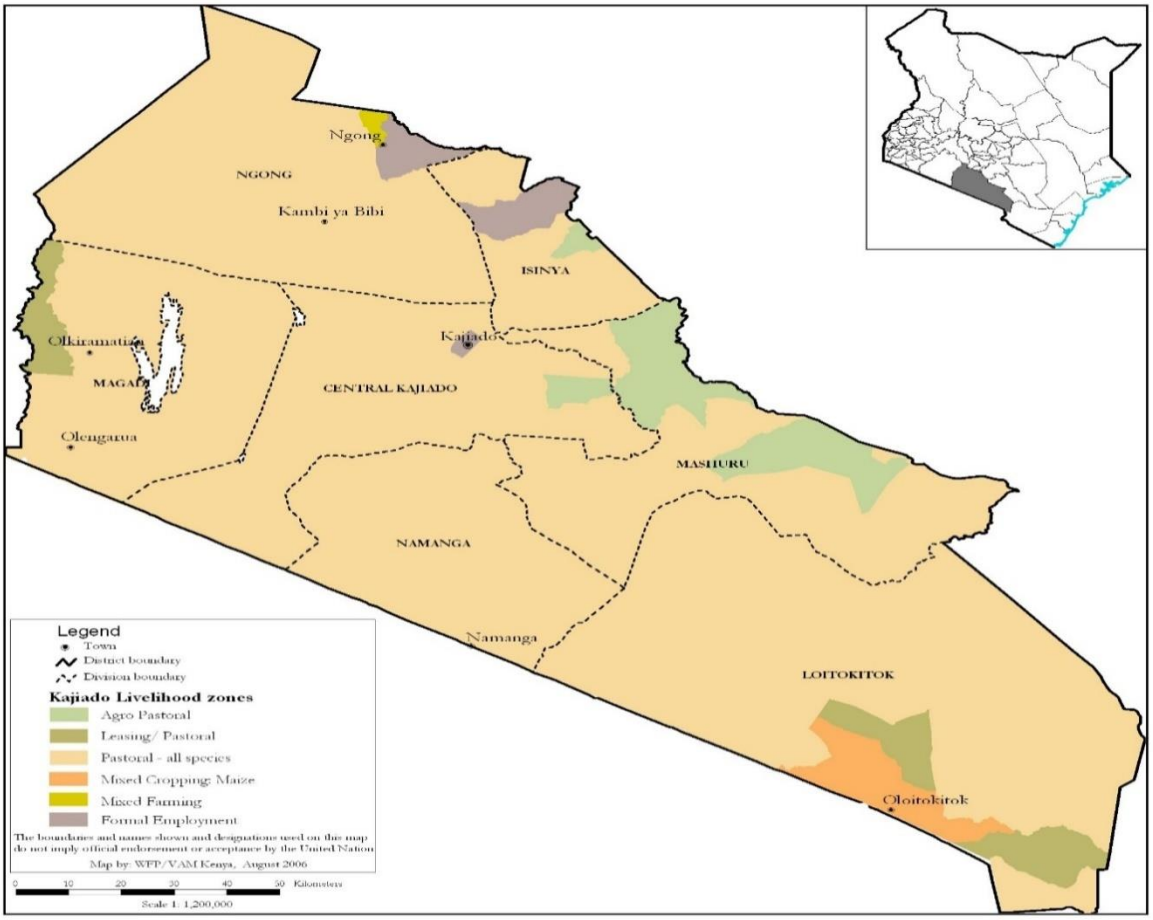
KAJIADO COUNTY

2018 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report of Kenya Food Security Steering Group[1] and Kajiado County Steering Group

August, 2018

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Executive Summary

The Long rains assessment was conducted between 13th and 18th August, 2018 led by a multi-agency team comprising of KFSSG and Kajiado county steering group. A multi-sectoral approach was adopted during the assessment covering agriculture, livestock, health and nutrition, water and sanitation and education. Long rains assessment aimed at establishing an objective, evidence based and transparent food security situation.

Rainfall performance was good during the season under review. Overall household food availability improved through own farm crop production; although maize production projected yields are expected to decline by 40 percent of their LTA. The decline was attributed to a drastic increase in crop infestation by the Fall Armyworm (FAW) and Maize Lethal Necrosis Disease (MLND) which have been affecting the zones since short rain seasons of 2017 and also due to earlier than expected start of the rains that affected land preparation activities. The livestock body condition was good to fair across all the livelihood zones. Household Tropical Livestock Units (TLUs) declined due to high mortalities experienced during the drought of 2015/2017, selling of small stock to cover household expenditure, loss of sheep and goats to diseases and a tendency of livestock keepers to keep more goats than cattle as they are more drought resistant especially in pastoral livelihood zone. Pasture and browse condition is also good and expected to last to the start of the short rains.
Household access to food improved with the average price of maize in July 2018 declining to Ksh. 43 compared to Ksh. 60 per kg in January 2018, which was attributed to the ongoing harvesting of maize. The terms of trade (ToT) for July improved by 85 percent (from 42kg to 78kg) compared with January 2018. The improvement was occasioned by the increase in goat prices which were 8 percent above long term averages. Distance to water sources for domestic use reduced with pastoral livelihood zone distances reducing recording about 70 percent reduction compared to normal. The morbidity patterns showed that upper respiratory tract infections (URTI) cases increased by 51 percent compared to a similar period in 2017 in under five and the general population, which was attributed to abnormal wet and cold weather experienced as result of the above average long rains.

The food security outcomes for the county improved during the assessment period as result of above normal long rains performance. The proportion of households with acceptable food consumption score (FCS) from January to July 2018 averaged over 51 percent in the three livelihood zones implying that majority of households had improved dietary diversity and meal frequency. The mean coping strategy index for the three livelihood zones for the period under review was 7.1 compared to 6.1 same time last year, pointing to a deterioration in household food consumption. The decline was attributed to cumulative effects of previous droughts which resulted in loss of livestock by most households which is the main source of livelihood therefore employing negative coping strategies. The proportion of children under five years at risk of malnutrition, based on mid upper arm circumference (MUAC) of < 135 mm, was 10.6 percent in July, 2018; representing a 24.8 percent improvement compared with similar period last year. The Global Acute Malnutrition (GAM) rates were at serious level (10 percent) but below the WHO emergency threshold of 15 percent.

The county is classified as “Minimal” (IPC Phase 1) in mixed and agro-pastoral livelihood zones while it is “stressed” (IPC Phase 2) in some pastoral zone. The main drivers of food security in Kajiado County for the season under review include performance of the long rains, flooding, human wildlife conflicts, crop and livestock pest and diseases.

