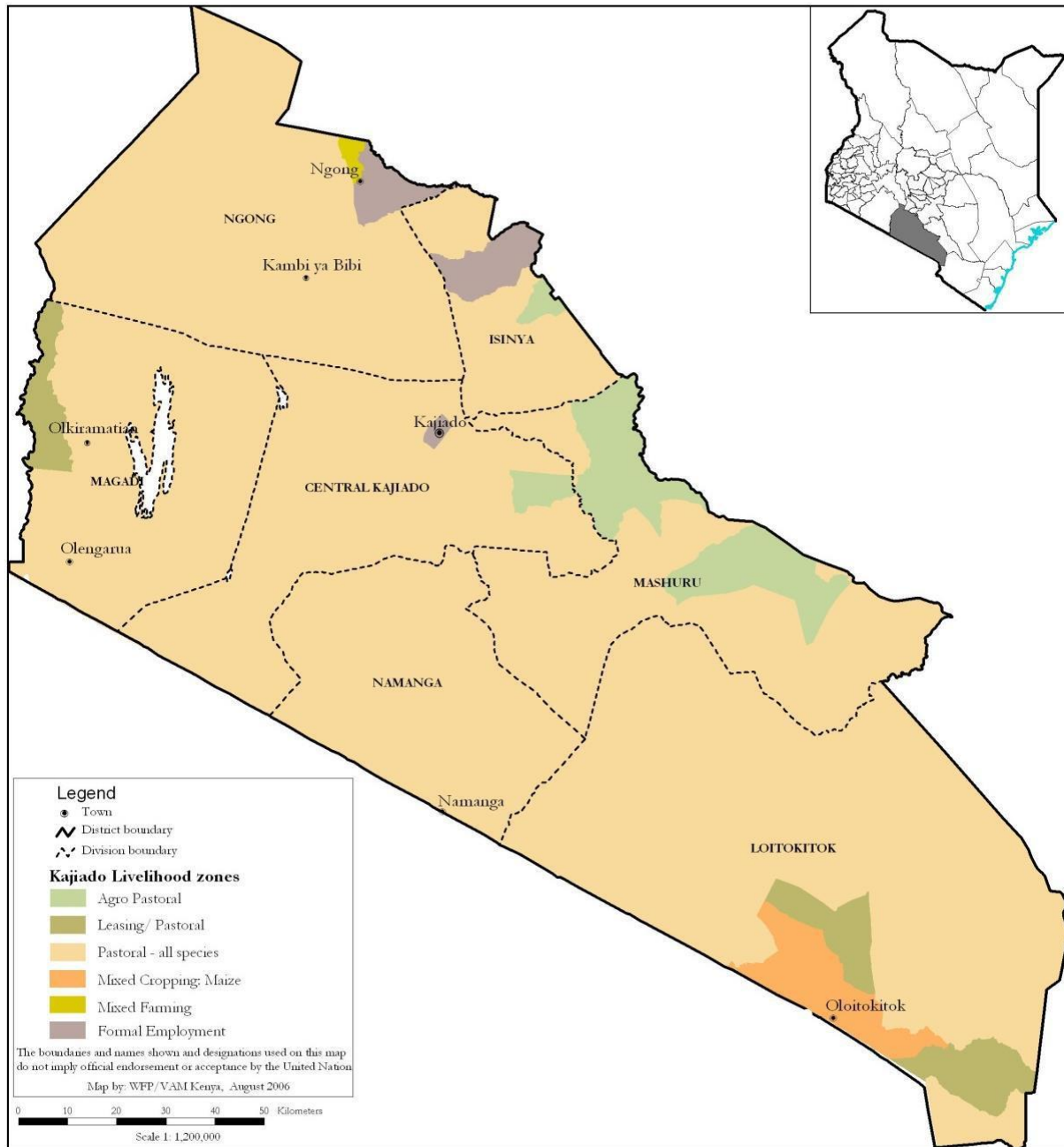


**KAJIADO COUNTY**  
**2018 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT**



**A Joint Report of Kenya Food Security Steering Group<sup>1</sup> and Kajiado County Steering Group**

**February, 2019**

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## **Executive Summary**

The Short Rains assessment was conducted between 11th and 23rd February, 2019 led by a multi-agency team comprising of KFSSG and Kajiado County steering group technical team. A multi-sectoral approach was adopted during the assessment covering agriculture, livestock, health and nutrition, water and sanitation and education. The Short rains food security assessment aimed at establishing an objective, evidence based and transparent food security situation in the county. The county is classified as “Minimal” (IPC Phase 1) in mixed farming livelihood zones while it is “stressed” (IPC Phase 2) in pastoral and agro-pastoral livelihood zone. The main hazard contributing to food insecurity in the County is late onset, poor temporal and spatial distribution and early cessation of short rains, human wildlife conflicts that has led to destruction of pipes and watering points, encroachment of grazing land for urban development and presence of invasive weeds in the pastureland. Both area under maize and beans was within normal while that of Irish potato increased by 48 percent of the LTA. Expected production of beans and maize will decline by 21 and 48 percent of long term average (LTA). Stocks held by farmers, traders and millers stood at 65 percent of the LTA. Pasture and browse conditions are fair to good for all livelihood zones but on a declining trend in the pastoral and agro pastoral livelihood zones and is expected to last for one month in the pastoral and agro pastoral livelihood zones as compared to normal of 2-3 months. Livestock body condition for cattle in the pastoral zone is fair while sheep and goats are in good body condition across all livelihood zones. Milk production and consumption are below normal in pastoral and agro pastoral zones compared to LTA. Milk production has declined by 80, 75 and 50 percent in the pastoral, agro pastoral and mixed farming livelihood zones respectively when compared to LTA. There was corresponding increase in milk prices by 20 percent in the pastoral and agro-pastoral zones. Milk consumption per household has reduced by 75 percent and 50 percent in the pastoral and agro pastoral zones respectively but remained stable in the mixed farming zones. Water levels in open water sources have decreased to approximately 20 percent. Access to water points has deteriorated across all livelihood zones with distances increasing by 20 percent and 60 percent in the pastoral and agro pastoral livelihood zones. The average county maize price in the month of January stood at Ksh. 43 per kg, about 17 percent below the LTA. The highest prices were recorded in pastoral livelihood zone at Kshs 50 per kg while the lowest was recorded in the agro-pastoral livelihood zone at an average price of Kshs 30 per kg. A medium-sized goat was retailing between Ksh. 3,500-5000, which is above the LTA. The prevalence of URTI and diarrhea progressively increased in 2018 for both under-fives and the general population compared to 2017. A decrease was registered for malaria for both under-fives and the general. There was an 18 percent increase in Fully Immunized Children (FIC) in the county between the period July–December 2018 (89 percent), compared to July–December 2017 (71 percent). Vitamin A coverage stood at 62 percent which was still below the national targets (80 percent) for children aged 12-59 months. There was Cholera outbreak in the county in January 2019 which was active as at the time of the assessment with a total of 552 been reported, 58 cases confirmed with one fatality (under five). About 65 percent and 19 percent of the households in January 2018 for pastoral livelihood zone were unacceptable and borderline Food Consumption Score (FCS) category. The mean Coping Strategy Index for the county in January 2019 remained stable at 3.85. For instance, the percentage of children (6-59 months) at risk of malnutrition in January 2019 reduced significantly to 6.3 percent in comparison to the LTA of 8.9 percent. The factors to be monitored include post harvest losses and wastage for maize, continuous livestock disease surveillance and

treatment as well as conflicts that may arise due to depletion of common resources especially along the ranch boundaries, private actors and areas surrounding the park.

