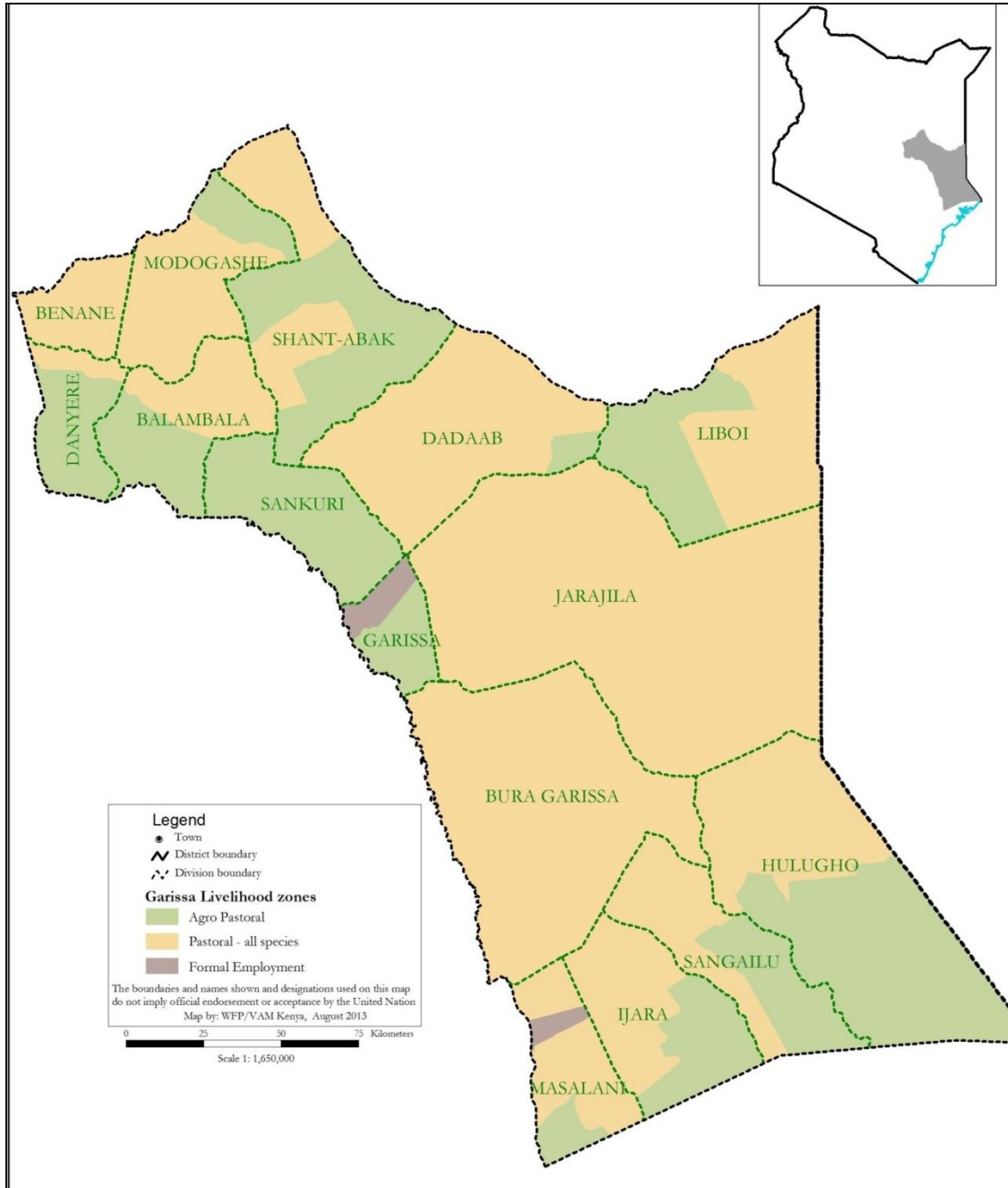


**GARISSA COUNTY  
2017 LONG RAINS FOOD SECURITY ASSESSMENT REPORT**



**A Joint Report by the Kenya Food Security Steering Group (KFSSG)<sup>1</sup> & Technical County Steering Group, Garissa County**

**July, 2017**

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## **Executive Summary**

The food security phase classification for the county is Stressed (IPC Phase 2) with localized areas in pastoral livelihood zone like Balambala, Lagdera and some parts of Hulugho Sub-counties being in Crisis (IPC Phase 3). The county has experienced three consecutive poor seasons in which it received near-normal to below-normal rainfall. With regard to food consumption, 88.5, 9.8 and 1.7 percent had acceptable, borderline and poor food consumption scores respectively (SMART Survey, 2017). The mean coping strategy index was 13.0, with households employing stress, crisis and emergency coping strategies as at May 2017 being 59.2, 11.7 and 27.7 percent respectively. Nutrition status was critical with global acute malnutrition (GAM) at 16.3 percent. The crude mortality rate (CMR) as at July, 2017 was 0.854 per 10,000 persons per day while the under-five mortality rate was 0.239 per 1000 live births.

Food availability was minimal across the livelihoods as there were no stocks held and households are relying on markets for food. Livestock body condition was fair to poor for all livestock species and resulted in reduced livestock productivity. Trekking distances for livestock in search of water and pasture has increased and livestock migrations reported reducing milk availability at household level. Crop production is projected to be below-normal for the main food-crops and livestock productivity has been reduced as evidenced by low milk availability and consumption.

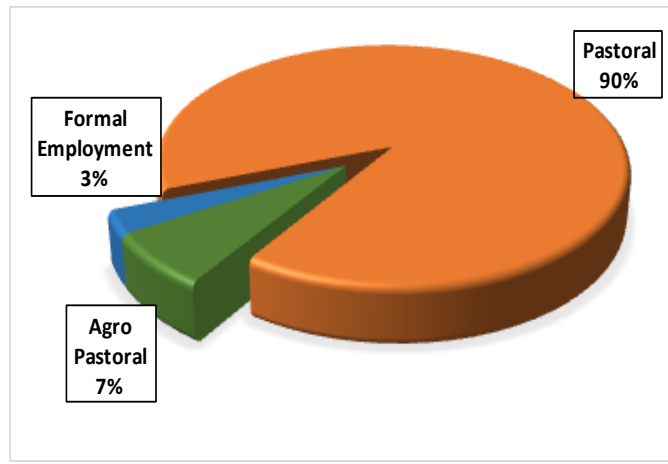
In terms of food access, markets were operating normally with supplies of food items being normal although traded volumes for livestock were below-normal. High food prices coupled with low livestock prices resulted in poor terms of trade and reduced purchasing power. Water is available and accessible in the agro-pastoral livelihood zone and consumption has remained the same at 30 litres per person per day with no change in the distances to water sources. In the pastoral livelihood zones, water availability and accessibility was low as majority of the water pans are dry although 76 percent of the boreholes are functional. Distance to water sources have increased and water consumption reduced by 50 percent of the normal to 20 litres.