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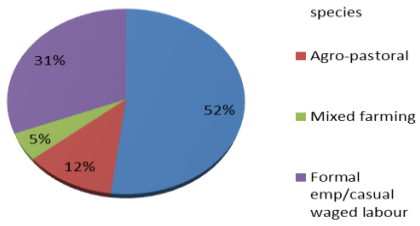
1.0 INTRODUCTION

1.1 County Background

Kajiado County covers an approximate area of 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: Proportion of population by livelihood zones



1.2 Objectives and approach

The overall objective of the assessment was to conduct an evidence-based and transparent food security situation analysis following the long rains season of 2018 taking into account the cumulative effect of the previous seasons; as well as to provide recommendations for possible response options based on the situation analysis by building a consensus. The specific objective was to review existing data on the current situation analysis as provided by the various sectors and determine the food security trends for previous seasons.

The assessment methodology employed included an initial county status briefing which was conducted on 13th August 2018, with presentation of sectoral checklists from agriculture, livestock, and water, education, health and nutrition sectors. Field data collection was done by two teams; in the southern and western parts of the county respectively, conducting transect drives across the three livelihood zones in order to have a quick assessment of the field situation on the performance of the season for two days. The teams visited sites in Mashuru, Loitoktok, Lenkisim, Namanga, Ngurumani, Pakase, Kamukuru and livestock markets of Kimana, Shompole and Olekrimatian. During the transect drives, the teams collected sector-wide food security data using community and household interviews, focus group discussions and key informant interviews.

The collected primary and secondary data was analyzed on the fourth day, the county food security draft report compiled for sharing during the de-briefing in the County steering group meeting on the last day.

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

The onset of the long rains season was in the first dekad of March which is normal. Heavy rains were experienced in the second dekads of March and April. A total of 532.2 mm of rainfall was experienced between March and May, 2018 compared the long term average of 189.6 mm. Temporal and spatial distribution of the rain was good across all the livelihood zones. The county received over 350 percent of the long term average (Figure 2). Cessation was normal in the third dekad of May.

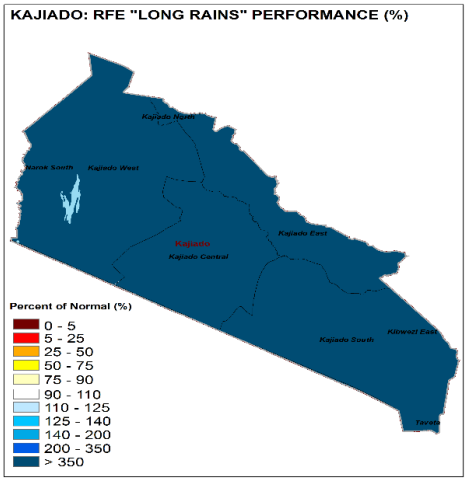


Figure 2: Long Rains Performance

2.2 Insecurity/Conflict

There are no major cases of conflicts or insecurity within the county during the assessment period. However, some few isolated cases of human – livestock – wildlife conflict have been reported in some areas in the pastoral and agro-pastoral which results to destruction of crop and competition for pasture, browse and water.

2.3 Other shocks and hazards

The heavy rainfall experienced in various agricultural areas caused flooding that hampered crop performance. The floods submerged crop plantations in areas like Kimana, Namelok and Nguruman. Floods that occurred in various parts of the county also led to disruptions of transport activities after major roads became impassable. There was also destruction of property and infrastructure such school facilities and roads particularly. In some irrigated crop production areas, floods in the area led to washing away of farms and destruction of maize, beans and other crops grown in the areas. For example, the floods led to damage of water canal in Namelok irrigation scheme, water intake in Nguruman irrigation scheme was completely washed away negatively affecting the crops under irrigation and posing a food security in these irrigation schemes. Maize production was affected by infestation of the Fall Armyworm (FAW). For example, all farms surveyed in Kajiado Central and Kajiado South were at least 30% FAW infested. There was an upsurge of livestock diseases mostly affecting the small stock which include Contagious Caprine Pleuro pneumonia(CCPP), Pestes des Petits Ruminants (PPR), Rift Valley Fever (RVF), Foot and Mouth Disease (FMD), Lumpy Skin Disease (LSD) and Heart water (sheep and goats). Only Ring vaccinations were done against PPR and RVF.

3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

3.1.1 Crop Production

Long rains season is not the main season for crop production in the county with the major crops grown being maize, beans and Irish potatoes. Maize production contributes 20 and 15 percent cash income for agro-pastoral and mixed farming livelihood zones respectively.

Rain fed crop production

Hectarage under maize decreased by 18 percent compared to the LTA and consequently the projected yields are expected decline by 40 percent of their LTA (Table 1). The decrease was attributed to a drastic increase in crop infestation by the Fall Armyworm (FAW) that has been affecting the zones since short rain seasons of 2017. Farms surveyed in Kajiado Central, and Kajiado South showed that at least 30% were FAW infested. In the agro-pastoral and mixed farming livelihood zones, hectarage and production under maize dipped due to devastation of the FAW and MLND. The heavy rainfall experienced also interfered with normal land preparation activities hence reduction of acreage. The area under beans decreased slightly by three percent of the LTA. However, bean production is expected to increase by 79 percent due to the above normal rainfall performance and availability of subsidized seeds (3.6 tons) provided by the County Government. Area under Irish potatoes decreased by 44 percent of the LTA, majorly due to the heavy rainfall that affected the crop performance and also due to scarcity of certified seeds. The projected production is expected to decrease by 38 percent compared with the LTA.

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

Crop	Area planted during 2018 long rains season (Ha)	Long Term Average (5 year) area planted during the long rains season (Ha)	2018 long rains season production (90 kg bags)	Long Term Average (5 year) production during the long rains season (90 kg bags)
Maize	6,672	8,140	146,674	244,200
Beans	21,709	22,335	310,895	173,920
Irish potatoes	192	340	6,550	10,500

Irrigated crop production

The main crops grown under irrigation in order of priority are tomatoes, maize and kales as indicated in Table 2. The hectarage under tomatoes, maize and kales increased by 30, 18 and 25 percent respectively when compared to their LTA. Production of tomatoes declined by 16 percent while that of Maize and kales increased slightly by 16 and 5 percent respectively of the long term means. . The decline in production is as result of heavy rains received during the season that led to water logging and tomato diseases which affected crop performance.

Irrigation schemes were affected by the above normal long rains which caused flooding resulting to damage of water canals, water intake and washing away of farms in Namelok, Kimana and Nguruman irrigation schemes. In Nguruman irrigation scheme the hectarage under production reduced from 150 to 80 hectares while production of maize is expected to decline from the normal 17 bags per acre to 10 bags per acre. Maize in the scheme was also attacked by FAW and MLND which are estimated to cause a 50 percent reduction in production. Therefore, unless the irrigation schemes are fully rehabilitated, households that depend on the scheme will remain to be food insecure.

