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## **EXECUTIVE SUMMARY**

Lamu County is in the Crisis (IPC Phase 3) food insecurity phase classification, mainly in the mixed farming and agro-pastoral livelihood zones, however there are pockets with phase 2 and 1. Lamu County's food security is currently driven by rainfall performance and insecurity. The long rains performance was largely average, ranging between 75 - 125 percent of normal and offered relief to many rainfall driven livelihoods. However, insecurity saw a surge in militancy that resulted in about 351 crop farmers being driven out of their farms as security operation got underway and a curfew of 90 days imposed by the government. This posed a danger of crop losses due to wild attack.

Food availability has been affected positively by rainfall performance where increased acreage in staple foods. Pasture, browse and water availability which were good, led to improved body condition of livestock which were recovering from the just ended drought. Though milk production was still well below normal level, there was progressive improvement being witnessed.

Access to food at markets had not been disrupted, but shortage in food stocks had seen increased prices of staple foods. Maize prices were about 30 percent above five year average, limiting the purchasing ability of the poor households. Livestock prices were on decreasing trend for all species.

Sale of a goat would afford a household about 70 kg of maize, which is about 30 percent reduction from what they would accessed in January. Relief maize, flour and other relief effort by national and county governments, Kenya Red Cross Society, National Drought Management Authority and other donors were helping to bridge many food access gaps.

Water access was near normal levels with up to 50-75 percent recharge level at most open water sources. Utilization of water averaged 5- 20 litres per person per day which was within normal levels, with cost of water being normal at Kshs 3-10 with exceptions of Mtangawanda, Tchundwa and Bahamisi areas of Lamu East where it cost Kshs 30-50 per 20 litre Jerrican , with transport taking up most of the of the cost .

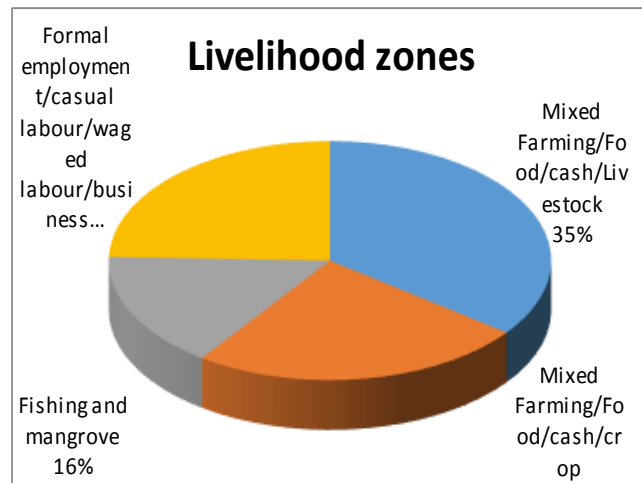
Percentage of the population adopting emergency coping strategies stood at 42 percent, while those adopting crisis coping strategies were at 34 percent 22percent were adopting stress coping strategies in May 2017 compared 32,42 and 18percent in 2016 showing worsening trends.

The proportion of households with poor, borderline and acceptable food consumption scores was Percentage of population with poor food diversity consumption score was 17, 42and 41percent respectively consumptions compared to six and 23percent of the households in May 2016 indicating worsening trends .

The proportion of children at risk of malnutrition, measured by mid-upper arm circumference (MUAC <135mm) was at 5.4 percent, being 12 percent above 2016 and 2 percent below and long term average levels.

## 1.0 INTRODUCTION

Lamu County has two sub-counties namely: Lamu East and Lamu West and covers an area of approximately 6,273.1 square kilometers consisting of a mainland and 65 islands, which form the Lamu Archipelago. The county has a projected population of 128,143 persons (KNBS, 2016). 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 (Figure1).



## 1.2 Objectives and approach

The main objective of the Long Rains Assessment was to determine the food security situation in Lamu County. The assessment was conducted between 6<sup>th</sup> and 13<sup>th</sup> July 2017. Sectoral checklists, transect drives, community focus group discussions and secondary data sources were used to collect data. The assessment adopted a multi-sectoral and multi-agency approach covering agriculture, livestock, health and nutrition, water and education sectors. Livelihood zones were used as the unit of analysis. The assessment findings were presented of the County Steering Group for their input which were incorporated into the final draft report.

Figure 1: Livelihood zone

## 2.0 DRIVERS OF FOOD AND NUTRITION SECURITY

### 2.1 Rainfall Performance

There was a late onset of rains witnessed in the 1<sup>st</sup> dekad of May instead of 3<sup>rd</sup> dekad of March. The rainfall amounts in most parts of the county was 90-110 of normal. Parts of the county including Mpeketoni, Witu and Basuba received 75-90 percent of normal rainfall. Spatial distribution was fairly even across the whole county while temporal distribution was poor, with most rains being witnessed in the 1<sup>st</sup> and 2<sup>nd</sup> dekad of May. Cessation of the rains was in the 1<sup>st</sup> dekad of June.

