operational and shallow wells are saline in Mtangawanda.

3.2.5 Food consumption

The percentage of population with poor, borderline and acceptable food consumption scores were 16, 30 and 54 percent respectively. this compared to previous season where poor and borderline households reduced by 9 and 5percent while the acceptable households increased by14percent.The proportion of households with acceptable, borderline and poor has improved food access, dietary diversity and meal consumption resulting enhanced livestock production and milk consumption. Currently households are consuming two to three meals per day comprising two to three food groups which is below normal for this time of the year.

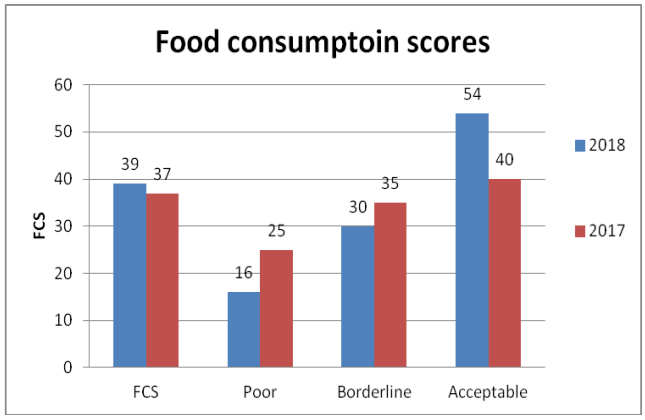

Figure7: Food Consumption Score

3.2.6 Coping strategy

The mean CSI was stable at 21 when compared last season. Percentage of the population adopting emergency coping strategies stood at 38 percent, while those adopting crisis coping strategies were at 48percent, 11 percent were adopting stress coping strategies and 3percent were not adopting any coping mechanisms. Most common consumption related coping strategies employed by households were; rely on less preferred, less expensive food, borrowed food, or relied on help from a friend or relative, reduced the portion size of meals, reduced the quantity of food consumed by adults/mothers to ensure that children had enough to eat. The females were more affected compared to males.

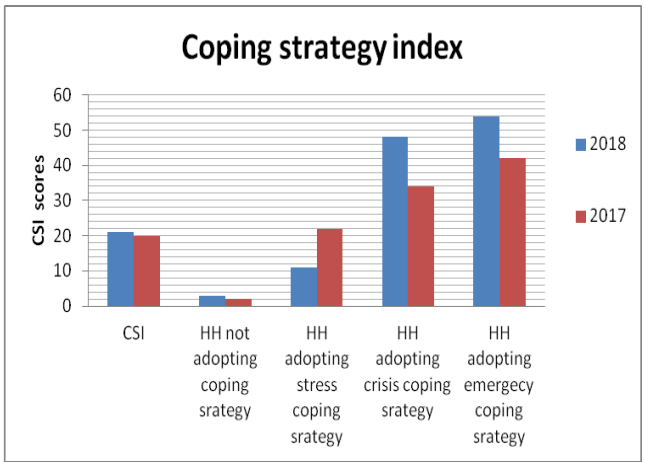

Figure 8: Coping strategy index

3.3 Utilization

3.3.1 Morbidity and Mortality patterns

The main diseases of morbidity for the general population and under five children were Upper respiratory disease, Diarrhea and skin disease. Disease pattern in both children under the age of five and the general was within normal in the County. Upper respiratory tract infection cases were on increase between January and June 2018. Diarrhea cases declined in both under-fives and general population during the period