Table 2. Irrigated Crop

Crop	Area planted during the 2018 long rains season (ha)	Long Term Average (3 years) area planted during long rains season (ha)	2018 long rains season production (MT)	Long Term Average (3 years) production during 2018 Long rains season (MT)
Tomatoes	1,330	1,020	15,780	18,890
Maize	200	170	3,250	2,800
Kales	50	40	40	38

Cereal stocks

Maize stocks held by households, traders and millers are currently at 90, 124 and 96 percent respectively compared to the LTA (Table 3). Households within the mixed farming zones have higher food stocks as compared to farmers who are in the agro-pastoral zones. Farmers in the pure pastoral zones have no stocks and wholly depend on the markets for their food. The maize stocks held by different players are normal and are expected to increase slightly as harvesting is still in progress in the mixed farming and the agro-pastoral livelihood zones. The stock held by households in the mixed farming are expected to last for 2 months compared to a normal of 3 months, 1 month

in the agro-pastoral compared to a normal of 2 months and 3 weeks compared to a normal of one month in the pastoral livelihood zone. However, maize stocks are expected to increase considering the ongoing maize harvesting in the county. The pastoral livelihood zone usually depends on the supply of maize from the market. With the ongoing harvesting in the mixed and agro-pastoral livelihood zones and the good goat prices, maize supply in the pastoral zone is expected to stabilize. Cases of aflatoxin were also reported in Kajiado South and Kajiado West due to heavy rains, high humidity, and destruction by pests and lack of maize storage facilities.

Table 3: Quantities held currently (90-kg bags)

Commodity	Maize		Beans	
	Current	LTA	Current	LTA
Farmers	40,010	44,280	56,175	42,600
Traders	13,936	11,230	10,926	14,250
Millers	7,983	8,345	0	0
Food Assistance/NCPB	148,709	0	0	0

3.1.3 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 enable households to acquire other food commodities such as maize, beans, wheat flour and to cater for other household needs.

Pasture and browse Condition

Current pasture and browse conditions are good and stable for all livelihood zones, following good performance of long rains season and maintenance of cool temperatures. Pasture conditions compare favorably with the long term average and are higher than normal attributed to the above normal rains received this year. Pasture supply is expected to last for 3-4 months in pastoral zones as compared to normal of 2-3 months if conditions remain the same but there is a major concern that the sporadic off-season rains experienced in the month of August could compromise the quality of standing hay. In the agro-pastoral and mixed farming zones, pasture is expected to last 4-5 months compared to normal situations of 2-3 months. Browse condition is good in all the livelihood zones and is expected to last 4-5 months compared to a normal of 4 months.

However, access to pasture and browse is limited by the invasion of Ipomoea spp and Prosopis spp (Mathenge) in Purko, Ildamat and Matapato North wards (Kajiado Central), Shompole, Olkramatian, Nguruman (Kajiado West) and Mashuru ward (Kajiado East). Shompole and Pakase areas are Tsetse prone, hindering access to pasture on the hills around the area as locals avoid them to limit Trypanasomiasis infections on livestock. Sub-counties bordering Nairobi city and major trading centres have also lost considerable pasture lands to real estate developments.

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	Good	Good	3-4	2-3	Invasive species- Ipomeas spp Prosopis spp, Tsetse fly infestation, human wildlife conflicts	Good	Good	4-5	4	
Agro-pastoral	Good	Good	4-5	2-3	Invasive species- Ipomea spp	Good	Good	5	4	
Mixed farming	Good	Good	4-5	2-3	Invasion by inedible Herbage, land demarcations	Good	Good	5	4	

Crop residues and other non- grass species grown in agro-pastoral and mixed farming zones such as Lucerne/ Alfalfa, Desmodium, Sweet potato vines and Fodder maize (mainly for silage) are also extensively as supplementary livestock feeds.

Livestock Productivity

Livestock body condition

Livestock body conditions are good for cattle across all livelihood zones which is normal for the same time of the year attributed to availability of surplus pasture, browse, water, low minimal livestock migration (Table 5). The body condition for sheep and goats across all livelihood zones was fair to good, which is below normal due to exposure to prolonged low temperature and wet conditions during the rains exposing sheep and goats to respiratory diseases and outbreaks like CCPP, PPR and heart water resulting to inferior body conditions.

Table 5: Livestock body condition

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

Tropical livestock units (TLUs)

The TLUs among poor households in the pastoral and agro-pastoral livelihood zones have declined by 70 and 50 percent respectively while it has remained stable for mixed farming zones. In the middle income households, the TLUs have declined by 50 percent for pastoral and agro-pastoral zones but remained stable for Mixed farming zones livelihood zones when compared to LTA (Table 6). The decline is attributed to high mortalities during the drought of 2015/2017, selling of

small stock to cover household expenditure, loss of sheep and goats to diseases and a tendency of livestock keepers to keep more goats than cattle as they more drought resistant.

Table 6: Tropical livestock units

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	3	10	12	25
Agro-pastoral	2-3	4	10	20
Mixed farming	1	1	3-5	3-5

Birth rate

Birth rates are below normal currently for pastoral zones. Following the prolonged 2015/2017 drought, livestock keepers restrained their livestock from breeding to avoid further mortalities of dams and calves and to reduce costs of production. Poor nutrition during the drought resulted in poor fertility and most breeding stock are now recovering. Most households also lost their breeding bulls in drought and depend on neighbours bulls for breeding services resulting to sometimes missed heat periods. Diseases especially for sheep and goats affected their normal breeding behaviour. It is estimated that 60 percent of female livestock are currently pregnant and kidding/lambing is expected from month of September while calving from month of November onwards. In agro-pastoral and mixed farming areas, birth rates for cattle, sheep and goats are normal for this period of the year.

Milk Production and consumption

Milk production and consumption are below normal in pastoral zones compared to LTA. Milk production and consumption declined by 70 and 40 percent respectively (Table 7). This is because birth rates for cattle are low as most cows either are in-calf or off milk because of prolonged drought; goats' milk is the most available but the production is lower when compared to cattle. This has caused consumption at household level to be suppressed. Milk production and consumption in these zones are expected to improve in the coming months as kidding, lambing and calving begins. Milk production and consumption are slightly above normal for agro-pastoral and mixed farming zones an increase of 67 and 33 percent respectively where livestock production has been stable.

Table 7: Milk Production, consumption and prices

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Ksh.)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	1-3	10	0-3	5	60-90	60
Agro-pastoral	20	12	6	4	45-60	60
Mixed farming	25	20	4-5	3	45-60	60

Migration

There were limited livestock migrations with only movements from wet to dry grazing areas in pastoral livelihood zones especially the areas neighbouring the park.

Livestock Diseases and Mortalities

There was an upsurge of livestock diseases mostly affecting the small stock which include Contagious Caprine Pleuropneumonia (CCPP), Pestes des Petits Ruminants (PPR), Rift Valley Fever (RVF), Foot and Mouth Disease (FMD), Lumpy Skin Disease (LSD) and Heartwater (sheep and goats). Only Ring vaccinations were done against PPR and RVF.