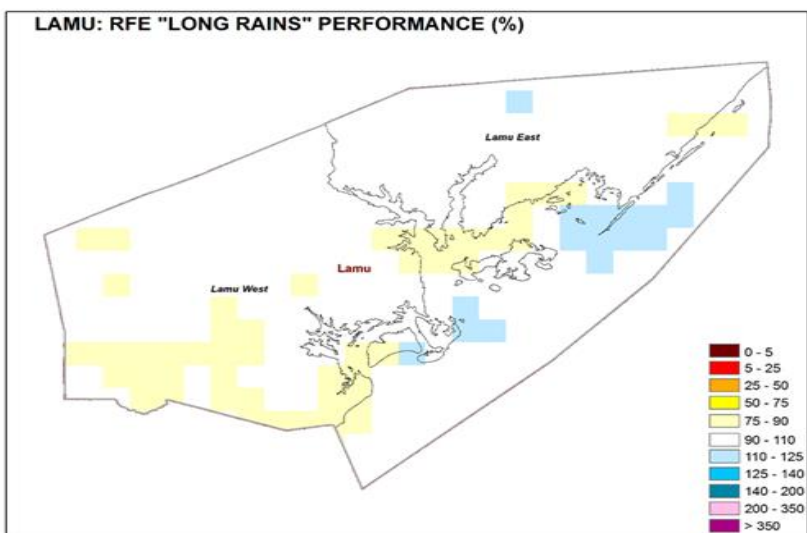


Figure 2: Rainfall performance

## 2.2 Insecurity/Conflict

Resurgence of suspected militant activities escalated in early July causing deaths and displacement of 351 households in Pandanguo and Jima areas of Witu. The insecurity situation led to imposition of a 90 day curfew in some areas of the county. The situation worsened when the attacks extended to Hindi areas of Milihoi. Human and wildlife conflict was reported in Mpeketoni and Mkunumbi Wards but subsided in at the onset of rains in May.

## 3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

### 3.1 Availability

#### 3.1.1 Crops Production Introduction

The long rains season is the main season accounting for over 80 percent annual crop production and the major crops grown in the county are maize, cowpeas and green grams.

**Table 1: Rain fed crops production**

Crop	Area planted during 2017 Long rains season (Ha)	Long Term Average (3yrs) area planted during the Long rains season (Ha)	2017 Long rains season production (90 kg bags) Projected/Actual	Long Term Average production during the Long rains season (90 kg bags)
Maize	17,410	16,694	348,200	341,468
Cowpeas	3,990	3,215	34,713	23,886
Green Grams	4,379	3,483	36,346	18,909

There was increased area planted under crops attributed to the county government offering subsidized tractor hire services which resulted in accessibility and affordability of land preparation and timeliness of planting county wide. Increase in acreage under pulses was attributed to farmers preferring to grow early maturing crops. The county and the national governments also provided green grams and cowpeas seeds to farmers. Production for maize, cowpeas and green grams was 2 percent, 45 and 92 percent above LTA attributed to increased area under crops (Table 1). Rising insecurity and tensions caused many households in affected areas to abandon their farms leaving their crops at risk of destruction by wild life. Some farmers were forced to harvest their maize as green maize.

**Table 2: Irrigated crop production**

Crop	Area planted during the 2017 Long rains season (ha)	Long Term Average (3 years) area planted during Long rains season (ha)	2017 Long rains season production (MT) Projected/actual	Long Term Average(3years) production during 2017 Long rains season (MT)
Tomato	113	106	4746	3710
Kales	158	90	3160	1800

There was an increase in number of farmers practicing irrigation in Lamu West due to the unreliable rainfall patterns in successive years. Tomatoes and kales acreage under irrigation increased due to anticipating of poor rainfall performance, steady demand and good prices for both crops. Area under tomatoes and kales was increased by 6 and 75 percent above LTA respectively. Increased production for both tomatoes and kales was 27 and 75 percent above LTA attributed to increased acreage and availability of effective agro-chemicals.

**Table 3: Cereals stocks**

Commodity	Period	Households	Traders	Millers	NCPB	Total
Maize (in 90 kg bags)	Current	5,000	90	50	0	5,140
	LTA	16,725	4,370	350	3,500	24945
Rice (in 50 kg bags)	Current	0	5970	0	0	5970
	LTA	2	4,350	0	3,952	8304
Millet (in 90 kg bags)	Current	2	15	0	0	17
	LTA	4	77	5	0	86
Sorghum (in 90 kg bags)	Current	3	10	0	0	13
	LTA	5	120	0	125	250

Maize stocks held by households was 30 percent of LTA while stocks held by traders was two percent of LTA due to low carryover stocks from the previous season and low maize availability across the country. Stocks held by millers was 14 percent of LTA with some mills closing down. The food stock available were expected to last 1 month.

### 3.1.2 Livestock Production

#### Pasture and Browse

Pasture and browse condition was good across the livelihood zones and were expected to last for 2-4 months. Factors currently affecting access include, insecurity, land tenure where farms encroach into grazing corridors and grazing areas and restricting access and causing conflict. Tsetse infestation and flooding in few areas have also affected access to pasture.

**Table 4. Pasture and browse**

Livelihood zone	Pasture				Browse			
	condition		How long to last (Months)		condition		How long to last (Months)	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Mixed livestock/ food	good	good	2	3	Good	Good	3	4
Mixed cash crop	good	good	3	3	Good	Good	4	4
Fishing/mangrove	good	good	3	3	fair	Good	2	4

#### Livestock body condition

Livestock body condition is currently fair to good for cattle, goats and sheep and improving across the livelihood zones. The good body conditions are supported by pasture availability.

**Table 5. Livestock Body Condition**

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normal	Current	Normal	Current	Normal
Mixed livestock food	fair	good	Good	Good	Good	Good
Mixed cash crop	good	good	Good	Good	Good	Good
Fishing/mangrove	fair	good	good	good	good	Good

#### Birth Rate, Diseases and Mortality and Tropical Livestock Units

There was a reduction in TLUs across the livelihood zones and wealth groups attributed to reduced birth rates and livestock abortions. The average tropical livestock units for formal employment casual labour, fisheries /mangroves livelihood and livelihood is currently 2.5,

compared to a normal of 3, while the Mixed farming Livestock has the highest TLU at 9 a reduction from a normal of 14.5 TLU. No unusual deaths or disease incidences reported were during the period under review except increased cases of tsetse fly related diseases (Trypanosomiasis).