Utilization is hindered by the increase in morbidity incidences with an ongoing outbreak of cholera in Fafi Sub-county. Poor hygiene and sanitation practices in which 6.1 percent of the population is treating water coupled with poor hygienic practices as only 23.4 percent practice hand washing during the four critical times further exacerbates the issue of utilization. The key drivers of food insecurity were below-normal performance of the rains, high food prices, cholera out-break and insecurity.

## 1. INTRODUCTION

### 1.1 County background

Garissa County borders Wajir County to the North, Republic of Somalia to the East, Lamu to the South, Tana River County to the South-west and Isiolo County to the North-west. The county covers an area of 44,031.7 square kilometers with an estimated population of 431,950 persons (Kenya National Bureau of Statistics 2017 Projections). It has seven sub-counties namely: Lagdera, Balambala, Dadaab, Fafi, Hulugho, Ijara and Township and 30 administrative wards. There are three main livelihoods (Figure 1).



**Figure 1: Proportion of population by livelihood**

### 1.2 Objectives and approach

The overall aim of the long rains assessment was to develop an objective, evidence-based and transparent food security situation analysis following the March-April-May(MAM) rains season of 2017 taking into account the cumulative effect of previous seasons and to provide recommendations for possible response options based on the situation analysis. The exercise was done from 3<sup>rd</sup> to 14<sup>th</sup> July, 2017. Secondary data collection was conducted by the use of checklists and collated, analyzed and triangulated with primary data which was collected from the community through transect drives, focus group discussions and key informant interviews. Sampling of sites for community interviews was done to ensure representation of the main livelihoods in the county. Analysis was done at livelihood level using the Integrated food security Phase Classification (IPC) protocols. The team was multi-sectoral comprising of the technical county steering group from the departments of agriculture, livestock, water, education, health and nutrition.

## 2. DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

### 2.1 Rainfall Performance

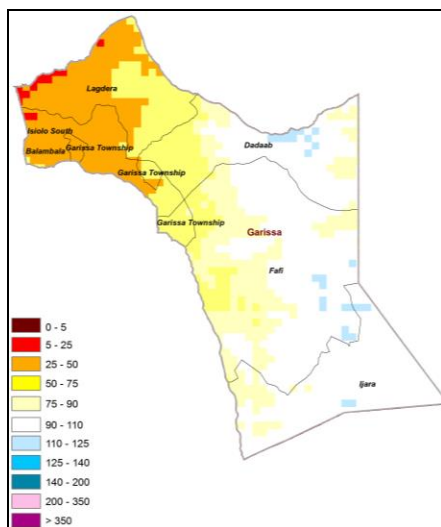


Figure 1: Rainfall performance

Garissa County experiences bimodal rainfall and is short-rains dependent. The onset of 2017 long rains was delayed across the livelihood zones and was in the first decade of April compared to the third decade of March normally. The eastern parts of the county including Dadaab, Fafi and Ijara sub-county received 90–110 percent of normal rains; the central part received 50–75 percent of normal rains while the north western parts of Lagdera and Balambala received 25–50 percent of normal. Temporal distribution was poor across the livelihood zones characterized by dry periods experienced in the third decade of April and second decade of May. Spatial distribution was uneven (Figure 2). Cessation was normal in the first decade of June.

### 2.2 Insecurity/Conflict

There were cases of insecurity reported which led to a closure of four schools in Fafi sub-county for two weeks in Term II of 2017. Insecurity was also reported in areas of Hulugho, Ijara, Masalani as a result of which there currently is a curfew for three months.

### 2.3 Other shocks and hazards

Currently, high food prices and declining terms of trade have affected accessibility to food for both livelihood zones. Incidences of cholera reported in the county are a hindrance to utilization.

## 3. IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

### 3.1 Availability

Food availability in the county is largely from livestock production in terms of milk and meat, and are supplemented by small-scale subsistence crop production within agro-pastoral zone. Market supplies play a key role in both pastoral and agro-pastoral livelihood zones although those in the latter occasionally rely on stocks held. Milk production declined to 0.5 – 0.8 litres per day compared to a normal of 1–1.5 litres per day. Similarly, projected production of the major food crops declined and as a response to the projected decline in food production, maize stocks held by other players increased. Food availability is minimal across the livelihoods.

#### 3.1.1 Crop Production

The three major food crops grown in the county were maize, green grams and cowpeas. Horticultural crops grown include bananas, mangoes, watermelons and paw paws, while vegetables include tomatoes, onions, capsicum and kales. Horticultural crops are largely produced on small-scale irrigation along River Tana while cereals are produced under rain-fed agriculture along the seasonal laggas. Over 50 percent of households within agro-pastoral areas

depend on crop production for food and income therefore reduced production would influence food availability.

### Rain-fed crop production

During the long rains season, the area under maize and green grams for each of the crops was 85 percent of the LTA, while area under cowpeas increased by 14 percent of the LTA. However, projected production of maize, green grams and cowpeas is expected to decline by five, 28 and 47 percent of the LTA respectively (Table 1). Decline in acreage was attributed to delay in planting while decline in projected production of the three crops was attributed to the poor performance of the long rains and crop damages by wildlife. Slight increase in acreage under cow peas was attributed to enhanced promotion campaigns through collaboration of the County government, National Drought Management Authority (NDMA) and World Food Programme (WFP) through food for asset (FFA) programme. Declined production in these food crops mainly within agro-pastoral areas further compromised the households' food availability and dietary diversity.