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## 1.0 INTRODUCTION

### 1.1 County Background

Kajiado County covers an area of about 21,902 square kilometres supporting an estimated population of 870,721 people (KNBS, Projected 2016). The County is administratively divided into five sub counties namely: Kajiado Central, Kajiado North, Kajiado South, Kajiado East and Kajiado West. The three main livelihood zones in the county are; pastoral all species, agro-pastoral and mixed farming livelihood zones as shown in Figure 1.

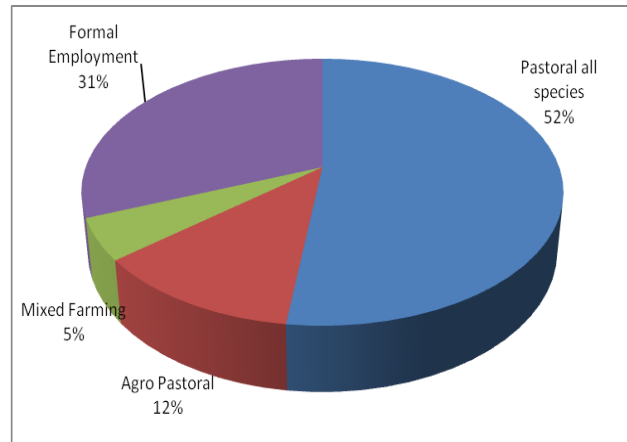


Figure 1: Population by livelihood

### 1.2 Objectives and Approach

The main objective of rapid Short Rains Food Security assessment was to develop an objective, evidence-based and transparent food security situation analysis following the short rains season of October to December (OND) 2018, taking into account the cumulative effect of previous seasons and thereafter provide immediate and medium term recommendations for possible response options for stakeholders based on actual situation analysis. Primary data was collected during the field visits at the County through conduction of community and market interviews. The sectoral technical members at the County level provided technical reports for reference. More secondary data was collected from the early warning system and used to provide trends for the different food security indicators in the various sectors.

## 2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

### 2.1 Rainfall Performance

The onset of the short rains season was late in the first dekad of December as compared to a normal of second dekad of October. Temporal distribution was poor and spatial distribution was uneven with most of rains being received in the eastern and the northern belt extending from Porka to Ngong. In the second dekad of December, rains were fairly distributed across the county, figure 2. Rainfall performance was below the expected seasonal range. Cessation was in third dekad of December.

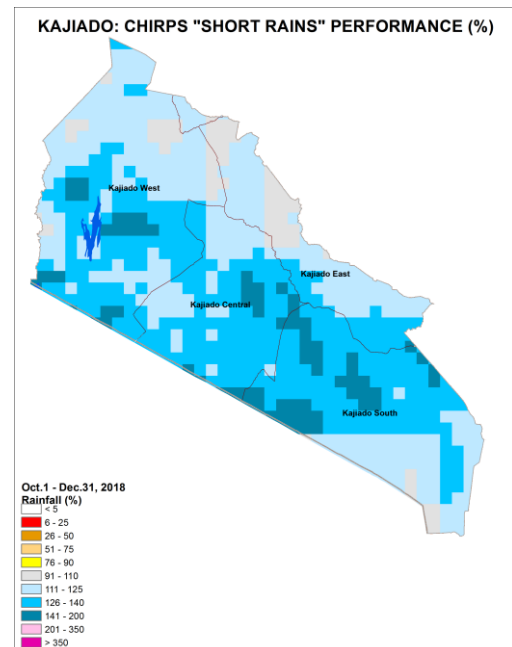


Figure 2: Rainfall performance, Kajiado County

### 2.2 Current Shock and Hazards

The main hazards contributing to food insecurity in the county include: Poor temporal distribution of rain which led to the wilting of maize crop reducing expected crop production. Human wildlife conflicts

have led to destruction of water infrastructure especially uprooting of water pipeline by elephants. Encroachment of grazing land for urban infrastructure development has rendered livestock keeper's food insecure as grazing land availability shrinks. Presence of invasive weeds in the pasture/browse land has further reduced quality and quantity of pasture/browse. In both agro pastoral and mixed farming zones, acreage under food crops declined and expected yields will decrease an attribute of insufficient precipitation to support full physiological development of the food crops.

### 3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

#### 3.1 Availability

##### 3.1.1 Crop production

##### Rain fed crop production

The three main crops in the rain fed areas include maize, beans and Irish potatoes. Maize, beans and Irish potatoes contribute 70, 15, 6 and 75, 10, 4 percent respectively to food in the agro-pastoral livelihood zone and mixed farming livelihood zone; and 35, 20, 15 and 35, 45, 4 percent to income in the agro-pastoral and mixed farming areas respectively. Both area under maize and beans was within the LTA while that of Irish potato increased by 48 percent of the LTA (Table 1) as farmers took advantage of the good returns when compared to both maize and beans. Production of beans and maize is expected to decline by 21 and 48 percent of LTA due to pest infestation, decreased area under production and insufficient and early cessation of rains at critical crop development stage. Projected Irish potato production is expected to be 42 percent above the LTA due to good gross margins and has two cropping seasons unlike maize. In both agro pastoral and mixed farming zones, acreage under food crops and expected yields will decrease attributed to insufficient precipitation to support full physiological development of the food crops.

**Table 1: Comparison of the current area planted and current production with LTA**

Crop	Area planted during 2018 Short rains season (Ha)	Long Term Average (5 year) area planted during the Short rains season (Ha)	2018 Short rains season production (90 kg bags) Projected	Long Term Average (5 year) production during the Short rains season (90 g bags)
1.Maize	19,831	20,665	297,465	576,800
2.Beans	22,397	23,335	529,883	667,200
3.Irish Potatoes (MT)	578	390	29,890MT	21,050MT

##### Irrigated crop production

The main crops produced through irrigation were tomatoes, maize and cabbages as illustrated in Table 2. The area under tomatoes and cabbages increased by 43 and 22 percent while that of maize has reduced by 10 percent as compared to the LTA, as farmers were venturing into more profitable crops with shorter growing seasons. The expected production for maize, tomatoes and cabbages was eight, 57 and 62 percent respectively above the LTA.