**Table 6. Tropical Livestock Unit**

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Mixed livestock/food	2	3	9	14
Mixed cash crop	0.1	1	2.5	3
Fishing/mangrove	0.1	1	2.5	3

### **Milk production, consumption and prices**

There was a reduction milk production across the livelihood zones as shown in table 7. Reduced production was attributed to livestock deaths caused by drought, reduction in livestock numbers due slaughter and commercial off take interventions. The reduced milk production and consumption impacted negatively on child nutrition. Milk prices increased in the

**Table 7: Milk availability**

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Mixed farming livestock food	3	14.05	2	14.5	30	20
Mixed farming cash crop	0.5	2	0.5	0.5	60	60
Fishing/mangrove	0.5	1.5	0.5	0.5	80	80

### **Livestock migration**

In-migration of livestock from Tana River and Garissa counties towards Lamu areas of Witu and Bahari was observed in July. Estimated population that had migrated were estimated were; cattle about 100, 000, sheep about 50,000, goats over 75, 000. Livelihood related conflicts were likely to arise among pastoralists in areas like Mokowe. Further in-migration is expected as the dry spell progresses in Garissa and Tana River counties.

### **Fisheries**

Fishing is an important source of income and food in the fishing / mangrove livelihood zone. The recent lifting of the ban on night fishing was beneficial to many fishermen and boosted food in the livelihood zone. Prices of fish remained stable at Ksh. 300 per kilogram.

## **3.2 Access**

### **3.2.1 Markets and Trade**

The main markets in the county are Mpeketoni, Witu, Mokowe, Hindi, Amu Faza, Patte, Kiunga and Kizingitini. Other alternative markets for livestock are Garsen in Tana River. There were no marked disruptions of markets in the county. The food commodities available in the market were maize, beans, green grams, cowpeas and rice. Food prices were higher especially due to diminishing stocks and poor roads which raised transportation costs. Livestock being traded in the markets were sheep, goats and cattle.

### Maize price

The prices of a kg of maize in June 2017 was 30 percent above the LTA and 22 percent above that 2016 price. Maize prices has been on an upward trend from January due to decrease in supplies. The prices are expected to reduce in the next two months after long rains harvests in August.

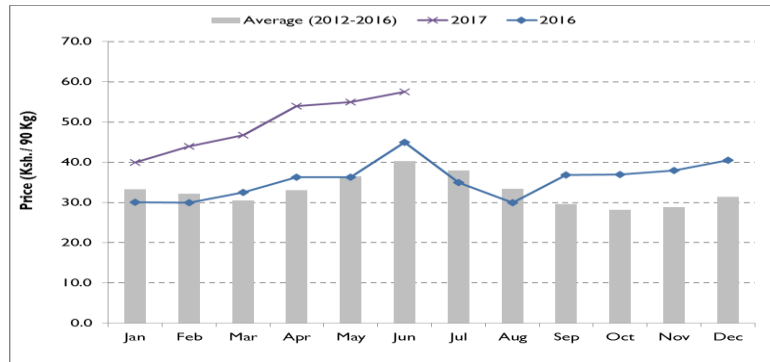


Figure 3 Maize price

### Goat Prices

Goat prices decreased from Ksh. 4,375 in May to Kshs 4,000 in June. The decrease in price of goats could be attributed to higher supply against market demand. Goat price were 29 percent higher than long term average and 20 percent higher than previous year. Goat prices are expected to increase in the coming months due to good body condition.

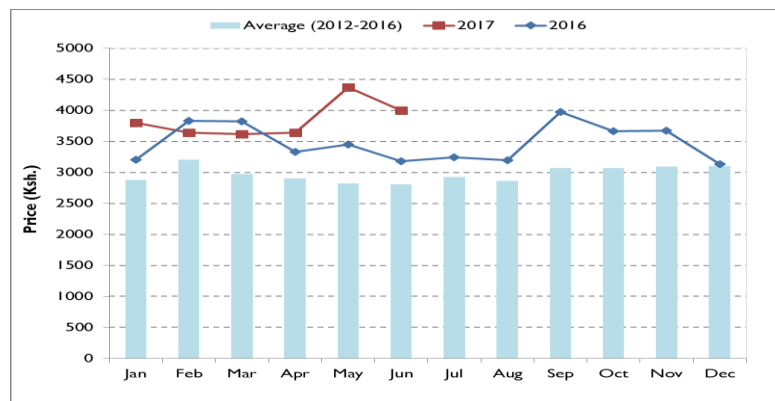


Figure 4 Goat prices

Agro pastoral and mixed farming/ zones recorded a price of Ksh. 3,000 each, fishing while mangrove harvesting zone, mixed farming/casual labour and agro pastoral/fishing livelihood zones recorded Kshs 5,000 each.

### 3.2.2 Terms of Trade

Sale of a goat could fetch about 70 kg of maize in June, 2017 which was within the LTA and equivalent to that for June, 2016. Increased maize prices against declining livestock prices for most part of 2017, contributed to the deterioration of ToT. The TOT is expected to improve after harvesting of the long rains maize crop which is expected to lead to a reduction in maize prices. The body condition of goat is also expected to improve after onset of the short rains.