**Table 1: Rain-fed crop production in Garissa County**

Crop	Area planted during the 2017 long rains season (Ha)	Long Term Average area planted during the long rains season (Ha)	2017 long rains season production (90 Kilogrammes bags) Actual	Long Term Average production during the long rains season(90 Kilogrammes bags) Actual
Maize	102	120	1750	2450
Green grams	70	82	455	855
Cow peas	78	68	345	365

### Irrigated crop production

Major crops grown under irrigation mainly along River Tana are fruits such as bananas, mangoes, melons and vegetables including tomatoes, chilies and kales. The area cultivated under mangoes and tomatoes increased by 15 percent of the short-term average (STA), while that of watermelon and bananas increased by eight and 31 percent of STA respectively. Production increased by 17, 23 and 24 percent in bananas, mangoes and water melons respectively (Table 2). Increase in both acreage and production for these crops was attributed to stake-holder participation in support to irrigation infrastructure in the county, support to farmers with certified seeds, chemicals and other farm inputs, and farmers' shift from food crops to horticultural crops that have quick returns. Notably, there was decline in both acreage and production of tomatoes which was attributed to crop pests such as red spider mites. Other reasons included high incidences of diseases such as bacterial wilt, blights and destruction of the crop by wildlife such as monkeys. The significant increase in production of horticultural crops mainly for markets slightly stabilized household's purchasing power thereby improving food access and dietary diversity.

**Table 2: Irrigated crop production in Garissa County**

Crop	Area planted during the 2017 long rains season (Ha)	Short Term Average area planted during the long rains season (Ha)	2017 long rains season production (MTs Projected/ Actual)	Short Term Average production during the long rains season(MTs)
Bananas	875	670	10205 MT	8750 MT
Mangoes	550	480	8425MT(Actual)	6870 MT
Watermelons	245	225	5600 MT	4500 MT

### Stocks of commodities held in the County

Currently, households in the agro–pastoral livelihood zone held no stocks compared to the same time during a normal season. However, there was an increase in stocks held by other market players by 28, 81 and 65 percent for maize, rice and sorghum respectively. There were 3000 bags of rice being held by the National Cereals and Produce Board (NCPB) (Table 3). Significant increase in stocks held traders by 81 percent of the LTA was attributed to higher prices of alternative maize flour; acceptability of rice as the staple food and uninterrupted market operations at the source markets such as Thika. Maize stocks held increased by 28 percent of the LTA and the stocks are largely held by relief agencies like Kenya Red Cross and Woman Kind as part of response following the short– rains assessment. In places where maize production was realized through irrigation, much of it was sold green and as such households in both agro–pastoral and pastoral livelihood zones depended on markets as a source of food which was not normal at this time of the year.

**Table 3: Food stocks held in Garissa County**

Commodity	Period	Households	Traders	Millers	NCPB	Total
Maize (90kgs bag)	Current	0	400	655	0	1,055
	LTA	120	1,200	400	0	1,720
Rice (50 kg bags)	Current	150	25,450	0	3,000	28,600
	LTA	250	16,050	0	0	16,300
Sorghum (90 Kg)	Current	15	120	0	0	135
	LTA	15	85	0	0	100

#### 3.1.2 Livestock production

Livestock keeping is the main source of income for pastoral communities in Garissa County. The main livestock kept are goats, sheep, cattle and camel. Livestock contributes 15 and 72 percent to cash income in the agro–pastoral and pastoral–all species livelihood zones respectively. The main livestock products are meat, milk and hides and skins.

#### Pasture and browse

Pasture condition in the pastoral livelihood was very poor and depleted in most areas such Danyere, Saka, Benane, Modogashe, Saka, Maalimin, Baraki and Gurufa to the North in Lagdera and Balambala Sub–counties as compared to good conditions experienced normally. However, to the southern stretch along river Tana (from Masalani to Abalatiro and Kotile), pasture condition was in relatively fair condition and is expected to last for one month against the normal 2–3months. Depletion of pasture in the pastoral zones was attributed to non- regeneration for three consecutive seasons owing to poor performance of rainfall. Lack of pasture has led to the abnormal and massive migration of all species of livestock to Daadab, Yumbis and Fafi while others have crossed over to Somalia. Browse in the agro–pastoral areas was fair and in the pastoral areas it was below normal. Where browse was available it was expected to last for less than a month in both the livelihood zones.

Average trekking distance to grazing areas increased and was 10–12, 15–18 km and above 20–25kms compared to 7–8, 10–12 and 15 km for small stocks, cattle and camels respectively. However, the average distances were much higher at 35-40km-in northern pasture corridors in Lagdera, northern parts of Balambala and Central Sub–counties.

#### Livestock body condition

Body condition was poor for cattle, fair for goats and sheep while good to fair for camel across the livelihoods and was below–normal (Table 4). Body conditions for all the livestock species

are projected to deteriorate further as the drought continues leading to depletion of browse and pasture, water scarcity and continued increase in return trekking distances from pasture to water. Overall, poor livestock body conditions attracted lower livestock market prices which further reduced households' purchasing power thus reducing food access.

**Table 4: Livestock body condition**

Livelihood zone	Cattle		Sheep		Goats		Camel	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	Poor-fair	Fair to good	poor-fair	Fair-good	Poor – Fair	Good	Good - Fair	Good
Agro pastoral	Poor	Good	Fair	fair-good	Fair	Good	Good-fair	Good

### Milk availability and consumption

There was minimal milk production at household level in both the livelihood zones. Areas in Northern pastoral zone such as Gurufa, Maalimin, and Benane reported zero milk production because all livestock had migrated. The other remaining pastoral areas produced of 0.5–0.8 liters per day, compared to seasonal average of 1.5–1 litres per day during normal times of the year (Table 5). Milk production in the agro– pastoral zones average at 0.8-1litre per day compared to a normal of 2-3 litres per household. The decline in milk production was attributed to lack of pasture and browse and below–normal kidding, lambing and calving rates. Where available, milk consumption at household level was 0.5 litres compared to 1–2 litres in both pastoral and agro pastoral livelihood zones respectively during normal times. Price of one litre of milk ranged from Ksh. 85–100 in both the livelihood zones compared to normal price of Ksh. 25–35 and Ksh. 20–30 in pastoral and agro–pastoral livelihoods respectively (Table 5). Increase in prices of milk across all the livelihood zones was attributed to low livestock productivity and high transportation costs of milk from grazing areas where livestock migrated. Decreased milk production at the household level and increased milk prices limited food availability, consumption and dietary diversity in both pastoral and agro–pastoral livelihood zones.