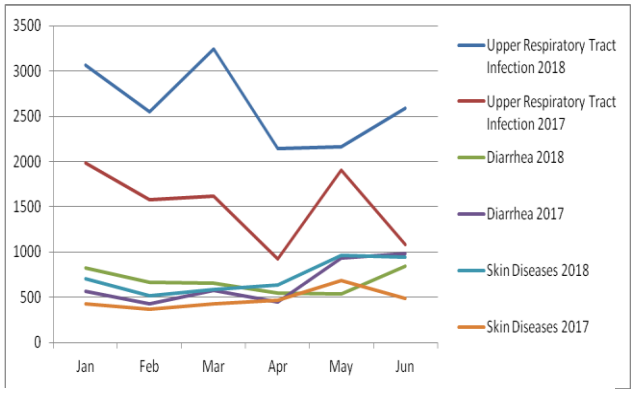

Figure9: trends in morbidity under five

under review which can be attributed to increased awareness on critical times for hand washing and use of safe water. Malaria disease now under control due to various intervention earlier done; free mosquitoes net distribution and massive campaigns on household spraying, and drainage of areas where mosquito's breed.

3.3.2 Immunization and Vitamin A supplementation

Immunization and Vitamin A Supplementation for children 6-59 months was slightly above the recommended national target of 80 percent in Lamu County at 81percentage making slight improvement from 72 percent.. The increase in immunization coverage is attributed to increase in staff turnover and more outreach programmes conducted by the County government. Vitamin A coverage remain below 80percent national target due to many children don't attend Child Welfare clinic after measles vaccine thus low coverage. Children below 1yr (51percent) while 12-59 months recording 35percent coverage.

Table 10: Immunization coverage

Year	Percentage of fully immunized children in the county (DHIS MOH 710 Vaccines and Immunizations	Percentage of children immunized against the mentioned diseases in the county Source: (Nutrition survey Feb 2017)
Jan to June 2017	72percent (1546)	OPV 1 : 98percent OPV 3 : 92percent Measles : 91percent
Jan to June 2018	81percent (1760)	OPV 1 ____ OPV 3 ____ Measles ____

Table 11: Vitamin A Supplementation Coverage

Year	Children 6-11 months		Children 12 to 59 months		Children 6-11 months	Children 12 to 59 months
	Received vitamin A supplementation Source> DHIS	Total Population (6-11 months)	Received vitamin A supplementation Source> DHIS	Total Population (12-59 months)	Proportion of children Received Vit A supplementation in the last 6 months Source: Nutrition Survey(Feb 2017)	Proportion of children Received Vit A supplementation in the last 6 months Source Nutrition Survey(Feb 2017)
Jan to June 2017	743 (47percent)	3753	1784 (12.6percent)	15949	78percent	67percent
Jan to June 2018	1068(51percent)	4253	5370 (35percent)	15310		

No disease outbreak and epidemic occurred in the due to increased surveillance and health education (Hygiene and Sanitation).

3.3.3 Nutrition status and dietary diversity

The proportion of children under five at risk of malnutrition with Mid Upper Arm Circumference below 135mm decreased to 5.2 compared to previous month of June at 5.4.

This decrease was attributed to increased milk production and consumption at household level. The rates of Malnutrition cases are decreasing in the Agro pastoral and Mixed farming Zones of Witu, Hindi wards..

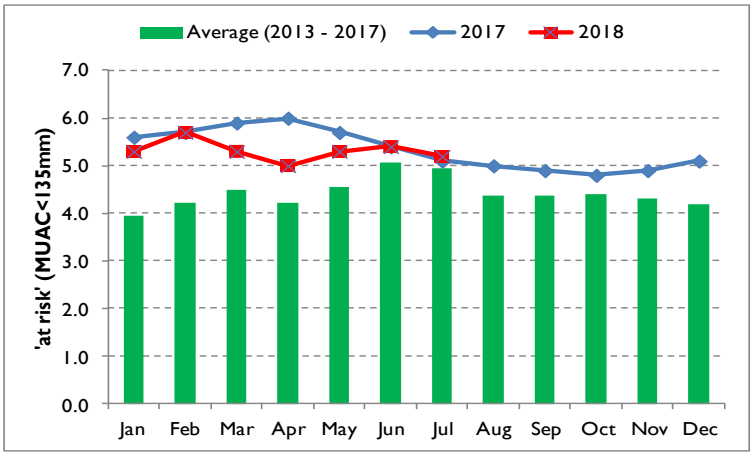

Figure 10: Proportion of Children at Risk of Malnutrition

3.3.4 Sanitation and Hygiene

Sanitation

Latrine coverage is fairly high at 72 percent in the county. 90 percent of households across all livelihoods, have been sensitized and are aware of t handwashing, however, there are still quite number populations which don't use soap.