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 such as water pans and dams are still holding water after above average performance of the March-April -May rainfall season. The current water situation is slightly above normal in agro-pastoral and pastoral livelihood zones and stable in the mixed farming livelihood zone. The distances to water were 3-5 km, 1-2 km and less than 1 km in the pastoral, agro-pastoral and mixed farming zones. The distance was below the long term average at this time of the year. Livestock continue to be watered once or twice a day with minimal waiting time due to the good performance of March–May rainfall. However, water in some open water sources especially water pans has begun to decline in quality and quantity especially in the pastoral livelihood zones resulting to increase in trekking distances some areas. For example, in Kajiado West Sub-county in Singiraine, the watering frequency was once in every two days with trekking distances of up to 30 km while in Chulu, watering frequency was once in three days. Distances might also increase in Keekonyokie and Ewuaso wards (Kajiado West), Lenksim ward (Kajiado South) and Iloodokilani Ward (Kajiado Central) if no rains are received within the next 2 months. 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 2-3 months in the pastoral and 4-5 months in the agro-pastoral livelihood zones. The limiting factors affecting access to water was human/wildlife conflict and frequent breakdown of boreholes.

Table 8: Water Sources and Availability

Livelihood zone	Sources		Return average distances (km)		Expected duration to last (months)		Watering frequency
	Current	**Normal**	**Current**	**Normal**	**Current**	**Normal**	
Pastoral	Water pans, rivers, boreholes, piped water, Water canals	Rivers, water-pans, boreholes and dams	3-5	5	2-3	3	Once
Agro Pastoral	Boreholes, water pans, rivers	Rivers, water-pans, boreholes and dams	1-2	3	4-5	4	Once/ twice
Mixed farming	Water canals, piped Water	Water canals, piped water	<1	<1	unlimited	unlimited	Once/twice

3.2 ACCESS

3.2.1 Market operations

The main staple foods consumed in the different livelihoods of the county are maize, beans, millet, sorghum, sweet potatoes, Irish potatoes and rice. The major markets for livestock and food stuff in the county are Kimana, Emali, Mashuru and Shompole in the pastoral livelihood zone, Rombo, Kajiado, Ilbisil and Namanga in the agro-pastoral livelihood zone while Loitokitok, Ngong, Kitengela, Kiserian and Soko Mjinga (Ongata Rongai) are found in the mixed farming livelihood zone. Market operations remained normal in all the livelihood zones. The main livestock sold in the markets included cattle, goats and sheep while food commodities include maize, maize flour, rice, beans, kales, cabbages, Irish potatoes and an assorted types of fruits.

Supplies of food stuffs come from within the county, other surrounding counties or from the neighbouring country of Tanzania. The county has two border points Tarekea and Namanga where most imports of dry maize and pulses come through. Traded volumes varied according to the distance and the level of supply to the market. Low livestock volumes traded in the market continued to be recorded especially due to improved body conditions of livestock as the pasture had regenerated with the onset of the long rains and as such, famers were not willing to dispose of their livestock. Also demand for young stock has increased in the markets as farmers purchase them for restocking following deaths of livestock in the previous droughts which has pushed up livestock prices. Other factors that affected the markets were influx of the market by cattle from Tanzania (e.g. Kimana, Ilbissil and Shompole markets) which affected prices and poor market infrastructure (water, sanitation facilities and livestock handling facilities. Traded volumes for food commodity remained stable. Maize and beans were the food commodities in high demand across all livelihood zones.

Maize prices

The average maize price per kilogram for the month of July was Ksh.43 a decline from Ksh.45 observed in June (Figure 4). Currently, maize price in the agro-pastoral /pastoral zones is Ksh.50 per kg while in the mixed farming zones it ranges from Ksh.35 to 40 per kg. The current prices of maize are relatively low at this time compared to LTA prices. The average price of maize is expected to stabilize below the long term average due to the ongoing harvest of the crop within and outside the county.

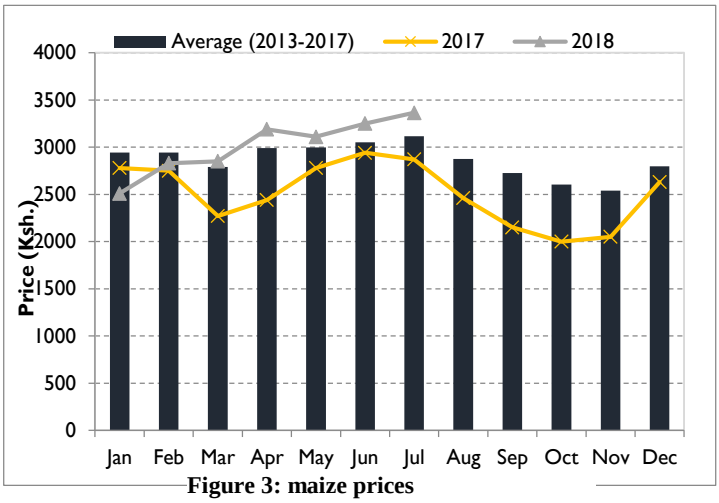


Figure 3: maize prices

Goat Prices

The average price of a mature goat improved from Ksh. 3,250 in June to Ksh. 3,364 in July. The July price was 8 percent above the long term average price (Figure 5). In Ewuaso lower price of Ksh. 2,867 was observed while Isinya reported higher prices of Ksh. 3,533. The prices of goats were likely to remain stable owing to available browse and water. However, increased demand for school fees may in September may push their prices slightly lower as school open