**Table 5: Milk availability and consumption**

Livelihood zone	Milk production L/HH		Milk consumption L/HH		Milk prices (Ksh./litre)	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	0.5-1	1-1.5	0.5	1	85-100	25-35
Agro–pastoral	0.8-1	2-3	0.5	2	85-100	20-30

### Birth rates

Below–normal birth rates were recorded for all livestock species in both pastoral and agro – pastoral livelihood zones (Table 6). Higher lambing rates were recorded than kidding which are not normal compared to previous livestock birth trends in the county.

**Table 6: Birth rate**

Livelihood zone	Lambing rate %		Kidding rate %		Calving rate%	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	12%	22-25%	8%	22-25%	6%	10%
Agro pastoral	12%	22-25%	8%	22-25%	6%	10%



### Tropical Livestock Units (TLUs)

There was a decline in TLUs across both livelihood zones (Table 7). The decline in was attributed to, below-normal calving rates during the month of September –December 2016, below-normal kidding and lambing rates during the month of May–June 2017, 1-2 percent and 2-3 percent livestock mortalities during March–May 2017 drought (SRA report 2017) and the slaughter offtake carried out in the county by various partners during the period of April–June 2017.

**Table 7: Tropical Livestock Units (TLUs)**

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	3-5	5-6	6-8	8-10
Agro-pastoral	3-4	4-5	5-6	7

### Water for livestock

The major water sources for livestock in the county were river Tana, bore holes, and natural springs in Benane. Normally, at similar times water pans, shallow wells and dams are the most preferred sources of water for livestock in all the livelihood zones. About 80 percent of the surface water sources had dried up, while a few such as Alikasadhe , Sangailu and Hulugho were holding water levels of less than 20 percent and were projected have dried up in the next 2 – 3 weeks. The average trekking distances to grazing areas ranged between 10–12, 15–18 km and above 20–25kms compared to 7–8, 10–12 and 15 km for small stocks, cattle and camels respectively in both the livelihood zones (Table 8). However, these distances were much higher (35–40km) in northern pasture corridors in Lagdera, northern parts of Balambala and Central Sub-counties.

**Table 8: Water for livestock**

Livelihood zone	Water sources		Average return distances ( km)		Expected duration to last ( months )	
	Current	Normal	Current	Normal	Current	Normal
Pastoral	Bore holes Water trucking	-Water pans -shallow wells -Dams	25-30	10-15	< one month	2-3months
Agro-pastoral	River Tana	-Pans water -Shallow wells	10-15	1-5	Permanent	3-4 months

### Livestock diseases and mortality

There was no major livestock disease outbreaks reported and confirmed across all the sub-counties. However, endemic diseases reported included Contagious Caprine Pleuro-Pneumonia (CCPP), in Balambala and Lagdera, Peste des Petis Ruminantes (PPR) and Sheep and Goat Pox (SGP) widespread in the county but the worst-affected included Hulugho, Ijara and Fafi Sub-counties respectively. High incidences of ecto- and endo- parasites such as ticks, fleas and worms respectively were reported across the county. Vaccinations against PPR targeting 80,000 livestock and SGP targeting 120,000 livestock were being done by the county Government of Garissa in partnership with Food and Agriculture Organization (FAO) and Regional Pastoral Livelihoods Resilience Programme (RPLRP). Currently, livestock mortalities in all species was above- normal ranges (0.5 –1.5 percent compared to normal range of 0.1 –1.0 percent). Livestock mortality rates are expected to worsen in the next 1–2 months as pasture, browse, over-concentration and water scarcity increases in both the livelihood zones (Table 9). Therefore

livestock diseases and mortality affected households' purchasing power and food access in both the livelihood zones.

**Table 9: Mortality for all livestock species**

Livelihood zone	Cattle		Sheep		Goats		Camel	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	1.2%	0.7-1%	1.5%	1%	1.0%	0.5 %	0.4%	0.3%
Agro-pastoral	0.8 %	0.8%	1 %	0.8%	0.6 %	0.4%	0.3 %	0.1%

### **Livestock Migration**

Livestock movements within the county and migrations out of the county were reported. These migrations were majorly driven by search for pasture and water and further compounded by security operations and were earlier than would be expected at such a time of the year. Internally, livestock concentrated around Daadab, Damajaley, Maleley, Kulan, Fafi, Dertu and Liboi in the North, and around Hulugho and Boni forest to the South. Livestock from Lagdera, Balambala and Central sub-counties were reported to have migrated to Somalia. An estimated 70 % of the livestock (all species) had migrated out of their normal grazing zones. Although there was continued pressure on the little available pasture, browse and water, minimal resource-based conflicts were reported. Food availability at household was directly affected by the livestock migrations as access to milk was limited with the situation was projected to deteriorate further as the drought situation continues.

### **3.2 Access**

Major markets in the county were functioning normally. However, a few remote markets such as Daadab were hindered by insecurity. Prices of main food commodities and livestock products were above LTA while those of livestock (all species) fluctuated below the LTA. These variations were attributed to poor crop performance, poor livestock body conditions, reduced traders in key livestock markets and insecurity/security operation in some parts such as Daadab.

#### **3.2.1 Markets**

The county's main markets are Garissa, Balambala, Modogashe, Daadab and Daghaley. The main livestock traded in the markets includes sheep, goat, cattle and camels. There was a reduction in the traded volumes attributed to migration of livestock, poor livestock body condition, few buyers in most local livestock markets and low demand in the terminal markets. The major food commodities traded in the markets included maize, maize floor, rice, beans sugar and milk. Apart from maize and maize-flour, the main markets were well-provisioned with other food commodities. Households in both pastoral and agro-pastoral zones depended on markets for food at a time of reduced income from livestock production; their ability to purchase food was therefore compromised and the situation was projected to deteriorate further in the next three months.

## Maize prices

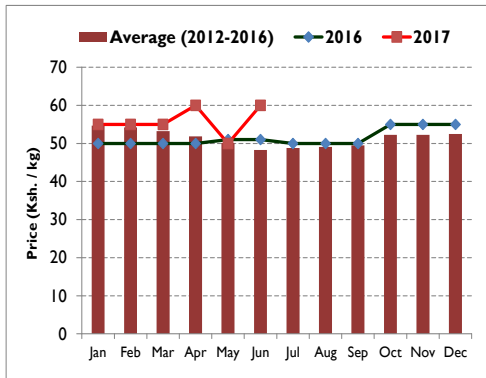


Figure 2: Maize prices in Garissa County

## Goat prices

The goat prices were 15 and 18 percent lower than (2012–2016) LTA and the price recorded at same period in 2016 respectively (Figure 4). From January to June, 2017, the prices remained below the LTA though they were on an upward trend as from March. The significant low prices were attributed to the poor livestock body condition. Goat prices are likely to marginally reduce further as the body condition of livestock deteriorates.