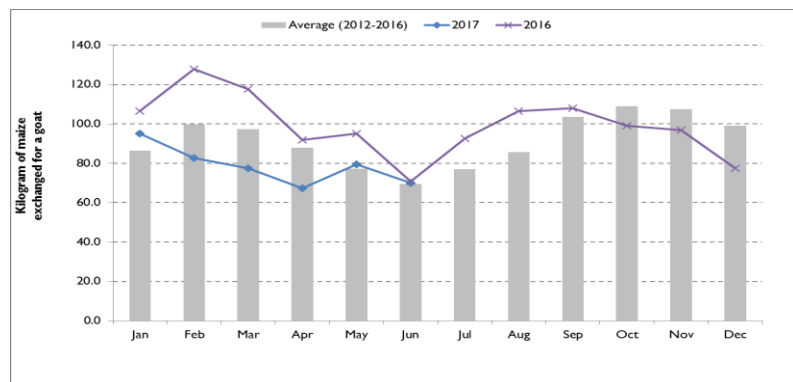


Figure 5: Terms of trade



### 3.2.3 Income sources

The main household income sources for the month of June are shown in Figure 6. On-farm labour opportunities, may be affected by the insecurity situation which resulted in farmers fleeing from their farms.

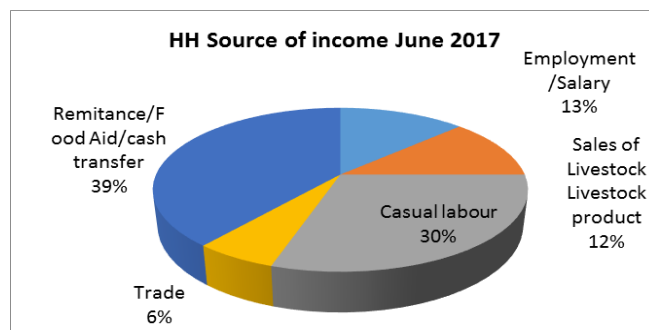


Figure 5 income sources

### 3.2.4 Water access and availability

#### Introduction

The major domestic water sources are shallow wells, water pans/dam, *djabias*, piped water, desalination plant, and rivers.

The recharge levels for open water sources

were 50-75 percent. Most areas in the county have adequate water except Mtanga-wanda where there was poor recharge of few available *Djabias*. Water was expected to last two to four months across the livelihood zones which is normal except in Mtanga-wanda area

Table 7 Water Sector

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/perso n/day)		Projected duration of water availability (months)
		Normal	Current	Normal	Current	Normal	Current	Normal	Current	
Mixed farming/ food/Cash crop/Livestoc k	lakes, shallow wells, rivers, boreholes piped water	0.1- 0.5	1-3	3-5	5-50	15-30	15-30	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	3-10	15-30	15-30	15-25	15-20	2-3 Month
Fishing and mangrove	shallow wells, boreholes	0.1- 0.5	3-15	5-10	10-50	10-30	10-60	15-25	5-15	1-2

#### Distance to water sources, Waiting time at the source and cost of water

The average household watering return distance was 1-3 Km in June same as May. This was due to increase in rainfall amount which led to increase in water table levels and recharge of open water sources. Household return water distances per livelihood zone were as follows: Agro pastoral -7.6Km, Fishing & Mangrove Harvesting 4.5Km, Mixed Farming zone was 1.8 Km and irrigated farming 3.6 km. The current waiting time at the water source is 20 to 60 minutes depending on the source of the water available.

### 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 Tchundwa where it costed up to Kshs 50.

### Water consumption

The current water consumption per person per day is 5-20 litres. However in areas such as Mtangawanda, Tchundwa and Bahamisi, water for domestic use is not available and this not normal at this period of the year, as the few water sources operational are saline.

### Sanitation and Hygiene

Open water sources are among facilities that are easy to contaminate in particular shallow wells. Communities are however advised to disinfect water sources such as shallow wells. Currently there are no known water sources that are contaminated in all the livelihood zones. Water treatment chemicals such as Chlorine Powder, Tablets, Aluminum and Pur are available to households. Some individuals owners of shallow wells collect chemicals from public health offices to treat their water, otherwise quite a number of households consume untreated water.

Latrine coverage is fairly high at 70 percent in the county. Awareness of hand washing at critical times is presently at over 90 percent of households across all livelihoods. However, there are still quite some number populations which don't use soap.

### 3.2.5 Food Consumption

Percentage of population with food consumption score was 17.3, 42.1 and 40.6 percent had poor, borderline and acceptable food consumption score respectively. The food consumption gap in the county could put the households at risk of malnutrition as most affected are mixed farming and livestock livelihoods zones. Minimal vegetables were consumed in the pastoral zone. Currently households are consuming two to three meals per day comprising 2-3 food groups which is below normal for this time of the year.

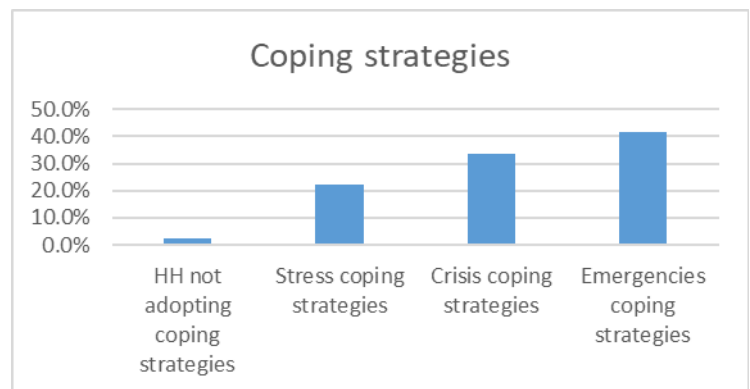


Figure 6 : Food consumption score

### 3.2.6 Coping strategy

Percentage of the population adopting emergency coping strategies stood at 41.5 percent, while those adopting crisis coping strategies were at 33.7percent. 22.4 percent were adopting stress coping strategies and 2.4 were not adopting. Most common consumption related coping strategies employed by households were; rely on less preferred, less expensive food, remittance and skip meals.