Hygiene

The water chemicals area accepted by the community members across all livelihood zones. Chemicals such as chlorine, Powder, Tablets, Aluminum and Pur are available to households. Water treatment level is above normal in the water supply and established water schemes in the sub-county. Sometimes individuals who own shallow wells collect chemicals from public health offices to treat their water, otherwise 27percent of households consume untreated water.

3.4 Trends of key food security indicators

Figure 12: Food security trends in the county

Indicator	Long rains assessment, July 2018	Short rains assessment, Feb 2018
% of maize stocks held by households (agro-pastoral)	30percent of LTA	10percent of LTA
Livestock body condition	Good	fair
Price of maize (per kg)	37	39
Water consumption(Litre per person per day	15-20l	10-15l
Distance to grazing	2-4km	13.6km
Terms of trade (pastoral zone)	134	114
Coping strategy index	21	20
Food consumption score	Poor-16, Borderline-30 and Acceptable-54	Poor-25, Borderline-35 and Acceptable-40

3.5 Education

3.5.1 Enrolment

There was a drop-in enrolment due to insecurity and floods in some parts of the county, especially in Witu and Mpeketoni in Lamu West and Basuba in Lamu East where five primary schools were closed. Some of the affected pupils from Basuba ward were transferred to Mokowe Arid Zone and Kiunga Primary. The impact was felt more in primary schools. Witu ward recorded the highest number of drop out cases due to floods, pastoral families migrating for pasture and waster use the school going children as herders, Basuba ward schools were closed down after teachers were attacked by Alshabab Militants. The impact was highly felt by ECD and primary schools than secondary schools. Most of the affected areas were rescued by Kenya Red Cross to secure places, therefore affecting their learning. As shown in table 16.

Table 13: School enrolment

	Term I 2018			Term II 2018 (includes new students registered and drop-outs since Term I 2018)			Comments (reasons for increase or decrease in Enrolment)	Reasons for Transfers
Enrollment	№ Boys	№ Girls	Total	№ Boys	№ Girls	Total		
ECD	6894	5226	12120	6889	5171	12060	Floods Lack of fees.	
Primary	14189	12823	27012	14289	12607	26896	-Early marriages and pregnancies -child labour	
Secondary	3532	2732	6264	3462	2657	6119	-Early marriages and pregnancies -child labour t -Lack of fees	

5.3.2 Participation

Transition Attendance rates are comparatively high in ECDE Centers and lower grades. However, it was higher for girls than boys. The National and County transition rate stands at 85 and 80 respectively. More pupils transits to form one in day schools than in boarding schools. However, in ECD Centers more girls transits to class one than boys. Attendance rates are comparatively high in ECDE Centres and lower grades. However, it was higher for boys than girls. More pupils transits to form one in day schools than in boarding schools. However, in ECD Centres more girls' transits to class one than boys. There is also a need for ECD Centres to have toilets as most of them lack this essential facility.

Table 14: School Participation.

	Term I 2018						Term II 2018						
Indicator	January 2018		February 2018		March 2018		May 2018		June 2018		July 2018		Comments (reasons for increase or decrease)
School attendance	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	
ECD	6949	5248	6962	5259	6894	5254	6891	5246	6992	5224	6881	5238	floods and lack of fees.
Primary	14361	12882	14354	12863	12408	12823	14350	12917	14302	12771	14289	12607	-Early marriages pregnancies -child labour to boys.
Secondary	3550	2752	3538	2739	3532	2732	3537	2680	3484	2769	3462	2657	Early marriages and pregnancies child labour to boys Lack of fees