Maize prices for June 2017 were 24 percent higher than the price posted at similar period in 2016 and 25 percent higher than the five-year LTA (Figure 3). The above-average prices were attributed to very minimal production realized in the agro-pastoral areas for three consecutive seasons and dependency on markets as a source of food by both livelihood zones. Maize prices were higher in the pastoral livelihood zones than in the agro-pastoral zones due to poor road network and increased distances from the main markets. Maize prices are expected to increase marginally in the next three months.

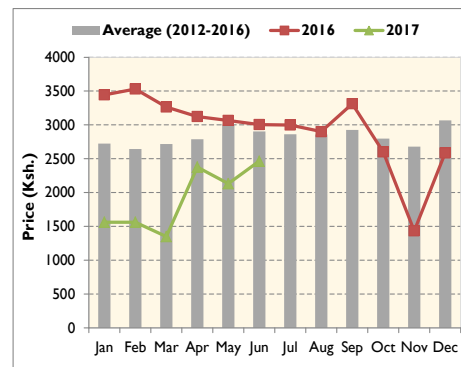


Figure 3: Goat prices in Garissa County

### 3.2.2 Terms of trade (TOTs)

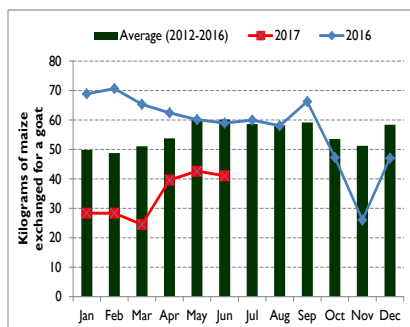


Figure 4: Terms of Trade in Garissa County

In the month of June, terms of trade were not favorable to the pastoralists as they were 32 percent below the LTA, a trend that has been maintained from January (Figure 5). TOTs were also below-average compared to a similar time in 2016 and are expected to further deteriorate in the next three months due to decreasing livestock prices at a time when maize prices will be increasing.

### 3.2.3 Income sources

The major sources of income in the pastoral livelihood zones normally are livestock production (including products) and firewood collection/ charcoal burning which contribute to 72 and 15 percent of income respectively (Table 10). However, currently, the households rely on credit. In the agro–pastoral livelihood zone, the major sources were the normal livestock production (including products) (50 percent), remittance and gifts (10 percent) and casual waged–labor income (5 percent)

**Table 10: Income Sources in Garissa County**

Livelihood zone	Source of income	% Contribution
Pastoral	Livestock production(including products)	72
	Firewood collection/ charcoal burning	15
	Food crop production	5
	Petty trading	5
	Remittance and gifts	2
	Formal waged labor	5
Agro–pastoral	<b>Food crop production</b>	
	Livestock production (including products)	50
	Remittance and gifts	10
	Fire wood collection/charcoal burning	5
	Petty trading	5
	Small business /own business	5
	Casual waged –labor income	5
	Other minor undertakings	4
Formal waged labor	1	

### 3.2.4 Water access and availability

The main water sources for domestic consumption in the county are River Tana, boreholes Benane springs, water pans and shallow wells. Water pans in the pastoral areas in the north recharged by 10 percent most of which were currently dry. Other pastoral areas in Fafi Sub-county have 50 percent of water pans operational and the water is expected to last two weeks compared to the normal 3–6 months. Currently, 76 percent of the boreholes (Table 11) are operational in the pastoral livelihood zone. However, some areas such as Modogashe, Baraki, Shanta Abaq and Maalimin in Lagdera Sub-county and Danyere and Balambala in Balambala Sub-county are experiencing water stress as a result of poor rainfall performance coupled with successive poor seasons. High concentration of people around water sources and increase in distances to water sources have been noted in these areas.

In the agro–pastoral livelihood zones along River Tana, water is available and accessible as 73 percent of the water supplies and all boreholes are functional except in Balambala area where only 30 percent of the boreholes are functional. In the southern part of the county in Fafi, Ijara and Hulughu sub-counties, which received 90-110 percent of normal rains, recharge was 80 percent and thus 76 percent of the water pans currently have water. However the water is expected to last one month compared to the normal 3–6 months (Table 10).

Return distance had increased by 50 percent in the pastoral livelihood zones from 10–15 kilometres but remained normal at five kilometers in the agro–pastoral areas (Table 12). The SMART survey indicated that 60.4 percent of the households paid for water. The cost of water remained at Ksh. five across the livelihood zones except in some areas of Jilango, Barfin and Modogashe in Modogashe ward that depended on the water vendors where it was sold at Ksh. 20

per 20-liter jerrican. The waiting time at water sources was normal at 20 minutes in the agro-pastoral livelihood zone while in Modogashe, Galgamalla, Bura in the pastoral livelihood zones the waiting time increased to 120 minutes from the normal 30 minutes (Table 11) attributed to congestion at the functional permanent water points. Water consumption is normal in the agro-pastoral areas at 30 litres per person per day. However, consumption in the pastoral livelihood had reduced by 50 percent to 20 litres due to increasing distances to water sources.

**Table 11: Distance to water sources, cost, waiting time and average consumption**

Livelihood Zone	Distance to water Source in km		Cost of water at source(Ksh)		Waiting time at source in minutes		Average consumption in litres	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	15	10	5	5	120	30	20	40
Agro-pastoral	5	5	5	5	20	20	30	30

### 3.2.5 Food Consumption

According to the nutrition survey carried out in July 2017, households having poor, borderline and acceptable food consumption scores were 1.7, 9.8 and 88.5 percent respectively compared to 0.14, 2.29 and 97.6 percent reported in June 2016. There was a slight change in the proportion of households having acceptable food consumption scores by nine percent. Based on the 24-hour recall, households consuming 3–5 food groups were 40.8 percent while those consuming more than five food groups were 53.6 percent. The household dietary diversity score shows that the four food groups mostly consumed were: milk and milk products (89.5percent), cereals (88.3percent), oil (85.5 percent) and pulses (78.3 percent).