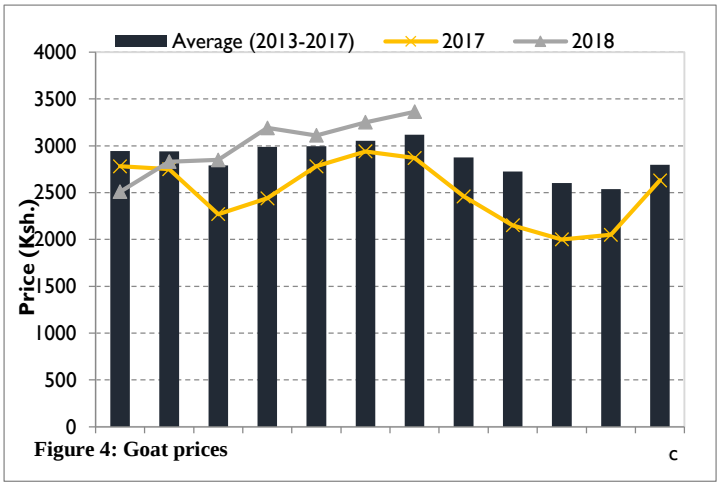


Figure 4: Goat prices

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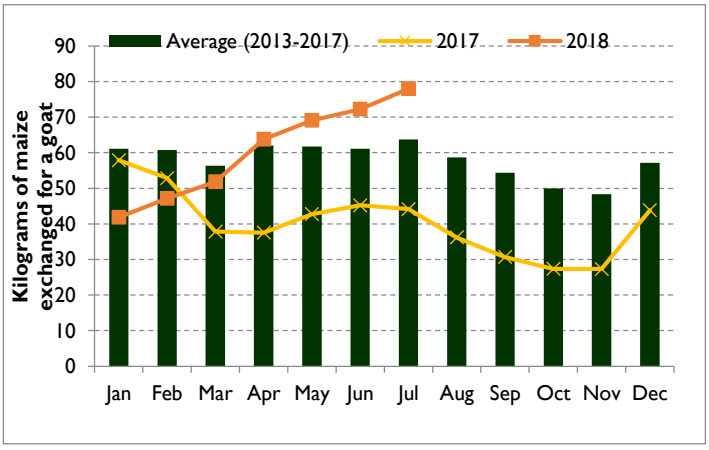
3.2.2 Terms of trade

Terms of trade (ToT) improved from 72kg of maize for every medium sized goat sold in the month of June to 78kg in July. The increase is attributed to the continuous increase in the price of goats as maize prices decrease as maize harvesting is going (Figure 5). The current ToT was 22 percent higher than the long term average of 64 kilograms of maize per goat. The TOT was favourable for pastoral livelihood zone. TOT was likely to stabilize above the long term average for the next two months for agro-pastoral and mixed farming zones but decline for the pastoral livelihood zones.



3.2.3 Income sources

In the pastoral livelihood zone the main income source of income is sale of livestock and milk while in the Mixed farming and Agro-pastoral zones have an advantage of selling both livestock milk and other farm products. Small scale farmers in the irrigated areas usually depend on sale of horticulture produce as the main source of income especially in the irrigation schemes. The income sources are normal at this time. However, incomes are expected to increase in the agro-pastoral and mixed livelihood zones as harvesting and sale of maize increases in the months of August and September. This will have a positive impact on food and nutrition security in these areas.

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 sources in pastoral and agro-pastoral livelihood zones. Springs and shallow wells are predominant in mixed farming and irrigated livelihood zones. In the season, pans and dams recharged very rapidly to between 80 and 100 percent (Table 9) as a result of above normal rains experienced in all the livelihood zones. However, the current water levels in open water sources have decreased to approximately 60 percent since the cessation of the rain in the third dekad of May. However the current volume of water is expected to last up to a period of 3months in pastoral livelihood zones. Operational boreholes are expected to last throughout the year. The proportion of households accessing protected water sources is approximately 46 and 60 percent for rural and urban areas respectively (County Water Department Checklist).

Table 9: Water Sources across Livelihoods

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	165	110	Permanent	12 Months	90%	Olepolos, Kuku ward, Lenkisim and Entonet,Itilal, Imbirikani, Mpalasha and Bisil, Motel,, Olkeri,Nalepo
	Springs	43	41	6 Months	12 Months	90%	
	Water Pans	80	54	12 Months	12 Months	100%	Spread Across the zone
Agro-pastoral	Boreholes	78	47	permanent	All year	100%	Sanjiloni, Mailwa, Olosuyiani
	Springs	16	16	12 Months	4 months	80%	Nkoben and katakala
	Water Pans	19	16	3 to 4Months	3 Months	90%	
Mixed Farming	Boreholes	2	2	Permanent	All year	100%	None
	Springs	253	186	6 Months	4 months	90%	Spread across LH zone
	Water Pans	5	3	12 Months	12 Months	100%	Kikuyani and Nairegie Enkare
	Shallow wells	43	43	All year	All year	100%	Nil

Distance to water sources and waiting time

Access to water points has improved across all livelihood zones with distances reducing from a maximum of 15km in the pastoral to approximately 5Km. This is attributed to availability of more functional water points since there is no competitive concentration of users in main sources. Therefore boreholes have remained operational. Currently, common water points are serving few users hence reducing the waiting time from a maximum of the normal 60 minutes to 30 minutes in the pastoral livelihoods.

Water consumption and Cost

Water consumption rates have also improved across all livelihood zones compared to normal. It is further noted that the availability of water has led to reduced dependency on vendors and a stable price of between 3 shillings to 5 shillings per 20 litre jerrican across all the livelihood zones. This is due to increased recharge to rivers, pans/dams.

Table 10: Water for Domestic Use

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	3 - 5	3 -5	3 -5	30-40	10-20	10 -20	10 -25
Angro pastoral	0.5 – 5	0.5 -2	3 - 5	3 - 5	30	10-20	15 - 20	20-30
Mixed farming	0.2 – 5	0.2 - 4	3 -5	2 -3	5- 10	10	20	20 -30

3.2.5 Food Consumption

The proportion of households with acceptable food consumption score from January to June was 51 percent in the three livelihood zone (Figure 7). Acceptable food consumption score implies that most households are consuming an average of 2 - 3 meals per day across the livelihood zones with good dietary diversity. Common foods groups consumed mainly are cereals and pulses and some animal proteins. Compared to a similar period in 2017, the proportion has of households with acceptable food consumption score remained relatively stable with an average of 54 percent compared to the current 51 percent implying a stable food security situation at the household level. (NDMA January-July Bulletin 2018).

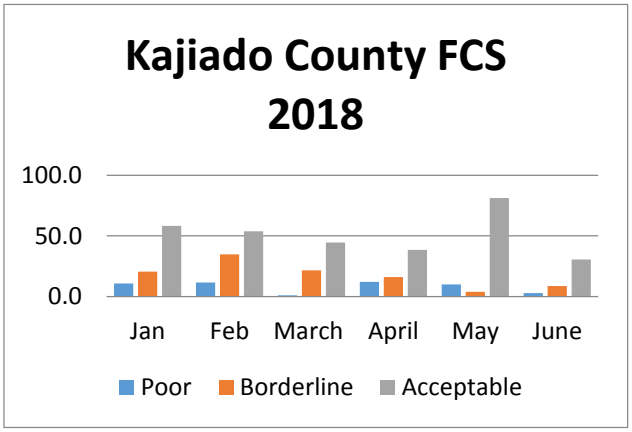


Figure 7: County Food Consumption Score Jan-June

3.2.6 Coping strategy

The mean coping strategy index for the county has remained relatively stable for the period under review with an average of 7.1 (figure 8). Compared to a similar period in 2017, the mean coping strategy index is elevated and this is attributed to cumulative effects of drought in previous seasons which resulted to most

pastoralists losing their livestock which are the main source of livelihood therefore employing negative coping strategies. This was compounded by floods in the months of March and April which limited access to markets. Use of less expensive food was the main consumption based coping strategy for most of households especially in pastoral livelihood zone (NDMA January-July Bulletin 2018).