**Table 2: Comparison of the current area planted and current production with LTA**

Crop	Area planted during the 2018 Short rains season (ha)	Long Term Average (3 years) area planted during Short rains season (ha)	2018 Short rains season production (90 kg bags/MT) Projected	Long Term Average (3 years) production during 2018 Short rains season (90 kg bags/MT)
1.Tomatoes	1,774	1,238	25,544MT	16,263MT
2.Maize	1,020	1,130	56,400	52,000
3.Cabbages	110	90	820MT	505MT

### Cereal stock

Stocks held by farmers and traders are at 39 and 74 percent of the LTA (Table 3) as a result of depressed OND rains. High post-harvest losses and poor storage facilities experienced by farmers have also contributed to the low stocks. This trend replicates across all the livelihood zones. Stocks held by millers have increased by 65 percent above the LTA. Stocks held by NCPB are under the Strategic Grain Reserve (NCPB Kajiado has 84,500 bags and NCPB Loitokitok has 105,209 bags). The stocks held by households in Mixed Farming livelihood zone is expected to last for three weeks while that in pastoral zone will take two weeks. In the Pastoral livelihood zone, the population wholly depend on markets. Rice, sorghum and millet are not significantly consumed in the county.

**Table 3: Grain stocks held in the County**

	Maize		Rice		Sorghum		Millet	
	Current	LTA	Current	LTA	Current	LTA	Current	LTA
Farmers	12,720	32,500	0	0	0	0	0	0
Traders	19,310	25,910	0	0	0	0	0	0
Millers	9,332	5,650	0	0	0	0	0	0
NCPB	189,709	0	0	0	0	0	0	0
<b>Total</b>	<b>231,071</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 3.1.2 Livestock Production

The main livestock species kept are cattle, sheep and goats where the dominant breeds are the Zebu, indigenous sheep and goats. Livestock contributes significantly to households' food security and incomes; it contributes 70, 48 and 30 percent cash income for households in pastoral, agro pastoral and mixed farming livelihood zones respectively. Sale of livestock and livestock products enabled households to acquire other food commodities such as maize, beans, wheat flour and to cater for other household needs.

### Pasture and browse condition

The current pasture and browse conditions are fair to good for all livelihood zones but on a declining trend in the pastoral and agro pastoral livelihood zones but within the normal range in the mixed farming zone. Pasture supply is expected to last for one month in the pastoral and agro pastoral livelihood zones as compared to normal of 2-3 months (Table 4). Browse condition was good in all the livelihood zones and is expected to last 2-3 months compared to a normal of four months. The downward trend of pasture and browse in the pastoral and agro pastoral livelihood zones was attributed to late onset and early cessation of October to December rains which were poor in terms of amounts and distribution. The wards experiencing accelerated pasture deterioration are: Mosiro, Magadi, Shompole, Iloodoklani, Ewuaso (Kajiado West), Purko, Dalalekutuk, Matapato South, Matapato North (Kajiado Central), Lenkism, Olgulului, Mbirikani, Esilengei, Rombo (Kajiado South) and Imaroro, Engirgiri, Ilpolosat (Kajiado East). Some of the

factors limiting access to pastures and browse are: Invasion of Ipomoea species in Purko, Matapato North, Matapato South (Kajiado Central), Imaroro, Kenyewa/Poka (Kajiado East) and parts of Imbirikani and Entonet/Lenkism (Kajiado South). Prosopis species (Mathenge) has also been reported in Magadi Ward, parts of Loodokilani Ward (Kajiado West) while Tsetse fly infestation was found in Rombo, Kuku, Imbirikani/Esilenkei and Lenkism (Kajiado South), Magadi, Mosiro (Kajiado West) and Kenyewa Poka (Kajiado East). The areas prone to human/wildlife/livestock conflict are Entonet/Lenkism, Imbirikani (Kajiado South) and Emotoroki, Mailua, Maparasha and Meto (Kajiado Central). Land subdivision for real estate development especially in the major urban centres has resulted to a considerable loss of pasture/browse land.

**Table 4: Pasture and Browse Condition**

Livelihood zone	Pasture					Browse				
	condition		How long to last (Months)		Factors Limiting access	condition		How long to last (Months)		Factors Limiting access
	Current	Normal	Current	Normal		Current	Normal	Current	Normal	
Pastoral	Fair	Good	1	2-3	Invasive species- Ipomeas spp, Prosopis spp, Tsetse fly infestation, Wild animals-livestock conflicts	Good	Good	2	4	Invasive species- Ipomeas spp, Prosopis spp, Tsetse fly infestation, Wild animals-livestock conflicts
Agro Pastoral	Fair	Good	1	2-3	Invasive species- Ipomea spp	Good	Good	2	4	Invasive species- Ipomea spp
Mixed farming	Good	Good	2-3	2-3	Invasion by inedible Herbage, land demarcations	Good	Good	3	5	

Inclusion of crop residues as livestock feed was minimal and mostly practiced within the agro-pastoral and mixed farming zones. Supplementary for livestock feeds was done through utilization of crop residues (maize stovers and beans husks), lucerne/ alfalfa, desmodium, sweet potato vines and fodder maize (mainly for silage) in the mixed farming zones.

### **Livestock body condition**

The body condition of cattle was fair (normally good) in the pastoral zone while it was good in the agro pastoral and mixed farming livelihood zones. The decline in cattle body condition was attributed to diminishing pasture and fairly longer trekking distance to watering points (Table 5).



The body condition for sheep and goats across all livelihood zones was good, due the availability of browse, which is normal.

**Table 5: Livestock Body Condition**

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normal	Current	Normal	Current	Normal
Agro pastoral	Fair	Good	Good	Good	Good	Good
Mixed farming	Good	Good	Good	Good	Good	Good
Pastoral	Good	Good	Good	Good	Good	Good

### Milk production, consumption and prices

Milk production and consumption are below normal in pastoral and agro pastoral zones compared to LTA. Milk production has declined by 80, 75 and 50 percent in the pastoral, agro pastoral and mixed farming livelihood zones respectively (Table 6). Milk production in the county was on a downward trend due to dwindling availability of pasture and long trekking distances to water sources as well as declining TLUs. Some areas like Maparasha, Esilengei and Olgulului (Kajiado South) have milk production at household less than one litres and this is mainly from sheep and goats. Consumption at household level was suppressed. Milk consumption per household has reduced by 75 percent and 50 percent in the pastoral and agro pastoral zones respectively but remained stable in the mixed farming zones.

**Table 6: Milk Availability and Consumption zone**

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	0-2	10	0-1	4	60	50
Agro-pastoral	3	12	1	2	60	50
Mixed farming	8 – 12	20	2	2	45-60	60

Milk production and consumption in these zones is expected to decrease further in the coming months should the on-set of the long rains delay. This has resulted to increase of milk prices by 20 percent in the pastoral and agro-pastoral zones. In the mixed farming zones, whereas milk production has reduced, consumption at household level has remained stable.

### Tropical Livestock Units and Birth Rate

**Table 7: TLUs**

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	3	10	12	20
Agro-pastoral	2-3	4	10	20
Mixed farming	1	1	3-5	3-5

The TLUs among poor households in the pastoral and agro pastoral livelihood zones have declined by 70 and 40 percent respectively while it has remained stable for mixed farming zones. In the medium income households, the TLUs have declined by 40 percent for pastoral and agro pastoral zones but remained stable for mixed farming livelihood zones when compared to LTA (Table 7). The decline was attributed to high mortalities during the drought of 2015 to 2017 hence most of the households have not yet recovered. Other factors contributing to reduction of the TLU are selling of small stock to cover for household expenditure and a tendency of

livestock keepers to keep more goats and sheep than cattle as they more drought resistant. Birth rates are currently normal across all the livelihood zones.