### 3.2.6 Coping strategy

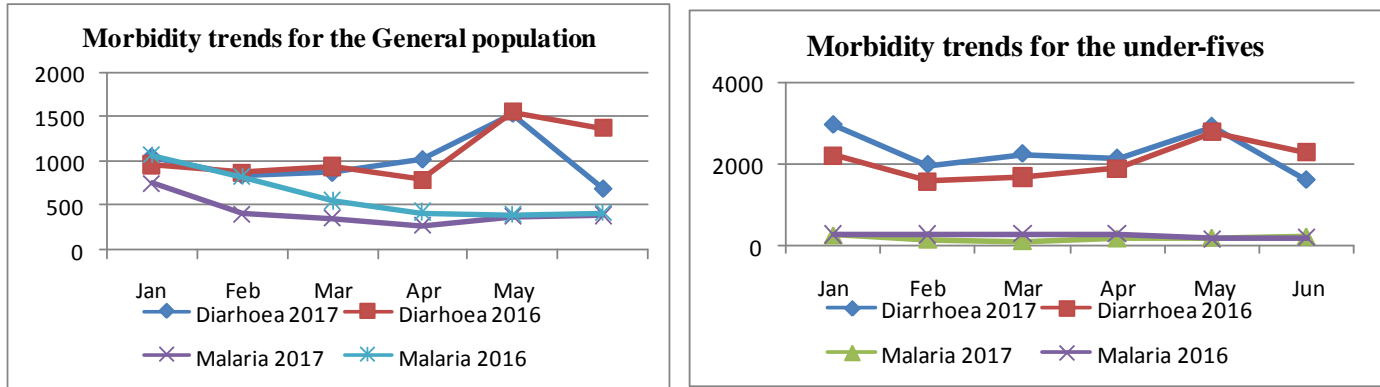
The coping strategy index as per the SMART survey in July 2017 is 13 and was comparable to 13.2 recorded in June, 2016 indicating that frequency with which households employed the food consumption-related coping strategies remained relatively the same. The most employed strategies were: reliance on less preferred or expensive foods and limiting the portion sizes of meals as reported by 92 percent of the households and reduction in the number of meals (87 percent). According to food security outcome monitoring (FSOM) data, households employing stress, crisis and emergency coping strategies as at May 2017 were 59.2, 11.7 and 27.7 percent respectively compared to 42.6, 2.6 and 51.3 percent reported at the same time in 2016.

### 3.3 Utilization

In terms of utilization, morbidity patterns were generally on an upward trend for food security-related diseases. Other indicators on sanitation and hygiene also indicate a poor water situation as a result of which there is a noted increase in water-borne diseases and the presence of outbreaks.

#### Morbidity Patterns

Trends for upper respiratory tract infections (URTI) among children under-five years and the general population from January to June 2017 were stable and peaked in March when the drought was at its peak after which there was noted a decrease until May. Malaria incidences among the under-fives were within the seasonal norms from January to June 2017. However, among the general population, they were above the cases reported at the same time in 2016 (Figure 6). Diarrhoea incidences were on the increase as from March through to June 2017. The increase in diarrhea and the reduction in malaria were attributed to the dry weather conditions that have been prevailing since the short rains assessment.



**Figure 6: Morbidity Trends for Garissa County**

There were outbreaks in the county in which six cases of measles were reported in January to June 2017 and 32 cases of cholera in Sadagose in Fafi Sub-county that led to three deaths. The cholera is still active however, interventions are ongoing. Waterborne diseases were on the rise and cases of dysentery and typhoid increased by 82 and 12 percent respectively. Utilization of health facilities was low especially from the month of June due to the ongoing nurses' strike. The crude mortality rate (CMR) as at July, 2017 is 0.854 per 10,000 persons per day while the under-five mortality rate is 0.239 per 10,000 persons per day. Both mortality rates are below emergency thresholds.

### **Immunization and Vitamin A Supplementation**

The proportion of fully immunized children between January and June 2017 was 73 percent compared to the same period in 2016 when it was 68 percent. However, it is still below the national target of 80 percent. The increase in immunization coverage is attributed to an increase in outreaches that were done across the county supported by National Drought Management Authority (NDMA) as part of the response measures recommended during the short rains assessment.

Vitamin A supplementation for children 6–11 months reduced to 62.4 percent in 2017 compared to 74 percent during the same period in 2016 while that for children aged 12–59 months as at May 2017 was 29.4 percent and comparable to 27 percent in the same period in 2016 (DHIS, 2017). Data from the survey in July 2017 also indicated that the proportion of children 6-11 months and 12-59 months who had received Vitamin A at least once was 46.4 and 42.5 percent respectively. It has also reduced from 62 and 50.3 percent for children aged 6–11 months and 12–59 months respectively reported in 2016. The decrease in Vitamin A supplementation was attributed to failure of Malezi bora exercise to fully take off this year as a result of delay in supplies coupled with the disruption of health services disruption due to the on-going nurses' strike.

### **Nutrition status**

The proportion of children under five at a risk of malnutrition based on mid-upper-arm-circumference (MUAC <135mm) was 20.1 percent in June 2017 and higher than 18.6 percent and 12 percent reported in June 2016 and the long term average respectively. Preliminary results of survey data for July, 2017 indicated that the global acute malnutrition rate was 16.1(13.2–20.9 at 95% CI) percent compared to 14.7 percent (11.8–18.2 at 95% CI) reported in June, 2016.

Although the nutrition status is currently critical, there was no significant change noted from the previous year. Severe acute malnutrition rate was 1.5 percent currently a reduction from 2.1 percent recorded in June 2016. The reduction was attributed to ongoing interventions with regard to management of acute malnutrition.

### Sanitation and Hygiene

The SMART survey results indicated that 56 percent of households have access to safe water with 45 and 15 percent reporting drawing water from piped systems and water trucking respectively. Water treatment is carried out by 6.1 percent of households, with 45.1 percent of these households using water treatment chemicals and 10.8 percent boiling their water.

The survey further indicated that the proportion of households practicing hand-washing at critical times (after visiting toilets, before cooking, before eating, and after changing small children), had reduced from 33.9 percent in June 2016 to 23.6 percent in June 2017. The findings are indicative of the water scarcity being experienced in the pastoral livelihood zones. Currently, the proportion of households practicing open defecation was 30.1 percent compared to 32.4 percent in June, 2016. The reduction in open defecation was attributed to the community-led total sanitation (CLTS) initiative that was launched in the county.