### 3.3 Utilization

#### 3.3.1 Nutritional status

##### Morbidity and mortality pattern

URTI, diarrhea and malaria were the prevalent diseases among under-fives and the general population in the year 2015 to 2017. Diarrhea cases are on the rise due to water severe water during drought period Jan-April 2017. Reduction in prevalence of diarrhea as well as malaria was attributed to nurse's strike in June 2017. Malaria is now under control due to various intervention earlier done-Free net distribution and massive campaigns on household spraying, drainage of areas where Mosquito's bred and free net distribution.

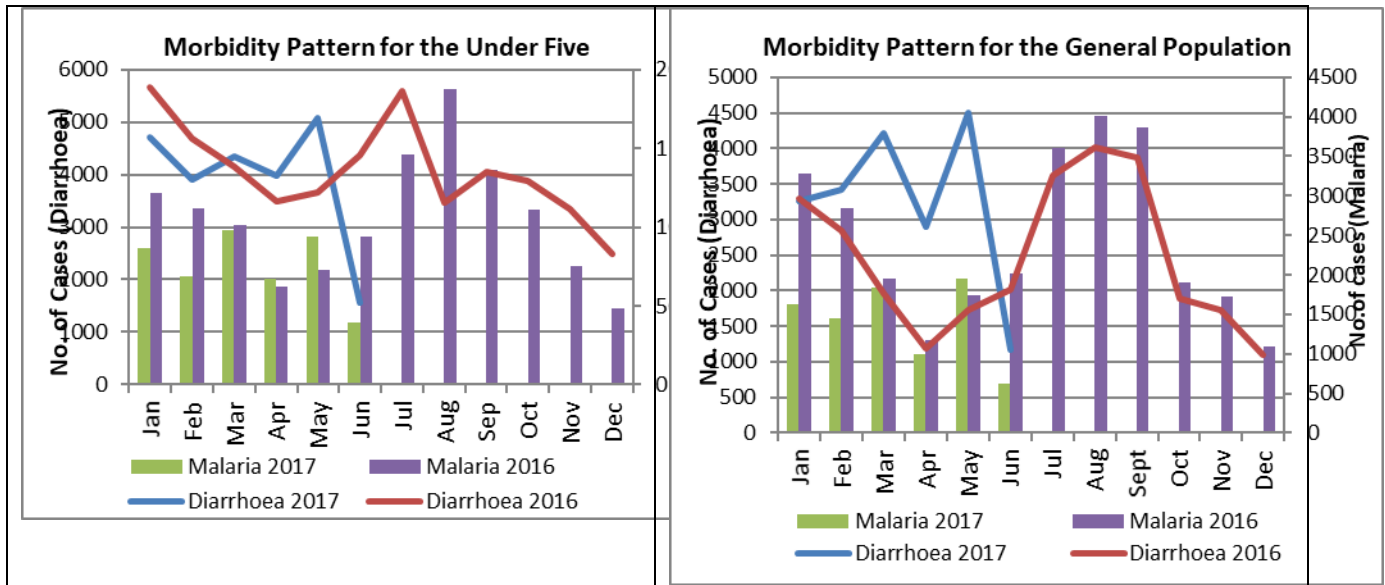


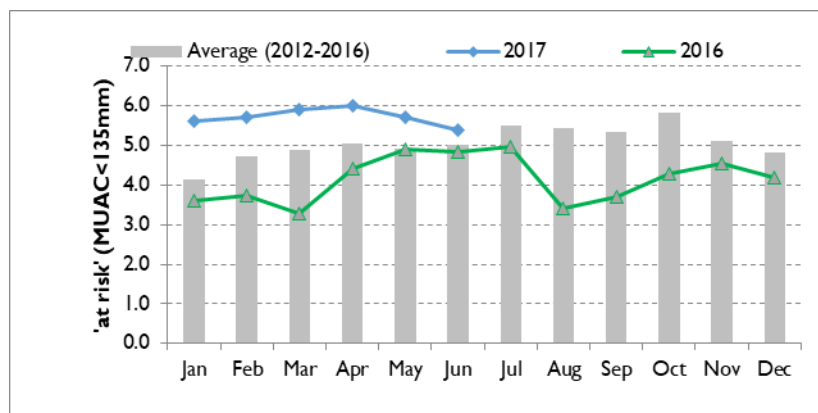
Figure 13: Morbidity trend for under fives

##### Immunization and Vitamin A supplementation

Immunization coverage is above the recommended 80 percent as per the national target. Vitamin A supplementation coverage remain below 80 percent national target this is due to that fact that children don't attend Child Welfare clinic after measles vaccination.

##### Nutrition status

Two to three meals are consumed per day across all livelihood zones. The percentage of children aged between 6 months and 5yrs in the County with mid upper arm circumference of less than 135 mm decreased from 5.7 percent in May to 5.4 percent in June. The decrease can be attributed to



increased interventions such as cash transfers programs and provision of CBS by Kenya Red Cross which have increased access to food hence decreasing the rate of malnutrition levels amongst the children. This figure of 5.4 percent MUAC for June has improved compared to the year 2012-2016 long term average of 5.5 percent.