### **Livestock Migration and Livestock Diseases and Mortalities**

There were limited livestock migrations with only movements from wet to dry grazing areas in pastoral livelihood zones within the sub counties. Few cases of internal migration were reported in Emotoroki and Esilengei majorly involving cattle from Namanga, Meto, Mailua, and Maparasha. The major livestock diseases reported within the county were sporadic outbreaks of Food and Mouth Disease (FMD), Lumpy Skin Disease (LSD) and Rabies. No major livestock mortalities were reported and therefore the current rates were within normal.

### **Water for Livestock**

The main sources of water for livestock in the county are boreholes, rivers, and water pans (Table 8). Most of the open water sources especially water pans are drying up after below average performance of the October-November-December rainfall season. The current water situation is slightly below normal in agro pastoral and pastoral livelihood zones and stable in the mixed farming livelihood zone. The distances to water were 5-15 km, 8 km and less than one km in the pastoral, agro pastoral and mixed farming zones respectively. The distance was above the long term average at this time of the year. Cattle, sheep and goats continue to be watered once a day in the agro pastoral and mixed farming zones and after two days in the pastoral zones. Water in some open water sources such as water pans is declining in quality and quantity especially in the pastoral livelihood zones resulting to increase in trekking distances in some areas. Therefore, if no rains are received within the next 1-2 months, water situation is likely to worsen. The variation in watering frequency was occasioned by increased trekking distances to watering points, drying of some water pans and overstocking. The available water is expected to last one month in the pastoral and agro pastoral zones. The limiting factors affecting access to water was human/wildlife conflict, frequent breakdown of boreholes and drying up of pans due to low levels of recharge during the short rains.

**Table 8: Water for livestock**

Livelihood zone	Sources		Return average distances (km)		Expected duration to last (months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	Water pans, rivers, boreholes, piped water, Water canals	Rivers, water-pans, boreholes and dams	5-15	<5	1 month for pans and dams	2	After 2 days	Once per day
Agro Pastoral	Boreholes, water pans, rivers	Rivers, water-pans, boreholes and dams	8	2-5	1 month for pans and dams	2	Once per day	Once per day
Mixed farming	Water canals, piped Water	Water canals, piped water	<1	<1	3	4	Once per day	Once per day

## 3.2 Access

### 3.2.1 Markets Operations

The major markets for food commodities and livestock in Kajiado County are: Mashuru, Kitengela, Shompole, Kimana and Emali in pastoral livelihood zone; Kajiado, Rombo, Kiserian, Bisil and Namanga in agro-pastoral livelihood zone, and Loitokitok, Ngong, Soko Mjinga and Ongata Rongai in mixed farming livelihood zone. Market operations were normal in all the livelihood zones during the period under review. Market transactions are the only source of food for the pastoralists. Major food commodities observed in the markets were maize grain/flour, beans, rice, potatoes, tomatoes, vegetables such as cabbages and kales. Horticultural produces are mainly supplied from Kimana area while cereals are mainly sourced from Tanzania. In most cases pastoralist households have limited access to vegetables and fruits. There were no disruptions in livestock marketing reported due to conflicts or disease outbreaks. Shompole, Kiserian, Ilbisil, Kimana and Rombo were the main livestock markets in the County. These markets have been operating normally.

#### Maize price

The average maize price in the county in the month of January stood at Ksh. 43 per kg, which was about 22 percent below the long term average of Ksh. 49 per kg as illustrated in Figure 3. In mixed farming zones of Loitokitok a kilogram of maize was selling at Ksh. 30 and Ksh. 50 in pastoral areas of Kajiado West such as Ewuaso and Magadi. Food was cheaper in southern part of the county due to accessibility by traders. The current price was lower than the average price for the previous three years which was Ksh. 52 per kilogram.

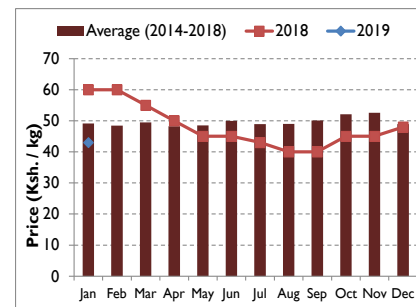


Figure 3: Maize prices Kajiado County

#### Goat price

The average county farm gate price for a medium-sized goat is Ksh. 3,730. The current price was 31 percent above the long term average of Ksh 2,846 in the month of January attributed to good body condition due to availability of browse, Figure 4. There was no notable variation in prices of goats across the livelihood zones. The average goat price was above the LTA. Goat prices are expected to stabilize due to available browse resulting in good body condition across all livelihood zones.

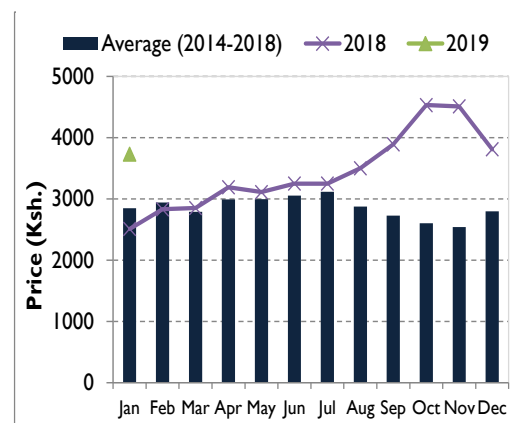


Figure 4: Goat prices in Kajiado County

### 3.2.2 Terms of trade

The terms of trade (ToT) are favourable to livestock keepers. Households are able to purchase 87 kilograms of maize with the sale of one medium-sized goat which was 50 percent above LTA. Normally, households would access about 58 kilograms of maize with the sale of the same goat as indicated in figure 5. The increase in ToTs was due to increasing goat prices and decrease in maize prices. Terms of Trade are expected to remain above LTA.

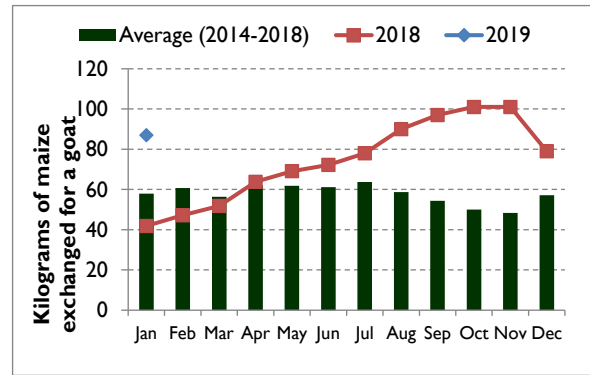


Figure 5: Terms of Trade Kajiado County.

### 3.2.3 Income Sources

The current main source of income in the pastoral livelihood zone was sale of livestock and milk while in the mixed farming and agro-pastoral zones sell livestock, milk and other farm produce. Small scale farmers in the irrigated areas usually depend on sale of horticulture produce such as onions, cabbages and tomatoes as the main source of income especially in the irrigation schemes. The income sources are normal at this time of the year although more farmers are engaging in onion farming, that fetch higher returns hence more income at household level.