### 3.4 Trends of key food security indicators

**Table 12: Food security trends in Garissa County**

Indicator	Short rains assessment, Feb 2017	Long rains assessment, July 2017
Maize stocks held by households (agro-pastoral)	37 percent of LTA	0%
Livestock body condition	Camels & goats-Fair Cattle & Sheep- Poor to fair	Camels & goats-Fair Cattle & Sheep- Fair to Poor
Distance to grazing	12-17km	- 10-12 km-small stocks - 15-18 km for cattle - above 20-25 km camels - 35-40 km in Pastoral in Lagdera
Price of maize (per kg)	Ksh.55	Ksh.60
Terms of trade (pastoral zone)	36.4	43
Coping strategy index	20	13(SMART survey, 2017)
Food consumption score	Poor-17% Borderline-33% Acceptable-50% (FSOM)	Poor-1.7% Borderline-9.8% Acceptable-88.5% (SMART survey, 2017)
Percent of Under Five children at risk of Malnutrition (%)	14.2	20.1

### 3.5 Education

#### Introduction

Garissa County has 219 ECDs, 209 primary schools and 33 secondary schools with an enrolment of 11,874, 51,550 and 9,588 pupils respectively (Table 13).

**Table 13: Enrolment for Garissa County**

Enrolment	Term III, 2016			Term I, 2017			Term II, 2017		
	No. Boys	No. Girls	Total	No. Boys	No. Girls	Total	No. Boys	No. Girls	Total
ECD	8991	6473	15464	6817	5057	11874	6817	5057	11874
Primary	33430	18595	52025	30773	20777	51650	30773	20777	51650
Secondary	5787	3278	9065	6090	3498	9588	6090	3498	9588

Enrolment in primary schools in Term 1, 2017 remained the same in term II possibly due to the ongoing school feeding programme funded by the World Food Programme (WFP). It however, reduced by 23 percent to 11,874 (Table 13) in Term I of 2017 in the Early Childhood Development (ECD) centres due to absence of the school feeding which is expected to be implemented by the county government. Another possible reason is the migration of the households in search of pasture and water for the livestock as reported in the Lagdera, Balambala areas. Average monthly attendance remained above 97 percent in both primary and secondary schools but was averagely 95 percent in the ECD centres attributed to minor illnesses among the young children.

**Table 14: Drop-out in Garissa County**

Indicator	End of Term III, 2016			End of Term I, 2017		
	No. Boys	No. Girls	Total	No. Boys	No. Girls	Total
<b>Students dropped out from school</b>						
<b>ECD</b>	1095	876	<b>1971</b>	1044	1240	<b>2280</b>
<b>Primary</b>	510	620	<b>1130</b>	380	420	<b>700</b>
<b>Secondary</b>	40	36	<b>76</b>	16	12	<b>28</b>

There was a 15.6 percent increase in the number of pupils who dropped out of school in term I of 2017 compared to term III of 2016 in ECD (Table 14). The drop-out in ECD centres was attributed to migration of the households and insecurity especially in Ohio where schools were reported closed. The main reasons for drop-out in the primary section were insecurity/violence, migration from school area and family labour responsibilities/ household chores. In the secondary section, the drop-out were largely related to fees, child pregnancies and early marriages.

School feeding programme is on-going in all the public primary schools in the county with a total of 51,550 pupils benefitting (30,773 boys and 20,775 girls). There were 13 schools in which the pupils missed meals with 2576 pupils (1954 boys and 622 girls) being affected (Table 12). The main reasons attributed to the missing of meals were lack of water, delays in the delivery of the food to the schools and the type of food being culturally inappropriate. There were four schools (Schobley, Harboley, Fafi and Yumbis) in Fafi Sub-county that were closed for two weeks in Term II of 2017 due to insecurity. The schools are currently open as security was provided.

## 4 FOOD SECURITY PROGNOSIS

### 4.1 Assumptions

- According to FEWS NET/USGS preliminary forecast, there is a likelihood that cumulative rainfall during short rains of October-December 2017 is forecasted to be above-average with a near-normal start in eastern Kenya.
- Maize prices are expected to increase as the prices for goats continue to decline.
- Terms of trade are likely to continue on a downward trend.



- Livestock are likely to remain in their dry-season grazing grounds.

#### **4.2 Outlook for August to October, 2017**

In the months of August to October, forage conditions are expected to remain below-normal and as a result livestock productivity will also be reduced. Household food consumption is expected to marginally reduce or remain stable as a result of the ongoing interventions which include food and cash transfers that will help the households to access food. The nutrition status is expected to remain critical. Households are expected to continue employing food consumption-related coping mechanisms until the onset of the short rains in October. Mortality levels are expected to remain within acceptable levels as the interventions are implemented.

#### **4.3 Outlook for November, 2017 to January, 2018**

With a projected above-normal short rains performance, rangeland conditions are expected to improve. Food at the household level will be minimal before the short crop harvest matures. Nutrition status is likely to improve following interventions that will have been put in place in the months of August through to October. There are no significant changes expected in the coping strategies being employed by the household neither are there expected changes in the mortality rates. There is therefore a high likelihood of households remaining in the current phase classification of Stressed Phase (IPC Phase 2) for the agro-pastoral and some of those in Crisis Phase.

## **5 CONCLUSION AND INTERVENTIONS**

### **5.1 Conclusion**

The current food security situation in the county has slightly deteriorated compared to the situation after the short rains as shown by the current indicators. Despite there being no significant deterioration, it is important for several key factors to be monitored as responses and interventions are implemented. The factors to be monitored include the onset and performance of the short rains, food and livestock prices, forage situation, livestock migration, water availability and access for livestock and domestic consumption, malnutrition levels and absenteeism rates in schools.

#### **5.1.1 Phase classification**

The county was classified in the Stressed (IPC Phase 2) food security with localized areas in Crisis (IPC Phase 3) in the pastoral livelihood zone in Lagdera Sub-county.