Source: Department of Education, Lamu County

3.5.3 Retention

In ECD 81percent of boy's dropout compared to term two of 62percent this was higher compared to the number of girl's dropout at 19percent and 38percent in term one and two. In primary the dropout of both genders was constant in the two the terms. However, dropout is more significant in primary as compared to secondary level across the two terms. This was attributed to lack of school meals, school fees, Floods, insecurity and migration with livestock in search of safer areas for grazing to neighboring counties prompted by floods and household's ignorance to the importance of girl child education. With secondary schools, there were more dropouts of girls at 64percent compared to boys 48percent. Girls dropout rates can be attributed to Floods effects, lack of school Fees, Early Marriages/Pregnancy as in table16.

Table 15: School dropout rate

Indicator	End of Term I 2018		End of Term II 2018	
Students dropped out from school	№ Boys	№ Girls	№ Boys	№ Girls
ECD	92	22	23	14
Primary	54	53	64	67
Secondary	34	62	50	53

3.5.4 School meals programme

There is no WFP supported school meal programme in the county. However, the Ministry of Education provides Home Grown Programme to only 23 primary schools in the whole county as in table 17. Currently, about 20,000 pupils in 50 schools are in need of School Feeding Programme to sustain the learners in schools, who hail from vulnerable communities with no food at household level especially the Boni who were also affected by insecurity.

Table 16: School meals programme

Name of county	№ of schools with school feeding	HGSM		RSMP		ESMP		CSMP		Other type of school feeding (Please specify below.)		Total number of beneficiaries	
		M	F	M	F	M	F	M	F	M	F	M	F
LAMU	23	3413	3290									3413	3290
Grand total	23	6703										6703	

3.5.5 Inter-sector links

The ministry of health regularly carried out deworming, vitamin A and iron supplementation at educational institutions for ECD centres and primary schools. Most of the learning institutions have access to water either through piping or shallow wells. Sanitation in most schools are adequate however hand washing is limited in some institutions. The national government through the ministry of interior was in an attempt to curb the insecurity that had been experienced in the county and provide food to few schools in hot spot areas.

4.0 Food Security Prognosis

4.1 Prognosis Assumptions

The following are the key assumptions guiding prognosis of the long rains season;

- The performance short rains season (October – December 2018) will be average tending to above average of normal over the county. (Source -KMD and FEWSNET).
- Conflict over (rangelands) water and forage is likely to intensify through to October as in-migration of livestock from neighboring counties increases.
- Market supplies are expected to continue supporting most households with relatively stable prices compared to last seasons
- Malnutrition cases are expected to decrease.
- Terms of Trade are expected to be stable due to good body condition of goats.

- Off season rains will continue to be received to sustain the late planted crops due farms been flooded and water logged to maturity.

4.2 Outlook for the next three months (August to October outlook)

Income sources from labour, livestock and food sales in harvest activities are expected support consumption deficits in all livelihood zones. Market supplies are expected to be stable and the terms of trade are expected to improve thereby increasing households' access to food. Distances and waiting time at the water sources are expected to increase in the pastoral/mixed and fishing/mangrove livelihood zones from the month of October. After the onset of the short rains, the forage conditions and water availability expected to improve further improving livestock body condition, production and decrease distance to water sources. In migration of livestock from neighboring Counties are expected towards September to November, as range land resources is expected to deteriorate. Mortality rates are expected to remain below the alert thresholds.

4.3 Outlook for the next six months (November to January outlook)

The projected average to above–normal short rains performance, will invariably result in improved range land conditions, there is high likelihood of increasing term of trade through September as livestock prices improves against stable food prices. Food consumption at the household level will be minimal owing to the likelihood of below–normal crop production in the county impacting negatively on household food stocks. Water consumption will improve across the livelihood zones in November after the short rains, with reduction in distances and waiting time. Household food stocks are expected to improve after crop harvest in mid January 2018.On-farm labour income shall increase households' access to food, while improvement in milk production shall contribute to dietary diversity hence nutrition status of the children below five years will improve from January 2018. There will be minimal in/outmigration as livestock will remain in the residential and traditional grazing areas.