### 3.2.4 Water Access and Availability

#### Major water sources

The major sources of water are boreholes, pans/dams, shallow wells and springs. Two perennial rivers, Nolturesh and Ewaso Nyiro contribute to water availability in the county. Boreholes form the main water sources in pastoral and agro pastoral livelihood zones. Springs and shallow wells are predominant in mixed farming and irrigated livelihood zones. During the season, pans and dams recharged very minimally as the rains received was very low and poorly distributed with some pans reported to have dried up especially in Maparasha North (Kajiado Central). It is estimated that open water sources were recharged by between 5-10 percent while springs and boreholes were recharged at about 50 to 70 percent across all the livelihood zones. Water levels in open water sources have decreased to approximately 20 percent as at the end of January. Operational boreholes are expected to last throughout the year, table 9.

Table 9: Water sources

Ward/ Livelihood zone	Major Water Source	No. of Normal Operational	No. of Current Operational Sources	Projected Duration	Normal Duration of water	% Recharged by the Rains	Locality of Non- operational Water Sources
Pastoral	Boreholes	170	110	Permanent	12 Months	50	Lorngosua, Oloilalei, Elerai, Olkejuloseki, Impiro, Naning'oi, Ilkunono
	Springs	43	41	6 Months	12 Months	50 -70	

					hs		
	Water Pans	80	54	2 Months	3 Months	5-10	Spread Across the zone
<b>Agro-pastoral</b>	Boreholes	74	47	permanent	All year	100	Meto, Maparasha, Olngarua, Sholinke, Engeju oolowarak
	Springs	16	16	12 Months	4 months	50 -70	
	Water Pans	19	16	1 to 2 Months	3 Months	10	Across the County
<b>Mixed Farming</b>	Boreholes	2	2	Permanent	All year	50	None
	Springs	253	186	12 Months	4 months	50 -70	Spread across LH zone
	Water Pans	5	3	2 Months	3 Months	10	
	Shallow wells	43	43	All year	All year	60	Nil

Thirty-five percent and 30 percent respectively of available boreholes and water pans were not currently operational which was attributed poor management by the water management committees and high frequency of breakdowns while the drying of pans was attributed to high levels of siltation and minimal recharge during the short rains. The current volume of water in the water pans is expected to last up for a period of 1-2 months and springs 6 - 12 months in all the livelihood zones.

**Table 10: Access to Domestic Water**

Livelihood zone	Return Distance to Water for Domestic Use (Km)		Cost of Water at Source (Ksh. Per 20litres)		Waiting Time at Water Source (Minutes)		Average Water Consumption (Litres/person/day)	
	Normal	Current	Normal	Current	Normal	Current	Normal	Current
Pastoral	5 – 10	5 - 12	3 -5	3 -10	30-40	30-60	10 -20	10 -15
Agro pastoral	0.5 – 5	0.5 -8	3 - 5	3 - 10	30	30-60	10-30	15 – 20
Mixed farming	0.2 – 5	0.2 - 5	3 -5	2 -10	5- 10	5-30	20 -30	20

### Waiting time at the source

Access to water points has deteriorated across all livelihood zones with distances increasing by 20 percent and 60 percent in the pastoral and agro pastoral livelihood zones respectively. This is attributed to diminishing functional water points leading to concentration of users in the in main sources. Boreholes have remained operational and currently, common water points are serving more users hence increasing the waiting time by 50 percent in the pastoral livelihood zones. The most affected wards are Lenkisim (Kajiado South) and Maparasha (Kajiado Central) and most wards in Kajiado West Sub County, table 10.

### Cost of Water and consumption

Water cost has increased by 50 percent per 20 litre jerrican in all the livelihood zones. Waiting time at water source has increased by approximately 50 percent in all the livelihood zones. This is due to reduced recharge in rivers, pans and dams during the short rains season. Lack of adequate water has led to increased dependency on water vendors who have in-turn raised the price of water. Consequently, water consumption rates have declined by an average of 40 percent across all livelihood zones compared to normal. Increase of water price in the major towns is due inadequate water supply and lack of proper water supply network. Forty-six percent and 70 percent of rural and urban households respectively use protected water sources. The most utilized method of water treatment is through boiling.

### 3.2.5 Food Consumption

About 92 percent and eight percent of the households fell within the acceptable and borderline food consumption score categories respectively for January 2018, Figure 6, in the agro-pastoral livelihood zone while 65 percent and 19 percent were unacceptable and borderline categories in pastoral livelihood zone. The poor food consumption score implies households are not consuming a balanced diet and rarely consuming food rich in protein. Borderline implies that households are consuming staples and vegetables every day accompanied by oil and pulses a few times in a week. The acceptable implies that households are consuming staples, protein (milk and meat) and vegetables every day and frequently accompanied by pulses.

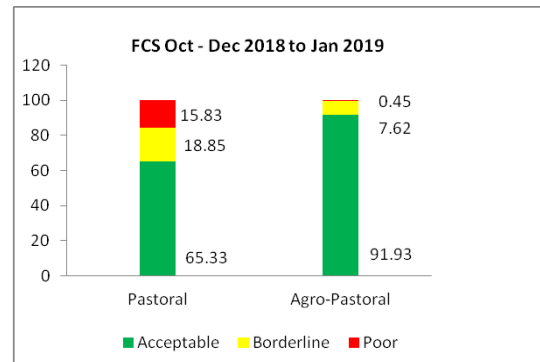


Figure 6: Food Consumption Score, Kajiado County

### 3.2.6 Coping Mechanisms

The mean coping strategy index for the county in January 2019 remained stable at 3.85 with most of the households accessing food with less difficulty. The mean county coping strategy index was 3.85 as indicated in Figure 7. In pastoral west, however, a number of households were borrowing food and consuming less preferred food in order to cope with lack of food or money to buy food.

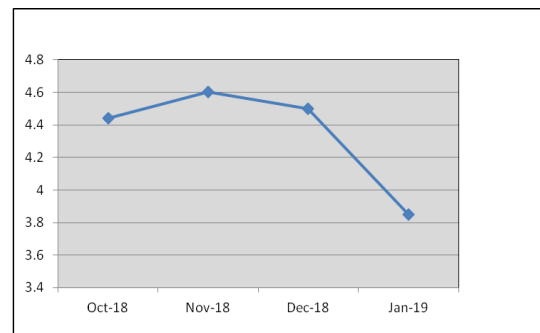


Figure 7: Average CSI, Kajiado County

## 3.3 Utilization

### 3.3.1 Morbidity and Mortality Patterns

The prevalence of URTI and diarrhoea progressively increased in 2018 for both under-fives and the general population compared to 2017. Similarly, there were increased cases reported for dysentery,

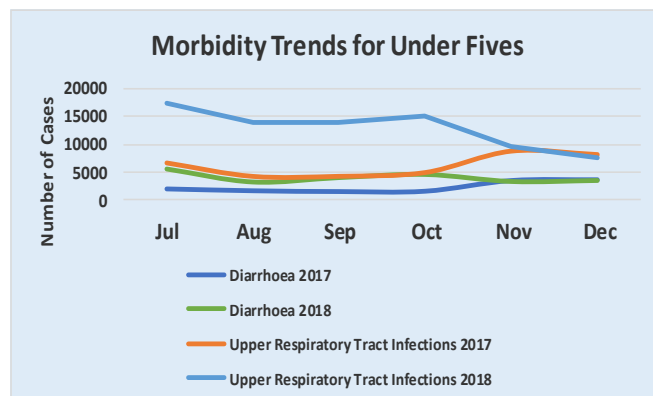


Figure 8: Morbidity trends under-fives, Kajiado County

diarrhoea and typhoid in July–Dec 2018 as compared to similar period in 2017. The apparent increase in prevalence trends was attributed to better data capture of cases at the facility level unlike in 2017. A decrease was registered for malaria for both under-fives and the general population attributed to improved service delivery through campaigns, outreaches and opening up of additional health facilities in the hard to reach areas, figure 8 and 9.