#### **5.1.2 Summary of findings**

Below average performance of March-May long rains of 2017 coupled with successive previous seasons have led to poor and depleting forage conditions as a result of which there are massive livestock migrations to dry-season grazing areas. Poor temporal distribution was attributed to the reduction in crop production and as such currently there are no stocks at household level. Water is available largely in the agro-pastoral areas; however, majority of the pastoral livelihood zone is experiencing water stress. Market operations are normal although terms of trade are deteriorating thus interfering with access to food. Increased morbidity incidences, outbreaks of notifiable epidemic-prone diseases and low immunization rates have interfered with utilization. Nutrition status is critical coupled with poor hygiene and sanitation thus increasing vulnerability to disease. Mortality levels are below-alert levels for both the children under five and the general population. Households will remain in Stressed (IPC Phase 2) with localized areas in Crisis (IPC Phase 3).

### 5.1.3 Sub-county ranking

Sub-County	Food Security (1-7) 1= worst; 7 =good	Main Food Security Threat (If any)
Lagdera	1	Successive poor seasons Livestock migrations Minimal water availability and accessibility High malnutrition rates
Balambala	2	Successive poor seasons Livestock migrations Minimal water availability and accessibility High malnutrition rates
Huluhoh	3	Insecurity and limited access to services Livestock concentration
Dadaab	4	Near normal rainfall performance Access to services Insecurity
Fafi	5	Fair rainfall performance Livestock diseases
Ijara	6	Fair rainfall performance Water availability and access
Township	7	Accessibility to services Livelihood diversification

## 5.2 Ongoing Interventions

### 5.2.1 Food interventions

Food for Assets (FFA) programme is being implemented by World Food Programme in conjunction with Kenya Red Cross with an enrolment of 70,520 beneficiaries. The asset creation programme has 42 sites across the county. Expanded School Meals Programme (ESMP) is targeting 51,550 pupils in 209 schools. Supplementary Feeding Programme (SFP) being implemented by the department of health services is targeting 3,627 beneficiaries of which 2,027 are pregnant and lactating women and 1,590 are children under five years of age. Cash transfers to households to start in August through the “*Chakula kwa Jamii*” programme to target 24, 459 households.

### 5.2.2 Non-food interventions

**Table 15: Non-food interventions per sector**

Sub county	Intervention	Location	No. of beneficiaries	Implementers	Impacts	Cost	Time frame
<b>Agriculture Sector</b>							
Garissa, Fafi Balambala	Provision of Extension Services	All riverine sub counties	3,500	County Government.	Improved food security	13 M	January 2018
Garissa, Fafi	Promotion of horticultural crops	All wards	3000	County Government	Improved food security	14M	January 2018
County wide	Promotion of cow peas utilization	All riverine sub counties	2400	County Government	Improved food utilization	4M	January 2018

Sub county	Intervention	Location	No. of beneficiaries	Implementers	Impacts	Cost	Time frame
<b>Livestock Sector</b>							
All sub-counties	Livestock off take	all wards	17625HH	NDMA /County Government	Livelihood protection	3M	June 2017
All sub counties(marsh &drought pellets)	Provision of livestock feed	All wards	17625 HH	NDMA	Improved livestock productivity	21.5M	May 2017
<b>Water Sector</b>							
Lagdera, Balambala	Water trucking	Maalimin, Afweine Balambala, Dujis, Sankuri Fafi	19,500	County Government/ NDMA	Improve water accessibility	12 million	3-months
<b>Education Sector</b>							
Schools in lagdera and Balambala	Water trucking	Balambala, Lagdera	950 pupils	County Government	Provision of water for cooking	3 million	3-months /

### 5.3 Recommended Interventions

#### 5.3.1 Food interventions

Following the analysis of the indicators, there is need to continue with ongoing food interventions without which the populations would be vulnerable thus a deterioration in the food security status. The following proportions are proposed as populations in need of immediate food assistance.

**Table 16: Population in need of food assistance**

Division/Ward name	Pop in need ( % range min – max	Proposed mode of intervention
Lagdera	40-45%	CFA/FFA
Balambala	50-55%	CFA/FFA
Dadaab	40-45%	CFA/FFA
Fafi	30-35%	CFA/FFA
Ijara/Hulugho	35-40%	CFA/FFA
Township	25-30%	

### 5.3.2 Non-food interventions

Table 17: Recommended non-food interventions

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
<b>Agriculture Sector</b>							
All agro-pastoral sub-counties	Continued support to extension services	All wards	4,800HH	County Gvt/MOA	4.7 M		
Daadab, Balambala	Excavation of water pans for Crop production	Dujis Liboi	3000	County Gvt/MOA	20 M		2016-2018
<b>Livestock Sector</b>							
Livestock off-take targeting 7,000 cattle, 14,000 small stock	Feed supplementation	All	27,500HH	Livestock dept, NDMA	50.6M	Nil	July-October
Lagdera, Balambala, Ijara, Hulugho, Fafi Garissa.	Slaughter destocking of 4800 goats	All	28,800.	Livestock dept, NDMA	17M	Nil	July-October
Lagdera, balambala, ijara, hulugho, fafi and Garissa.	Diseases surveillance and control	all		Livestock dept, NDMA	10M	Nil	
<b>Water Sector</b>							
All 7 Sub counties	-Provision of water treatment chemicals -Storage facilities	All wards	70,000 Households	County government of Garissa / NDMA and other WASH actors	21M	Nil	3-months
Balambala, Lagdera, Part of Fafi	Water trucking	Sankuri, Dujis, Danyere, Maalimin, Modogashe, Afwein Fafi	30,000 households	County government of Garissa / NDMA and other WASH actors	36M	Nil	3-months
Lagdera,	Rehabilitation	Danyere,	25,000	County	30 M	Nil	3-

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Balambala, Dadaab, Fafi	of existing water supplies	Modogashe Baraki Gurfa Dadaab Fafi	households	government of Garissa / NDMA and other WASH actors			months
<b>Health and Nutrition</b>							
All	Mass screening in 60 hard to reach areas	Hard to reach areas	50,000 under fives	County government of Garissa / Department of Health	15M	Nil	3 months
All sub counties	Provision of Households water treatment chemicals	All wards	30,000 households	County government of Garissa/ Department of Health	20M	Nil	3 months
All sub counties	Integrated health and nutrition outreaches	All facilities	30,000 households	County government of Garissa / Department of Health		Nil	3 months
<b>Education</b>							
All sub counties	School feeding programme	209 schools	51,550	WFP, Education Sector		Nil	3-6 months
	Water trucking to Schools	159 schools					