Lamu County Integrated Smart Nutrition Survey results Feb 2017 indicated GAM 4.8percent, Stunting 20.3percent and Underweight 15.8percent.

### 3.4 Trends of key food security indicators

**Table 8: Food security trends in Lamu County**

Indicator	Short rains assessment, Feb 2016	Long rains assessment, July 2017
Percent of maize stocks held by households	2 percent of LTA	2 percent of LTA
Livestock body condition	Poor	Good
Water consumption (litres per person per day)	5 Litres / person/day	5-15 Litres / person/day
Price of maize (per kg)	40	57.5
Distance to grazing	5-15	1-2.4km
Terms of trade (pastoral zone)	80	70
Coping strategy index	22	18.13
Food consumption score	Poor-20, Borderline-46 Acceptable -35	Poor-17.3, Borderline-42.1 and Acceptable-40.6

### 3.5 Education

#### Access-(Enrolment)

There was an increase in enrolment in ECDE due to the feeding programme sponsored by the County government during this drought period. Primary schools had a decrease in enrolment due to drought and lack of feeding programme in most schools in the County. Similarly, there was an increase in secondary schools due to food for fees programme in most of the secondary schools.

#### Participation-(Attendance rate)

Attendance rate are comparatively high in ECDE centers and class 8. However, it was lower for girls compared to boys. Nationally, **transition** to form 1 stands at 85 percent while Lamu County stands at 83 percent. In ECDE centers more boys transit to class 1 than girls, which could be attributed to distance to the ECDE centers.

#### School meals programme

A total of 3,931 pupils in Lamu County are under the Home Grown School Feeding programme (HGSM). However, the school meals programme in the county is not fully operational due to delays in disbursement of funds to schools and only sixteen schools do benefit. The County Government is supporting the school feeding programme but only in a few areas of the county.

Improved school attendance was reported in schools where the school meals programme was running. Currently, about 10,000 pupils in 25 schools are in need of school feeding to sustain them in schools.

## **4. FOOD SECURITY PROGNOSIS**

### **4.1 Prognosis Assumptions**

Lamu County food security prognosis for the next six months is based on the following assumptions:

- The preliminary forecast for the short rains of 2017 are likely to be average to above average in cumulative amounts.
- Resource-based conflicts between crop farmers and livestock herders are likely to increase especially at the peak of the lean season in July/September.
- Market prices for essential staple food commodities are likely to increase as stocks are depleted and demand from markets increase, between July and September.
- Human-wildlife conflicts are likely to increase as wildlife likely invade crop fields for feeds due to degenerated rangeland resources.
- Pasture and browse will be depleted due the huge influx of livestock from neighboring counties

### **4.2 July to September outlook**

The July to September period will mainly be determined by the security situation. Should the security situation remain stable, food stocks will be fully replenished due to expected above average long rains harvest and open supply routes. This will result in improved household access and nutrition status. Good water recharge will see water being adequate for this period. Pasture is expected to last for at least three months but depletion rate will be high. Because of the huge influx of livestock from neighboring counties. There are high risk of livelihood conflicts between crop and livestock farmers. Increased acreage and yields will improve utilization outcomes such as MUAC due to improved food stocks.

However should the security situation deteriorate further, farms will be abandoned and crops either harvested as green maize or left and destroyed by wildlife, food stock will not be replenished properly with market supply routes being distorted. This is likely to escalate the food security situation in the region. There is a high likelihood of more households being displaced from their homestead, necessitating a crisis hence need for food and non-food interventions.

### **4.3 October to December outlook**

The October to December 2017 period will also likely be dependent on the security situation in the County. While the short rains are forecasted to be average to above average, their positive impacts might be hindered by insecurity related factors. With stability, the forecasted good rains will likely result in improvements in food and nutrition security as casual labor opportunities and early maturing crops become available. Stable water availability due to further recharge will see water being adequate for the period extending to December. However, if the short rains perform dismally, likelihood of significant deterioration in household food security during this period remains real.

## 5.0 CONCLUSION AND INTERVENTIONS

### 5.1 Conclusion

In conclusion, the food availability at household level is low, with access from own production and markets being hindered by security situation in some areas. Increased and above average food prices against low household incomes are also constraining access to food. Access gaps are being bridged by humanitarian aid. Utilization is fairly good, while stability is hindered by the security situation.

#### 5.1.1 Phase classification

Lamu County is in the Stressed (IPC Phase 3) food insecurity phase classification. These are populations to watch especially those currently under donor relief, cash transfer and those displaced by insecurity in areas of Maleli, Boramoyo, Pandanguo, and Jima

#### 5.1.2 Summary of the findings

In Lamu County, 17.3 percent of the population have a poor food consumption score while 41 percent are adopting emergency coping strategies an increase from, showing increasing strain to obtain food. These efforts to provide food have reduced the MUAC for under-fives' at 5.4 percent from a previous of 5.7 percent.

#### 5.1.3 Sub-county ranking

Table 11. Sub County food security ranking (worst to best)

Sub County	Food security rank (1-10)	Main food security threat (if any)
Lamu West	1	<ul style="list-style-type: none"><li>• Low food stock levels at HH</li><li>• Huge influx of Livestock In-migration</li><li>• Insecurity</li><li>• Reduced purchasing power</li><li>• Human, Wild life conflict</li><li>• Conflict between Crop farmers and Livestock farmers</li><li>• Loss of income from tourism</li><li>• Poor infrastructure</li></ul>
Lamu East	2	<ul style="list-style-type: none"><li>• Low food stock levels at HH</li><li>• Water stress- salinity, lack at sources and high cost</li><li>• Insecurity</li><li>• Inadequate water recharge at sources</li><li>• Reduced purchasing power</li><li>• Poor infrastructure and high cost of Transport</li></ul>

## 5.2 Ongoing Intervention

### 5.2.1 Food interventions

- Relief Food was distributed by the Kenya Red Cross/ICRC to 930 households each receiving 25kg -Rice,2.5kg-Sugar,12kg-Beans,5litres-Oil in Boni areas of Bargoni, Kiunga, Pandanguo, Milimani and Kiangwe during the Month June.