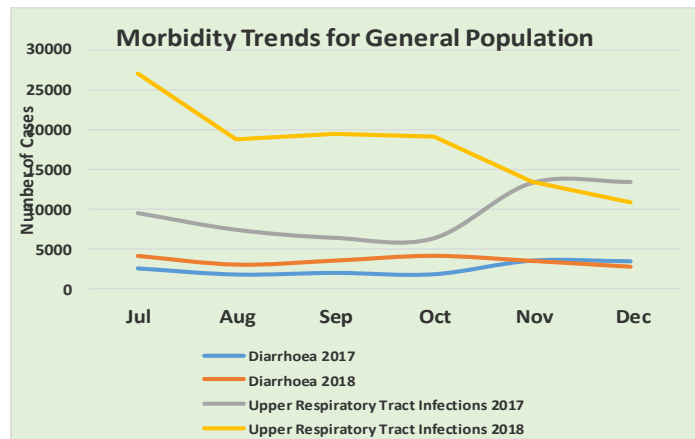


Figure 9: Morbidity trends, General Population, Kajiado

### 3.3.2 Immunization and Vitamin A supplementation

There was an 18 percent increase in children reported to be fully immunized (FIC) in the county between the period July–December 2018 (89 percent), compared to July–December 2017 (71 percent) attributed to outreaches, ad hoc campaigns and opening up of additional health facilities as well as *malezi bora* campaigns. Vitamin A coverage increased significantly in the period July–Dec 2018 in comparable to July–Dec 2017 for both categories of children, 6-11 months and 12-59 months. The upward trend was attributed to increased outreaches, *malezi bora* campaigns as well as target setting by each facility. Nonetheless, the coverage (62 percent) was still below the national targets (80 percent) for children aged 12-59 months. There was cholera outbreak in the county in January 2019, currently active as at the time of the assessment affecting several areas such as Musenge, Shompole, Oloika, Mosiro, Pakase and Entasopia (Kajiado West) and Nyatataek (Kajiado central). As at the time of compiling this report, a total of 552 cases had been reported, 58 cases confirmed with one fatality (under five). Five cases are currently active.

### 3.3.3 Nutrition Status and Dietary Diversity

The last nutrition SMART survey was conducted in February 2018 where a GAM of 10 percent was registered. Information gleaned from field interviews and corroborated with existing data indicates major improvement in nutrition situation in the county. For instance, the percentage of children (6-59 months) at risk of malnutrition in January 2019 reduced significantly to 6.3 percent in comparison to the LTA of 8.9 percent, and 17.6 percent recorded during similar period in 2018 (Figure 10). The improvement is attributed to consumption of acceptable diets by households owing to improvements in general food security situation. In the

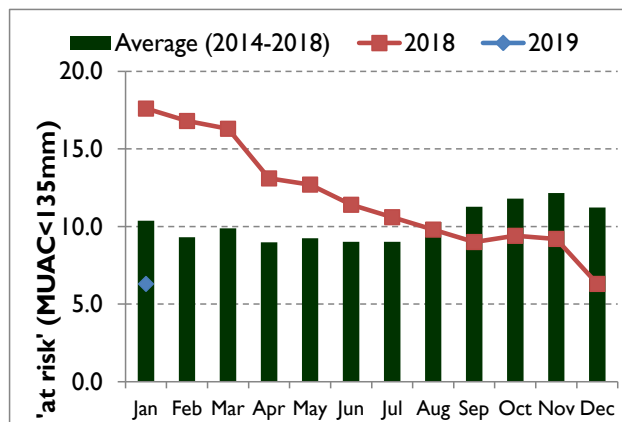


Figure 10: Proportion of children at risk of malnutrition (MUAC) Kajiado County

period July – December 2018, the proportion of children who were underweight has been on the decrease with the exception of September where it increased slightly. This is chronic malnutrition affected by inputs from multiple sectors.

### Admission trends for selective feeding programmes (OTP/SFP)

**Table 11: Selective Feeding Data Admission Trends (SFP)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	462	717	602	283	904	354	445	251	267	278	186	161
2017	159	250	513	571	808	731	418	304	242	488	912	702
2016	16	11	167	92	66	78	98	78	46	50	47	82

**Table 12: Selective Feeding Data Admission Trends (OTP)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	250	232	265	190	289	145	302	176	185	209	99	105
2017	70	153	227	196	217	291	300	74	98	154	783	283
2016	184	67	166	58	91	156	169	177	229	147	117	24

The SFP and OTP admission trends in July – December 2018 have been on a decreasing trend compared to similar period in 2017, table 11 and 12. This has been linked to improved food security and nutrition situation.

### 3.3.4 Hygiene and Sanitation

Approximately 86 percent of households were aware of four critical hand washing moments (after toilet, before eating, before cooking and after taking the child to the toilet), however, only 14.6 percent are practicing hand washing at four critical times while 47.1 percent at three critical times with only 19.5 percent of households practicing hand washing after taking child to the toilet. Only 30.6 percent of households treated their drinking water. Approximately 41 percent of households relieved themselves in toilets while majority of households (52.9 percent) relieved themselves in the bush/field due to low latrine coverage (Latrine coverage 40.6 percent). Cases of water related diseases such as cholera outbreak and dysentery were experienced during the period. The ongoing cholera outbreak was traced to faecal effluent discharge contamination in the Ewaso Nyiro River upstream in neighboring Narok County where similar outbreak has occurred. Other significant sources of water contamination in the county include Isinya flower farms discharge of effluent and horticultural farmers in Kajiado South use of chemicals eventually swept into domestic and livestock water sources.

### 3.4 Trends of key food security indicators

The county was classified as “Minimal” (IPC Phase 1) in mixed and agro-pastoral livelihood zones while it is “stressed” (IPC Phase 2) in some pastoral zone during the long rains assessment of July 2018 and has remained the same in the current assessment. The performance of food security indicators comparing the long rains and short rains seasons are shown in Table 13.