5.0 Conclusion and Interventions

5.1 Conclusion

The food security situation in the county has slightly improved compared to last season due to enhanced rainfall that lead to good pasture and browse and water availability thus improving livestock production, However the heavy downpour caused flooding and water logging which destroyed crops, fall army worms and delayed farm plantation, resulting to below normal food stocks at household levels. The factors to monitor are water availability, pasture and browse condition, market trends, livestock disease outbreaks, in-migrations, insecurity/conflicts, crop value chain development, health and nutrition status of the population.

5.1.1 Phase classification

Lamu County is classified under "Stressed" (IPC Phase 2) of food security classification with other pockets in Minimal (IPC Phase 1) in the county.

5.1.2 Summary of Findings

The long rain was above normal in the county except few pockets with below normal. The Spatial Distribution was good with rainfall evenly spread out across the county. Temporal distribution was also good with rains continuously being received in successive dekads. Cessation was in the second Dekad of July which was late in comparison to third Dekad of June

in a normal season. The rains had a positive effect on food availability but floods caused destruction to crop production resulting in reduced yields, this coupled with fall army worm infestation affected households stock levels. Forage condition is good across the livelihood zones resulting to good livestock body condition hence improved livestock production. Above normal livestock prices improved pastoralists' terms of trade. A significant proportion of households (16% and 30%) have poor and borderline food consumption score respectively with more households employing emergency coping strategies stood at 38 percent, while those adopting crisis coping strategies were at 48percent in agro – pastoral and Fishing /Mangrove livelihood zones. The proportion of children under five at risk of malnutrition with Mid Upper Arm Circumference below 135mm decreased to 5.2 percent compared to previous month of June, indicating slight improvement. The key factors that need to be monitoring for the next six months include the pasture and browse condition, livestock body condition, human and livestock diseases, livestock and food prices. Others factors include under-five nutritional status, distances to water sources, availability and access to forage and water, resource-based conflicts/insecurity and in-migrations.

5.1.3 Sub-county ranking

Table 18: sub-county ranking

Sub County	Food security rank (1-2) (worst to best)	Wards	Main food security threat (if any)
Lamu East	1	Faza, Basuba and Kiunga	Crop failure. Low food stock levels. Water stress- salinity, lack at sources. low milk production and consumption. Reduced purchasing power. Low food consumption. Stressed and crisis coping strategy
Lamu West	2	Witu, Bahari, Mkunumbi and Hindi	Crop failure Low food stock levels Low milk production Reduced purchasing power . Stressed coping strategy

5.2 Ongoing Intervention

5.2.1 Food interventions

Table 19: Food intervention

Education						
County/Sub-county	**Intervention/ activity (Please be as detailed as possible.)**	**Name of school(Number of schools)**	**№ beneficiaries**	**Implementers (Please list all partners.)**	**Please detail any impacts (positive and negative) of each intervention.**	**Timeframe (please detail whether activity is long-term, short-term, when it began and when it will finish.)**
Lamu East	Feeding Programme	8	1,651	GOK	Retention of learners in school	Jan. - December
Lamu West	Feeding Programme	15	5,516	GOK	Retention of learners in school	Jan - December
Total		23	7,167	GOK	Retention of learners in school	Jan - December

5.2.2 Non-food interventions

Cash transfer is being administered by the department of social services to 1600 households and 120 households for older persons and people with severe disabilities respectively in the County.