### 5.2.2 Non-food interventions

- Cash Transfer by Kenya Red Cross to 6,070 households in Faza, Witu, Basuba and Kiunga ward for the Month of June.
- Cash transfer by the Social Development department to 1600 households and 120 households for older persons and people with severe disabilities respectively.
- The following amounts are to be received per household as follows: Faza and Ndau- Kshs 5,700 per Household, Kiwayu-Kshs 5,000 per households and in the mainland Kshs 4,800 per household.

## 6.0 ANNEXES

### 6.1 Ongoing Interventions

Immediate On-going Interventions							
Sub County/ Ward	Intervention	Location	No. of beneficiaries	Implementers	Cost	Time Frame	Implementation Status (% of completion)
<b>Agriculture Sector</b>							
Provision of certified maize seeds(18tons )	All wards in Lamu East sub-county	2000 farmers	CGL/agriculture & Irrigation	Improved crop productivity and ultimate food security	10M	April May 2017	Provision of certified maize seeds(18tons)
Provision of Nerica seed -1.5tons	All wards Lamu east and West	75 Farmers	CGL/agriculture & Irrigation	Improved crop productivity and ultimate food security	2.96M	April May 2017	Provision of Nerica seed -1.5tons
Provision of planting Fertilizer-DAP and NPK(23:23:0) 900 bags and 1120 bags of 50kg each respectively.	All wards in Lamu west	2020 Farmers	CGL/agriculture & Irrigation	Improved crop productivity and ultimate food security	2.15M	End of June 2017	Provision of planting Fertilizer-DAP and NPK(23:23:0) 900 bags and 1120 bags of 50kg each respectively.
Construction grain storage structures	2 wards Witu and Faza	450 farmers	CGL/agriculture & Irrigation	Improve farmer income	8.9M	End of June 2017	Construction grain storage structures

Construction of water harvesting structures and establishment of small scale irrigation systems	3 wards -Bahari -Mkomani -Hindi	40 farmers	- CGL/agriculture & Irrigation National government	Improve farmers food security and promote income	11.26M	End of June 2017	Construction of water harvesting structures and establishment of small scale irrigation systems
Procurement of irrigation materials(pump and fittings )	Witu ward	200 farmers	CGL/agriculture & irrigation	Enhance land productivity and farms' income	-	-	Procurement of irrigation materials(pump and fittings )
Provision of tractor hire service maintenance cost.	All wards	2000 farmers	CGL/Agriculture & Irrigation	Improve food production	800,000	End of June 2017	Provision of tractor hire service maintenance cost.
Capacity building on cashew nut management	County wide	50 Farmers	Asdsp /Agriculture & Irrigation	Enhanced on-farm incomes	500,000	By end of June 2017	Capacity building on cashew nut management
Procurement of fiber-boat to produce for Barani farmers.	Faza (Barani)	200 farmers	CGL/Agriculture & Irrigation	Improve farmer income	4.5M	By end of June 2017	Procurement of fiber-boat to produce for Barani farmers.
Establishment of fruit process plant	Hongwe ward	All Lamu county fruit growers	CGL/Agriculture & Irrigation	Promote value addition and farmer income	10M	By end of June 2018	Establishment of fruit process plant
<b>Water Sector</b>							
Faza	Installation of desalination plant	Siyu	1286	County Gov't of Lamu	Improve water availability	12M	
Kiunga	Installation of desalination plant	Kiunga	2348	County Gov't of Lamu	Improve water availability	20M	
Hindi	Distribution and installation of 10,000 litres plastic tanks	2no Institutions and 3no water trucking sites	1000	Coast Water Services Board	To be confirmed	2months	60%



Mpeketoni	Distribution and installation of 10,000 litres plastic tanks	1no Institution and 4no water trucking sites	1000	Coast Water Services Board	To be confirmed	2months	50%
Witu	Distribution and installation of 10,000 litres plastic tanks	7institutions and 1 water trucking site	2000	Coast Water Services Board	To be confirmed	2months	50%
Amu	Distribution and installation of 10,000 litres plastic tanks	2institutions	300	Coast Water Services Board	To be confirmed	2months	50%
<b>Medium and Long Term On-going Interventions</b>							
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
Mpeketoni	Rehabilitation of LAKWA tank and construction of 6km Kibaoni-Mkunumbi 150mm pipeline.	Mpeketoni	60% of Mpeketoni population	Coast Water Services Board	20m	6months	Contract awarded
Witu	Drilling and equipping of 3No boreholes to increase production and construction of a 7km pipeline extension to Maisha Masha.	Witu	85% population of Witu	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	Contract awarded
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	Contract awarded
LAPSSET	Installation of a 3000m <sup>3</sup> /day desalination plant	LAPSSET	Population of LAPSSET, Kenya Navy ,Mokowe and its environs	Coast Water Services Board	350m	2years	Evaluation stage
<b>Health and Nutrition</b>							
Lamu East &	Vitamin A Supplementation	ALL	19,888	MOH	Improved immunity hence less frequencies of illnesses resulting in	-	