**Table 13: Food Security Trends in Kajiado County**

Indicator	Long rains assessment, July 2018	Short rains assessment, February 2019
Percent of maize stocks held all actors- local maize supply	90 %	65%
Livestock body condition	Cattle - Good Sheep and goats- Fair to good	Cattle - Good Sheep and goats - Good



Indicator	Long rains assessment, July 2018	Short rains assessment, February 2019
Water consumption (litres per person per day)	20L	Pastoral=10-15 Agro Pastoral=15-20 Mixed Farming=20
Price of maize (per kg)	43	48
Return trekking distances (Km)	Pastoral =3-5 Agro Pastoral =0.2-2	Pastoral =5-12 Agro Pastoral =0.5-8
Terms of trade (pastoral zone)	44	87
Coping strategy index	7.1	3.85
Food consumption score (Poor, Borderline, Acceptable)	19:30:51	Pastoral P=16, B=19, A=65 Agro Pastoral P=0, B=8, A=92

### 3.5 Education

#### 3.5.1 Access (Enrolment)

There were no significant difference in enrolments from term one to term three for both girls and boys. ECD enrolment increased by 2,948 (1,788 boys, 1,160 girls) at the end of Term 1, Table 14. The increase was due to availability of teachers supported by County government and provision of food for school going children. Primary school enrolment was 11,247 (4,523 boys, 6,724 girls) the increase was due to provision of meals by the government and community empowerment on importance of education. Secondary school enrolment increased by 1,805 attributed to 100 percent transition policy and free day secondary initiative by the National government.

**Table 14: Enrolment**

Enrolment	Term III 2018			Term I 2019		
	Boys	Girls	Total	Boys	Girls	Total
ECD	14,629	15,425	30,054	16,417	16,585	33,002
Primary	67,864	65,493	133,357	72,383	72,217	144,604
Secondary	13,826	11,152	24,978	13,979	12,804	26,783

#### 3.5.2 Participation

The attendance rate for both boys and girls was good across the county for ECD, primary and secondary school. There were few cases of absenteeism in primary and secondary schools which was attributed to free primary and secondary education and the school meal program for ECD and most school in the county. Absenteeism of girls was higher than for boys since girls miss schools during menstrual period because the sanitary pads given to the girls are shared with other siblings and parents at home and sometimes they are left at home to take care of the young ones when parents go for markets.

#### 3.5.3 Retention (Drop out)

There were few cases of drop out as captured in the Table 15 below. The number of dropouts across all levels of institutions was minimal attributed to provision of milk in ECDs, school meal programme in most schools and free day secondary schools. It was noted that dropout rate is higher in boys than girls due to boys engaging in income generating activities such as *boda*, while girls are mainly due early pregnancies. At ECD level, dropouts mainly affect children with

special needs and who are enrolled in schools that do not have special units. In addition, distance to schools is another reason why children drop out.

**Table 15: Drop Out**

Student drop out from school.	End of Term II 2018		End of Term III 2018	
	Boys	Girls	Boys	Girls
ECD	10	9	4	4
Primary	47	70	39	56
Secondary	19	15	13	16

### 3.5.4 School Meals Programme

A total of 358 public primary schools are under the Home Grown School Meals Programme (HGSMP) supported by the Government of Kenya (GoK) Table 16. The availability of meals at schools have resulted to improve learner’s enrolment, attendance and retention. The food basket includes maize, beans, vegetable oil and salt. The Home Grown School Meals Programme is the only programme in all public primary schools in the county. Occasional delay in disbursement of HGSMP fund to primary schools which delayed the procurement processes has constrained the provision of meals to pupils.

**Table 16: School with meal programme**

Sub-County	HGSMP		
	No. of Schools with school feeding	Boys	Girls
Kajiado North	14	9,339	9,414
Kajiado West	106	14,821	13,376
Isinya	31	4,836	3,578
Loitokitok	88	4,825	4,778
Mashuuru	9	2,009	2,000
Kajiado Central	110	15,606	14,734
<b>Subtotal</b>	<b>358</b>	<b>51,436</b>	<b>47,880</b>

## 4.0 FOOD SECURITY PROGNOSIS

### 4.1 Prognosis Assumptions

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

- The onset of the Long Rains will be timely and performance will be good in terms of both spatially and temporal distribution.
- The County is not likely to experience influx of livestock from neighbouring counties
- Available pasture and browse is likely to last for the next two to three months. Livestock will therefore not likely to move outside the county in search of pasture during this period.
- Livestock productivity including their body condition and prices will remain good and stable for the next three months as pasture and browse remain available
- The expected maize harvests in some of the Agro Pastoral and Mixed farming zones will improve maize availability and stabilize maize prices

## 4.2 Food Security Outlook

**March to May:** Food security situation is expected to remain stable and off season rains experienced in January led to regeneration of pasture. Livestock will continue to fetch good market prices due to good body condition as a result of availability of forage. Water consumption is likely to increase from April when the Long Rains sets in.

**June to August:** The current forecast for the Long Rains performance for the region covering the county is near normal with a tendency to above normal. If this holds, food security outcomes are expected to improve further in all the livelihood zones. Water sources are likely to be re-charged, as well as regeneration of pasture and browse. The good livestock body condition is expected to be sustained during the period. Milk production is anticipated to increase owing to available pasture and browse and reduced return trekking distances to water sources. Crop production in the agro pastoral and mixed farming livelihood zones is expected to be realized. Food consumption is expected to improve further owing to available milk and food commodities in the markets.

## 5.0 CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusion

#### 5.1.1 Phase classification

The county is classified as “Minimal” (IPC Phase 1) in mixed farming livelihood zones while it is “stressed” (IPC Phase 2) in pastoral and agro-pastoral livelihood zones. Though there are few pockets experiencing food insecurity, the county food security situation is expected to remain stable. A number of factors that need to be monitored include availability of maize at household and market level, post- harvest losses for maize, as well as continuous livestock disease surveillance. The Long rains are the most reliable season in most parts of the County and it will largely influence the outcome of food security for the remaining part of the year.

#### 5.1.2 Summary of the findings

The main drivers of food insecurity in Kajiado County include poor temporal distribution of rain especially in December that led to wilting of maize crop and poor generation of pasture, encroachment of grazing land that has rendered livestock keepers’ food insecure. Approximately 552 cases of cholera were reported during the season. The number of children at risk of malnutrition has declined to 6.3 percent as compared to 17.6 percent in January 2018, and LTA of 8.9 percent. Purchasing power has increased due to improved livestock prices as a result of good body condition and functioning markets.

#### 5.1.3 Sub-County Food Security Ranking

**Table 17: Sub-County Food Security Ranking (Worst to best)**

Sub County	Food security rank (1-10)		Main food security threat (if any)
Very Good	Good (5)	Fair (3,4)	Poor (2) Very Poor (1)
KAJIADO WEST	1		Cholera outbreak Low latrine cover Depleted pastures Water stress Higher malnutrition rates

		Poor market access due to poor roads Minimal crop production
KAJIADO CENTRAL	2	Pasture depression-ipomoea invasion, prolonged dry spell Water stress High malnutrition rates Parts-livestock disease-LSD, FMD Human/livestock/wildlife conflict
KAJIADO SOUTH	3	High crop failure Water stress Depleted pasture Livestock disease-FMD, LSD Poor market access Human/livestock/wildlife conflict
KAJIADO EAST	4	Good livestock body condition Fairly adequate pasture and browse
KAJIADO NORTH	5	Adequate access to markets Fairly adequate water access Malnutrition rates are lower Mixed farming- high potential Better agro-climatic conditions Higher adaptation to innovations and technology