3.3 Utilization

3.3.1 Morbidity and mortality patterns

Upper respiratory tract infections (URTI), diarrhea and Malaria were reported as the three most prevalent diseases respectively between January and June 2018 among under-fives and the general population (Figure 8). The trend of three top diseases was on the increase apart from the month of March and April when there was a drop since health services were not accessible due to the floods hence the admissions in health facilities went down (Figure 8). Compared to a similar period in 2017, there was a significant increase of 51 percent in URTI cases in both under five and the general population and this was attributed to unusual wet and cold conditions as result prolonged rainy season (Figure 9). Diarrhoea cases for both under 5 and general population increased by 24 percent compared to a similar period in 2017. The increase was attributed consumption of water from contaminated water sources due run off. The situation was made worse due to chronic open defecation and low latrine coverage especially in pastoral livelihood zone. Malaria cases also increased by 18 percent for both under 5 and general population for both under 5 and general population this was attributed to stagnant water and overgrown bushes near household providing breeding site for mosquitos coupled by low usage of insect-sides treated nets.

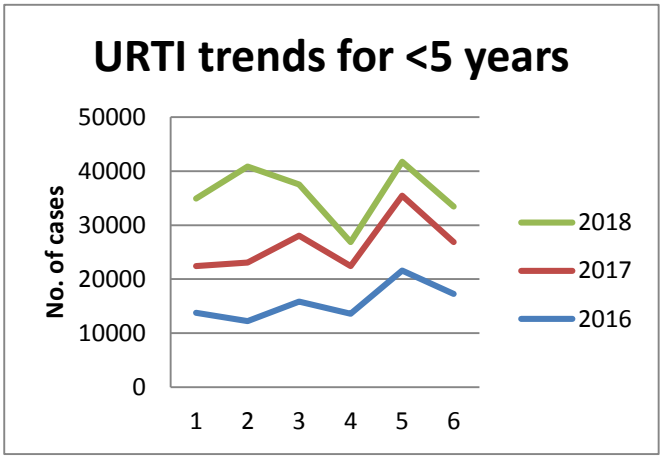
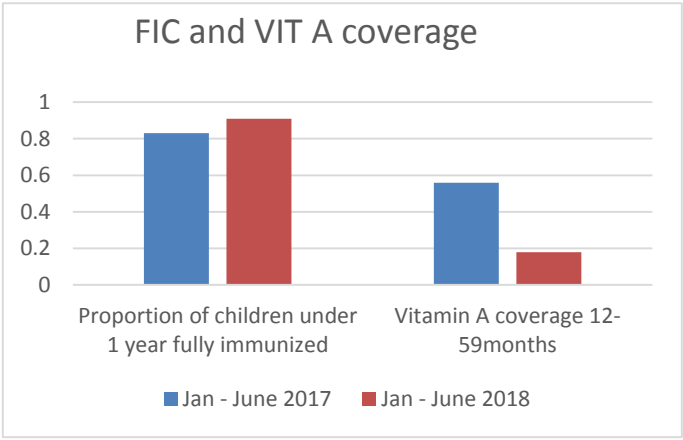


Figure 5: URTI trends for < 5 years

Figure 6: Top three diseases for both under 5 and general population.



There was reported outbreak of Cholera in Kajiado West (Mosiro and Pakase) with six confirmed cases between January and Febrauary and part of the reason for the outbreak would be

high open defecation in Kajiado West which stood at 84 percent and low latrine coverage. There was however no other notifiable outbreak of other epidemic and water borne diseases during the reporting period. Under five mortality rates and crude mortality rate (CMR) was normal and below the emergency threshold.

3.3.2 Immunization and Vitamin A supplementation

The proportion of fully immunized children in the county between January and June 2018 increased from 83 percent to 92 percent compared to a similar period in 2017; with the coverage above national target of 80 percent (Figure 10). Vitamin increased from 18 percent to 56 percent compared to a similar period in 2017, though far below the national target of 80 percent. The increase in coverage for fully immunized children and Vitamin A supplementation coverage is attributed to the integrated outreaches carried out in first quarter of 2018 which reached more children.

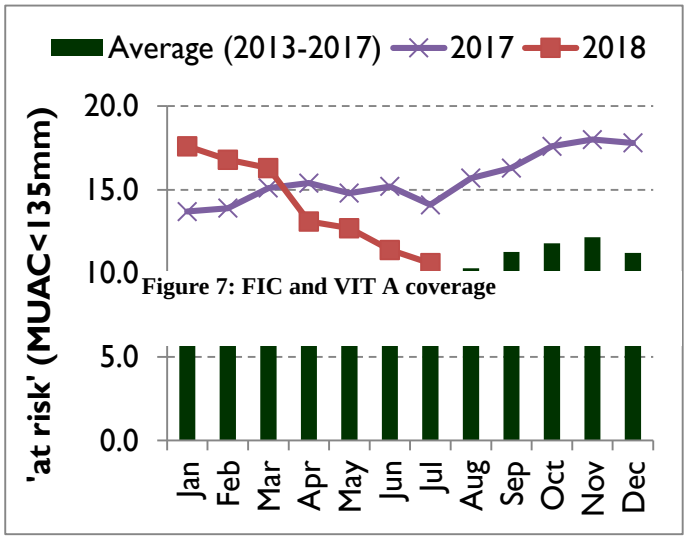


Figure 7: FIC and VIT A coverage

3.3.3 Nutritional status and dietary diversity

According to the most recent SMART survey done in January 2018, the GAM rates for the county are at serious level of 10 percent which is below the WHO emergency threshold of 15 percent. For the proportion of children under five years at risk of malnutrition based on mid upper arm circumference (MUAC) of < 135 mm, this was reported to be 10.6 percent in July 2018 compared to 14.1 percent in July 2017(figure 11). The decrease was attributed to the better performance of the long rains thereby resulting to availability of food at household level which improved the food consumption. However, there was an increase in admissions for both severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) children into outpatient therapeutic program (OTP) and supplementary feeding program (SFP) respectively compared with similar period in the last two years (Figure 12). The increase in the number of admissions was attributed to the active case findings by community health volunteers and scale up of integrated nutrition and health outreaches and mass screening in the first quarter of 2018.