Lamu West					having more hours to work & improve on household food security.		July-Dec 2017
	Management of Acute Malnutrition (IMAM)	Amu, Mpeketoni, Faza, Witu		MOH, NHP/USAID, REDCROSS			July-Dec 2017
	MIYCN Interventions	All facilities		MOH			

## 6.2 Recommended Interventions

### 6.2.1 Food interventions

**Table 12: Proposed general population in need of food assistance:**

Sub County	Population	Poverty level	Poor population	Approx.% in need of food assistance
Lamu West	104,365	34 percent	35,484	34-45
Lamu East	23,778	25 percent	5,945	25-36
Total	128,143	59	41,429	25-46

**Table 13: Proposed Pupils in need of food assistance**

Sub-County	Intervention	Location	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost	Time Frame
<b>Education Sector</b>							
LAMU WEST	Meal Programme	Witu Mpeketoni Amu	8514	MOE & NDMA	Improvement in Education indicators	10,000,000	January to December
LAMU EAST	Meal Programme	Kiunga Faza	1187	MOE & NDMA	Improvement in Education indicators	2,500,000	January to December

### 6.3 Non-food interventions

#### Recommended Interventions

Division	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
<b>Agriculture sector</b>							
Lamu West	Trainings on high value crops agronomy	County wide	1500	Lamu County government(Min of Agriculture and irrigation) -Community	Technical officers, Training materials, Funds	Technical personnel	End of June 2017
Lamu East	Provision of planting materials for Traditional high value crops	County wide	300	Lamu County government(Min of Agriculture and irrigation) -Community	Technical officers, Planting materials, Funds	Technical personnel	End of June 2017
Lamu county	Fruit process plant	County wide	3000 horticultural farmers	Lamu County government(Min of Agriculture and irrigation) -Community	Technical personnel, funds, raw-materials	Raw-materials Land resource Technical personnel	End of June 2017
Lamu county	Expansion of small scale irrigation	County wide	500 farmers	Lamu County government(Min of Agriculture and irrigation) -Community	Technical personnel, funds, raw-materials	Land resource Technical personnel	End of June 2017
Lamu county	Expansion of grain storage structure	County wide	1200 farmers	Lamu County government(Min of Agriculture and irrigation) -Community	Technical personnel, funds, raw-materials	and resource Technical personnel	End of June 2017
<b>Water Sector</b>							

Faza	Expansion of Vumbe water supply	Faza, Tchundwa and Bwajumwali	12,000	Coastal water service Board	60M	60M	1 Year
Faza	Contstruction and repair of Djabias(15) for water catchment	Tchnudwa,Mtangawanda,Patt e,Siyu and Bahamisi	7,358	GOK,NDMA,Cou nty Govcernment	15m		1 year
Kiung a	Drilling of Boreholes construction	Basuba and Kiunga	8,000	Coastal water service Board	40M	40M	1year
Lamu Count y	Water to still be sourced from Tana River for a permanent water	Lamu County	Lamu county	GOK, County Gov't. Partners	100M	Nil	2-5 years
<b>Health and Nutrition</b>							
All Sub counti es	Scale up screening of malnutrition in all hot spot areas	19,888	MOH & Partner	Transport, Lunches	H/Worke rs	All Sub counties	Scale up screening of malnutrition in all hot spot areas
<b>Medium and Long term Recommended Interventions</b>							
All Sub counti es	Scale up IMAM sites	3,978	MOH	Lunch, Transport Reporting tools	H/Worke rs		Scale up IMAM sites
	Scale up Vitamin A Supplementat	19,988	MOH/MOE/UNI CEF	Transport, Lunches	Health worker, Chew		Scale up Vitamin A Supplementat
<b>LIVESTOCK SECTOR</b>							
<b>MEDIUM</b>							
Lamu	Lamu west	Pasture cultivation/hay making	4	RPLRP	Livestoc k , increase	1200000	3 months
	Lamu East	Pasture cultivation/ hay making	4	RPLRP	Livestoc k , increase	1200000	3 months
Lamu	Lamu west/East	Desalting of water pans	3000	Any donor	Water for livestock	20,000,000	4 months

Lamu	Lamu west	Commercial off take	1500	NDMA	Fatten livestock	37,000,000	5 months
Lamu	Lamu west/east	Vaccination and treatment campaign	30,000 cattle	Donors	Livestock health	10,000,000	4 months
Lamu	Lamu west/east	Tsetse control	30,000 cattle	Donors	Livestock health	10,000,000	4 months
<b>MEDIUM AND LONG TERM</b>							
Lamu	Lamu west	Nagele Livestock market	Livestock keepers/ traders	County Government	trade	18,000,000	1 year

	Recommendations	Proposed interventions	Available resources	Gaps
<b>Peace and Security Sector</b>				
Lamu	Enhance peaceful co-existence among communities in Lamu County	Carrying out peace dialogues with communities in the whole county (2 sub counties)	Human resource	8 peace meetings with 30 community leaders in 8 hot spot areas(Kshs. 800,000)
		Conduct peace building meetings in 2 sub-counties	Human Resources	Funds for conducting two meetings@(Kshs 130,000)
		10 Sensitization meeting on natural resource management	Human resources	Resource for conducting 10 meetings (Kshs 560,000.00)
Inter-County	Inter-County peace meeting	Meetings between Lamu Tana River and Garissa Counties	Personnel's	Funds to conduct three meetings @ Kshs 580,000.00
Lamu	Enhance Conflict resolution mechanisms	Facilitation of conflict Rapid response teams on 10 different occasions	Human Resources	Rapid Response facilitation on 10 occasions @ksh380,000
	<b>Total</b>			<b>2,450,000/=</b>