Table 20: Non food intervention

County	**Intervention**	**Sub County**	**No. of beneficiaries**	**Implementers**	**Impacts in terms of food security**	**Cost**	**Time Frame**
Livestock							
Lamu	Restocking	All	1,000	Resilience	Livelihood support	7 m	1 week
Lamu	Supplementar	All	1,000	Resilience	Livelihood	3M	1 month

	y feeding				support		
Lamu	Nagele Livestock Market development	Lamu west	12,000	County Department of Livestock	Livelihood support	18M	1 year
Lamu	Pasture establishment	Lamu west	1,000	County Department of Livestock	Livelihood support	5M	1 year
Lamu	Water pan/dam for market and pasture storage	Lamu west	12,000	NDMA	Livelihood support	38M	1 year
Health and Nutrition							
Lamu East & West	Vitamin A Supplementation	ALL	19,888	MOH/ Unicef	Improved immunity hence less frequencies of illnesses resulting in having more hours to work & improve on household food security.	-	July to Dec 2018
County	Management of Acute Malnutrition (IMAM)	Amu, Mpeketoni, Faza, Witu		MOH/ Unicef KRC's	Improvement on labor productive		
county	MIYCN Interventions	All facilities		MOH	Improvement on labor productive		
Agriculture							
Lamu East & West	Agricultural Mechanization service Fuel and	Wards -Bahari	3,500	LCG	Improve food security	9.37M	End of June 2018

	maintenances	-Witu -Hindi -Kiunga -Faza -Basuba					
County wide	Provision of inputs (fertilizer)	All wards	3.000	LCG	Improved food security & income	10M	End of June 2018
	Provision of certified maize seeds	All wards	3,000		Improved food security	5M	End of June 2018
Immediate ongoing interventions							
Water Sector							
Lamu East/Faza ward	Rehabilitation Vumbe pipeline	Faza	1200	National Government of Lamu Equalization Fund	3.5M	To start soon	Not yet started
Lamu East/i Kizingitini ward	Rehabilitation Djabias	Kizingitini	4000	National Government-RPLRP	0.5M	3 MONTHS	Ongoing
Lamu East/a Faza ward	Expansion of Vumbe/Faza water supply	Mtangawanda	12,000	National Government-RPLRP	0.9M	3 MONTHS	Ongoing
Lamu West-Mpeketoni	Construction and equipping elevated tank and equipping with solar	Hongwe	1000	County government of lamu	5m	6months	ongoing
Lamu West - Mkunumbi	Improvement of water supply	Mkunumbi	1500	Water sector trust fund	2.9m	6months	ongoing
Medium and long term ongoing intervention							

	AS ABOVE						
HINDI	Completion Of Bargoni Water Project and construction of elevated tank at HIMWA to improve storage	Hindi, Bargoni	Entire population of Hindi division	Coast Water Services Board	20m	6months	Contract awarded
Amu	Construction and equipping 5No shallow wells, sump tank and pipeline interconnections to boost water for Ras Kitau and Manda Maweni	Shella well field	Ras Kitau and Manda Maweni population	Coast Water Services Board	20m	6months	ongoing
Mokowe	Construction of a complete water supply to serve Mokowe and its environs	Mokowe	The whole of Mokowe Population	Coast Water Services Board	75m	6months	ongoing

5.3 Recommended Interventions

5.3.1 Food interventions

Table 21: Proposed Population In Need of Food Assistance.

Sub County	Population	Poverty level	Poor population	Approx.% in need of food assistance
Lamu West	104,365	34 %	35,484	34-42
Lamu East	23,778	25 %	5,945	25-33
County	128,143	32.3 %	41,390	32-35

5.3.2 NON FOOD INTERVENTIONS

Table 22: Recommended Non-Food Interventions

Immediate Interventions							
County/Sub County/Wards	**Intervention**	**Specific Location**	**Activity target**	**Cost**	**No. of Beneficiaries**	**Time Frame**	**Implementation stakeholders**
Water sector							
Lamu west	Construction of five wells and a pump in Shella water supply.	Shella water supply	Water supply	5M	30,000	Dec 2018	County gov't Partners
Lamu West	Pipeline extension to Bargoni	Bargoni	Water supply	1.2M	5,000	Dec 2018	County gov't Partners
Lamu East/Faza ward	Improvement and construction of reticulation system	Faza	1500	County Government	30M	-	3 Months
Lamu East/Kiunga ward	Improvement and construction of reticulation system	Kiunga	500	County Government	25M	-	3 Months
Medium and Long Term Interventions							
Lamu East	Installation of 3000 metric cubic/Desalination Plant	LAPSSET	Water supply	20,000	600m	Dec 2018	County gov't Partners, National gov't
Lamu East-Patte-Mtangawanda & Bwajumwali	3 no Installation of 1000metric cubic/Desalination Plant	-	Water supply	4,680	60M	Dec 2018	County gov't Partners, National gov't