**Table 18: Population requiring food assistance**

Sub County	Rank	Population range (Percentage)
KAJIADO WEST	1	25-30
KAJIADO CENTRAL	2	5-10
KAJIADO SOUTH	3	5-10
KAJIADO EAST	4	5-10
KAJIADO NORTH	5	0

## 5.2 Ongoing Interventions

### 5.2.1 Food interventions.

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
<b>Health and Nutrition</b>							
Vitamin A Supplementation	Improved nutrition status	Health facility	Children	200,000	104,084	Ongoing	CDH
IYCN Interventions (EBF and Timely Intro of complementary Foods)	Help adopt proper feeding habits	All County	Children	20 M	5,000 Infants	Ongoing	CDH
Zinc Supplementation	Aid in reduction congenital malformation and boost immune system.	Health facility	Patients	10 M	23,681	Ongoing	CDH
Iron and Folic acid supplementation among pregnant women	Help to reduce risk of iron deficiency and anaemia in pregnant women	All County	Pregnant women	20 M	29,998 pregnant mothers	Ongoing	CDH
<b>Agriculture Sector.</b>							
Promotion of drought tolerant crops (Normal extn work)	Improve food availability at household level.	All wards	Reduce low yield	750,000	4,000	continuous	MOA

### 5.2.2 Non-Food interventions.

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
<b>Agriculture Sector.</b>							
Capacity building on utilization and post-harvest handling of crops	Equip farmers with knowledge on how to manage crops	All wards	Farmers	500,000	2,000	Continuous	MOA/KEPHIS and other partners
<b>Livestock Sector.</b>							

Provision of Demand Driven Extension Services	Enhance food security through provision of information and interventions for maximum livestock production.	All sub counties	farmers	6 M	All farmers in the sub counties	Continuous	Livestock department staff
Capacity building and sensitization on invasive weeds, rangeland reseeding and pasture conservation	Ensure livestock feed security	Kajiado Central, West, South and East	Farmers	500,000	500 community members	Continuous	Livestock production RPLRP
Regional Pastoralist Livelihood Resilience Project	Enhance food security through provision of information and interventions for maximum livestock production.	All sub counties	Livestock farmers	2 M	All farmers/pastoralists in the sub counties	1 year	Livestock department and RPLRP staff
<b>Health and Nutrition.</b>							
Management of Acute Malnutrition (IMAM)	Improved health	County wide	Children health	20 M	400000	MOH and County Government	Ongoing
<b>Education Sector</b>							
Improved Sanitation facilities	To prevent spread of diseases in schools and community.	All schools	School children	3 M	All Schools	2 years	MOE and County Government
Provision of plastic tanks to schools ( 1,000 learners)	To enhance rain water harvesting and water storage	All Schools	School children	10 M	All Schools	2 years	MOE and County Government
<b>Water Sector.</b>							
Rehabilitation of water pan	To enable constant supply of water	Olasit	Community	2 M	1500	Immediate	CGK

Drilling and equipping of borehole	To maintain the boreholes	Merrueshi, Ilmunkush, poka, Isinya, Ngong and Olkeri	Water availability	8 M	300,000	1 year	CGK
School shamba irrigation system	To equip schools with water	All schools	Students	40 M	All schools	Continues	CGK

### 5.3 Recommended Intervention

#### 5.3.1 Food interventions

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
<b>estock Sector</b>							
Facilitate farmers with hay baling facilities.	Motorized hand held grass cutters and fabricated metallic hay boxes	All sub-counties	Farmers	2 M	Farmers /pastoralists within the sub-counties	1 year	Livestock production department & the beneficiaries
Rangeland Reseeding	Sustaining natural resources and productive environments	West, East, South, Central	Farmers	2 M	Livestock farmers in the four Sub-counties	2 years	Livestock production department & the beneficiaries
<b>Education Sector.</b>							
SMP to be expanded to cover all primary schools.	To enhance access, participation and retention in primary schools	All schools without school meal programmes	All pupils	15 M	100000	1 year	MOE and County Government

<b>Health and Nutrition.</b>							
Distribution of water treatment tabs	Improve water hygiene	Kajiado west, south, central, east and north	Community	2 M	100,000	1 year	CDH and Development partners
Provision of portable water testing kits(chemical and bacteriological)	Improve healthy water to the community	Kajiado west, south, central, east and north	Community	1 M	100,000	1 year	CDH and Development partners
Baby friendly community initiative	Help to improve proper growth of infants and address breast feeding practices to women	West, Central, East and North sub counties	Community	0.8 M	100,000	1 year	CDH and Development partners

### 5.3.2 Non-Food interventions

<b>Intervention</b>	<b>Objective</b>	<b>Specific Location</b>	<b>Activity target</b>	<b>Cost</b>	<b>No. of beneficiaries</b>	<b>Implementation Time Frame</b>	<b>Implementation stakeholders</b>
<b>Agriculture Sector</b>							
Excavation and De silting of Dams	Improve water availability	County wide	Community	5 M	100,000	2 Years	National and CGK
Relief seed	Improve crop yields	County wide	Community	1 M	200,000	1 Year	MOA at National and CGK, Other Partners
Rehabilitation of Nguruman irrigation Scheme	Improve crop production.	Kajiado West (Magadi)	Community	2 M	10,000	2 years	CGK, National Government and other partners
<b>Livestock Sector</b>							
Capacity build farmers on pasture	Increase on crop	All sub-counties	Farmers	2 M	200,000 farmers	1 year	Ministry of Agriculture



production and conservation	production						
Establishment of cultural Center at Magadi Ward with a component on hay production and beekeeping	Improve livestock production and bee production	Kajiado West magadi ward	Community	Planning Stage	20,000	Planning Stage	Globally Important Agricultural Heritage Systems.
<b>Health and Nutrition.</b>							
Capacity building on M&E on sanitation	Improve sanitation	Kajiado west, south, central, east and north	Community	1 M	100,000	1 year	CDH and Development partners
Sensitization forums for vulnerable groups	Help to create awareness	Kajiado west, south, central, east and north	Create awareness	1 M	150,000	1 year	CDH and Development partners
Provision of public sanitary facilities in urban centers	Help to create awareness	Kajiado West, south, central, east and north	Community	3 M	100,000	1 year	CDH and Development partners
<b>Water Sector.</b>							
Training of Community water sources management committees.	Enhance water availability in communities	All county	Community	3 M	200,000	5 years	CGK/NDMA/ Other Dev Partners
Upgrading shallow well to a borehole	Enhance water availability in communities	All sub counties	Community	4 M	200,000	3 years	CGK/NDMA/ Other Dev Partners
<b>Education Sector.</b>							
Community sensitization on benefit of	Empower the community to know the	All county	Capacity building	5 M	10000	1 year	MOE, County Government and NGOs

Education	importance of Education to students.						
Provision of plastic tanks to schools ( 1,000 learners)	To enhance rain water harvesting and water storage	Kajiado central	Water catchment	5 M	10000	1 year	MOE and County Government and Caritas.
Opening of new schools	To reduce on trekking distance coverage by students	Kajiado Central	More schools	100 M	50000	2 years	MOE and County Government
Improvement of infrastructure development such as building of modern latrines	To provide suitable learning environment to learners	All county	Suitable learning environment	100 M	100000	3 years	MOE and County Government