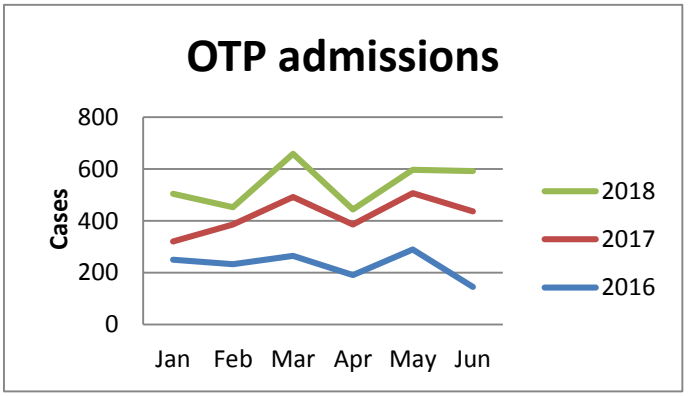


Figure 8: Nutritional status of under 5 by MUAC

3.3.4 Sanitation and Hygiene

The latrine coverage for the county as of July 2018 stood at 45 percent (CLTS monitoring database) which is a marginal increase from 41 percent as of January 2018(SMART survey). The marginal

Figure 9: Trend of OTP admission Jan-Jun

increase was attributed to intensified efforts by Kajiado county government and other development partners to implement CLTS. For the period under review, 40 villages were triggered and 2 villages have been verified as open defecation free (ODF). However, Latrine coverage and utilization is still low in the pastoral areas due to low sensitization, lack of knowledge on importance of using latrine and nomadic lifestyles. Most households practice open defecation especially in the pastoral livelihood zone, posing a health risk during rainy season. Contamination of open water sources was prevalent as livestock shared open water sources with humans. Open water sources were contaminated through surface run-off washing into them agro-chemicals, human waste and refuse.

3.4 Trends of key food security indicators

Table 11: Food security trends in Kajiado County

Indicator	Short rains assessment, Feb 2018	Long rains assessment, Aug 2018
% of maize stocks held by households	6.5 percent LTA	90 percent LTA
Livestock body condition	Cattle: Poor in pastoral, fair in mixed farming and agro-pastoral. Shoats: Fair in pastoral	Cattle good Sheep and goat- Fair to good
Water consumption (litres per person per day)	<15 Litres	20 litres
Price of maize (per kg)	Ksh. 53 (15% above LTA)	Ksh. 43
Distance to water sources	20-40 km in pastoral	3-5 km in pastoral
Terms of trade (pastoral zone)	52 Kgs	78 Kgs
Coping strategy index	6.1 percent	7.1 percent
Food consumption score	Acceptable 56% Borderline: 20% Poor: 24%	Acceptable 51 Borderline 30 Poor 19

Cross – Cutting Issues

3.5 Education

3.5.1 Enrolment

The county has 888 ECDE Centres, 432 Primary and 86 Secondary public schools with a respective enrollment of 37687, 144187 and 25694 learners (table 13).

Table 12: Enrollment

Indicator	Term I 2018			Term II 2018		
Enrolment	Boys	Girls	Total	Boys	Girls	Total
ECD	19168	18519	37687	19168	18519	37687
Primary	67870	63505	131375	74529	69658	144187
Secondary	13769	11585	25354	14032	11662	25694

Boys have a higher enrollment compared to girls across the three level (figure 13). A 10 percent and a marginal two percent increase in enrolment was observed in secondary and primary levels respectively while ECDE remained constant for term 1 and term 2, 2018. This was attributed to employment of ECDE teachers and feeding programme by county government, Free Primary Education and Free Day Secondary Education (FPE, FDSE). It was noted that some areas like Imaroro ward, (Mashuru), Lenkisim ward (Kajiado South Sub County) do not have day secondary schools. This is despite having KCPE candidates in surrounding primary schools.

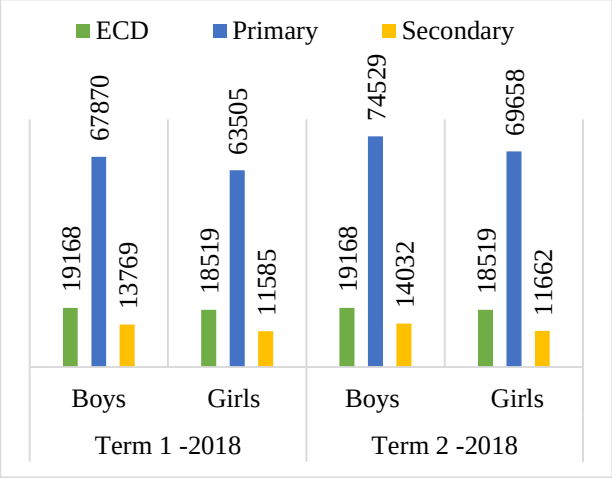


Figure-13. Enrollment

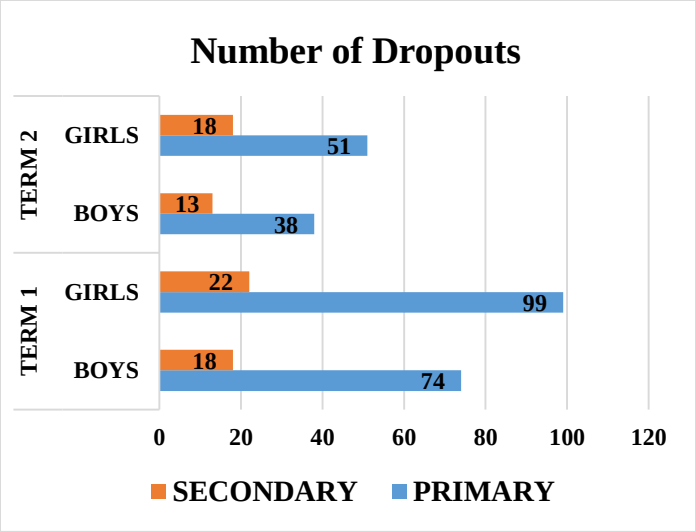
3.5.2 Participation

Attendance rates are higher for term II as compared to term I in both primary and secondary levels while ECDE remained constant (table 13). This scenario was attributable to availability of food and water for both human and livestock at household level which limited migration especially in pastoral areas and also feeding programme supported by the County Government at ECDE. At secondary level there is a marked lower boys' attendance compared to girls' (55 percent and 90 percent respectively) even though boys have a higher enrollment. Generally, low attendance rates were attributed to school fees in cases where there are no day secondary schools and herding responsibilities in the months of May June and July. It is also noted that there are more boarding school opportunities for girls as compared to boys'.

Table 13: Attendance.

		TERM 1- 2018			**TERM 2- 2018**		
Level	Gender	Jan	Feb	Mar	May	June	Jul
ECD	Boys						
	Girls						
Primary	Boys	61634	61306	61306	64397	64397	64397
	Girls	57424	57280	57280	59225	59225	59225
Secondary	Boys	13672	13751	13751	14029	14029	14029
	Girls	12020	11544	11544	11601	11601	11601

3.5.3 Retention



Across all the levels, girls are more likely to drop out of school than boys (figure 14) with highest number of drop outs recorded among primary and secondary school girls in term 1 and 2 which has been on the rise across the period. Early marriages and teenage pregnancies among girls were cited as the main cause while boy dropout is attributed to child labour where sand harvesting and other cash for labour activities have lured school boys at both primary and secondary levels.