Lamu	Sourcing water from Tana River	-	Water supply	18B	100,000		Dec 2018	County gov't Partners
Education								
county	Intervention/activity	Justification/ reason/need for this activity	Location	№ beneficiaries targeted	Proposed implementers	Required resources	Available resources	Timeframe
Lamu	Low Cost Boarding School	Improve access to education	Amu Hindi Kiunga Faza Mpeketoni Witu	3000	MOE, County Government & other Agencies	200M	NIL	Immediately & continuous
	Food for fees	Retention of pupils in school	Amu Hindi Kiunga Faza Mpeketoni Witu	8000	MOE, County Government & other Agencies	20M	NIL	"
	Water Tanks	Improve access to education	Amu Hindi Kiunga Faza Mpeketoni Witu	8000	MOE, County Government & other Agencies	16M	NIL	"
	Classrooms	Improve transition	Amu Hindi	9000	MOE, County Government	190M	NIL	"

Livestock							
Lamu	Pasture harvesting and preservation and purchase of equipment	all	3000	Resilience County Department of Livestock	Harvesting equipment traininers	-	6 months
	Construct water troughs in strategic hotspot	all	3000	Resilience County Department of Livestock	funds	-	6 months
Lamu	Training Livestock keepers on preparedness Livestock vacination	all	500	Resilience County Department of Livestock	funds	-	6 months
Lamu	Peace committees	Lamu west	all	Office of the president	funds	-	2months
		to schools	Kiunga Faza Mpeketoni Witu		& other Agencies		
Health and Nutrition							
Immediate Recommended Interventions							

All Sub counties	Scale up screening of malnutrition in all hot spot areas	21,263	MOH & Partner	Transport, Lunches	H/Workers
	Scale up IMAM sites	3,500	MOH	Lunch, Transport Reporting tools	H/Workers
	Household spraying of insecticide for Mosquitoes	137,182	MOH	Lunch Insecticide	H/workers
	Integrated outreach services in all hard to reach areas	50,000	MOH KRC's	Transport, Lunches	Health workers, CHV's and medical products
Medium and Long term Recommended Interventions					
	Conduct KAP survey on MIYCN issues		MOH/NDU & Partners	100,000	Human resources
	Micronutrient Powder supplementation	7,800	MOH/GAIN	Transport Lunches	Health workers

Agriculture							
County	Provision of certified seeds	All wards	4,000	LCG	Funds Transport	Human resource	End of June 2019
County	Provision of extension services	All wards	10,000	LCG	Funds Fuel	Human resources transport	End of June 2019
County	Provision of subsidized tractor higher services	All wards	4,000	LCG	Funds Transport	-	End of June 2019
County	Provision of subsidized	All	4,000	LCG	Funds	Human resource	End of June 2019

	fertilizer	Wards			Transport		
County	Establishment of fruit processing plant	Bahari ward	1200	LCG	Land Raw materials Funds Human resources	- Land -Raw material	End of June 2022
County	Kenya Climate Smart Agriculture Project (KCSAP)	Six wards- Kiunga, Faza, Hindi, Mkunumbi, Bahari and Witu	6,000	CGL/ National government/ World Bank	Funds Human Resources Fuel Transport Stationery	Funds Human resource	Mid of year 2021
County	ASDSP II	All wards	6,000	CGL/ NG/SIDA	Funds Human Resources Fuel Transport Stationery	Funds Human resource	End of year 2022