Fig. 14 Comparison Dropouts by gender.

3.5.4 School meals programme

There are two main feeding programs in primary schools- Home Grown School Meals Programme (HGSMP)-147 schools and Expanded School Meals Programme (ESMP) in 318 primary schools benefiting 33649 and 73358 pupils respectively. At ECDE level, 10878 pupils are benefiting from County Government feeding programme.

4.0 FOOD SECURITY PROGNOSIS

4.1Prognosis Assumptions

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

- Projected normal to above normal short rains in most parts of the county
- Normal market operations with stable commodity food prices
- Current good body condition of cattle is likely to be sustained until the start of short rains.
- High goat prices to continue.
- Minimal out migration of livestock from pastoral livelihood zones
- Forage and water availability expected to be stable

4.2 Food Security Outlook

August to October 2018

Since the food security situation has improved across the county primarily due to the positive effects from the enhanced above-average March to May long rains, it is expected that the situation will remain stable based on the above assumptions. The above average performance of the rains resulted in improved pasture, browse and water situation which is projected to last up to the next rains season. Consequently, livestock productivity is expected to remain stable and hence stabilize livestock prices. However, milk production is likely to decrease below long term average due to substantial reduction in livestock tropical unit resulting from the 2015/2017 drought especially in

the pastoral areas. In the mixed farming and agro-pastoral areas, it is expected that crop production will be average to near average hence the long rains crop harvest is expected to improve household food availability until next planting season in October. The prices of maize and beans are likely to rise gradually as demand rises while stocks decrease, resulting in unfavorable ToT for pastoral livelihood zones. The county is therefore likely to remain food secure for the next two months.

November 2018 to January 2019

Forecast for the short rains points towards a normal to above normal rainfall performance in most parts of the county, the key food indicators predicted for November to January 2019 are expected to improve during this period in all livelihood zones. Water availability, pasture and browse condition and milk availability especially in the agro-pastoral and pastoral livelihood zones are expected to improve tremendously. From October, the forecasted above-average short rains are expected to intensify crop production activities, with households in the mixed farming and the agro-pastoral livelihood zones expected to intensify the hectarage planted in order to get a good harvest, resulting to increased demand for casual labour and income for most households. Improvements in forage and water conditions across all the livelihood zones will build on those of the previous seasons and result on more improvements, especially in terms of milk production, which is expected to increase to normal even in the counties previously hit by drought thus leading to improved household nutritional status. In December, short cycle crops harvest in agro-pastoral and mixed farming livelihood zones are expected, and coupled with improving milk availability, household dietary diversity and food consumption is expected to improve at the household level.

5.0 CONCLUSION AND INTERVENTIONS

5.1 Conclusion

5.1.1 Phase classification

The Mixed farming and Agro-pastoral livelihood zones are classified in the Minimal Phase (Phase 1) while some pastoral livelihood zones are classified as Stressed (Phase 2). A few pockets were affected by the floods e.g. Pakase, Namerok, Kimana which was a threat to household food security. A number of factors need to be monitored which include: Plant and livestock pest and diseases that caused substantial crop losses and reduced livestock productivity e.g. Fall army worm and MLND in maize and heart water and CCPP diseases that affected sheep and goat. The short rains will also influence the outcome of food security in the remaining part of the year especially pastoral livelihood zone and will determined if the county eventually recovers from cumulative effect of previous droughts in the county.

5.1.2 Summary of Findings

The main drivers to food insecurity in Kajiado County in this season include, long rains performance, flooding, human wildlife conflicts, plant and livestock diseases. The food security outcomes for the county have improved during the assessment period as result of above normal long rains experienced. For the nutrition indicators, the proportion of children under five years at risk of malnutrition, based on mid upper arm circumference (MUAC) of < 135 mm, was at seven percent in June, 2018 which was 52 percent below to a similar period in 2017 while the GAM rates are at alert level of 6.8 percent which remains well below the WHO emergency threshold of 15

percent. For the food consumption score, the proportion of households with acceptable food consumption score from January to April averaged over 65 percent in the three livelihood zones implying improved household dietary diversity and meal frequency. The coping strategy index for the three livelihood zones has remained relatively stable for the period under review with a mean index of 3.5 implying a stable food security situation in the county which also shows that most households are not or minimally employing consumption based coping strategies

5.1.3 Sub-county ranking

Table 14: Sub county ranking

Sub County	Food Security Rank (1-10 from worst to best)	Main Food Security Threat (if any)
Kajiado West	**1**	Low school enrolment, destruction of irrigation infrastructures, high admission for MAM and SAM, lowest latrine coverage, high incidences of livestock diseases and pests(Tstetse fly and ticks), invasion of rangeland and farms by prosposis (Mathenge), infrastructure destruction-Pakase areas cut off, Fall army worm, MLND and aflatoxin, cholera outbreak, limited access to health services.
Kajiado South	**2**	Competition from wildlife for pasture, declining water levels and increased distance to water sources, poor sanitation, destruction of irrigation infrastructures, Fall army worm, MLND and aflatoxin, Higher morbidity levels, Water scarcity, admission trends for OTP and SFP, low access to education and health services
Kajiado Central	**3**	Ipomea Invasion to pasture, Livestock mortality, fall army worm invasion, water scarcity,
Kajiado East	**4**	Pasture is degenerating, declining water levels, increasing distance to water, low/livestock crop production
Kajiado North	**5**	Diminishing land sizes due to subdivision

5.2 Ongoing Interventions

5.2.1 Food interventions

No food interventions have been reported to be on-going in the county.

5.2.2 Non-food interventions

Water Sector

On-going Interventions							
Sub County/ Ward	**Intervention**	**Location**	**No. of beneficiaries**	**Implementers**	**Cost**	**Time Frame**	**Implementation Status (% of completion)**

Kenyewa	Olkatetemai borehole	Merrueshi	800	New genset required and 2km piping	3,000,000	2017/18	Not started
Imaror	Imejooli sch borehole	Ilmunkush	800 students	Awaiting equipping	4,000,000	2017/18	30% drilling done.
Kenyewa	Oltinka borehole	Poka	1200	Needs rehabilitation	3,000,000	2017/18	Not started.
Kaputiei North	Oloshaiki borehole	Isinya	800	Needs rehabilitation	2,000,000	2017/18	Not started
Medium and Long Term On-going Interventions							
Imaror	Esilalei	Imaroro	900	5 km pipeline required	4,000,000	2017/18	Not started
Kenyewa	Oloikarra	Poka	800	Borehole rehabilitation	2,000,000	2017/18	Resources not enough.

Education

Sub County	Intervention	No. of beneficiaries	Implementers	Impacts	Time Frame
County wide	ESMP	318 primary schools	MOE	Has stabilized enrollment at primary level	Ongoing programme

Health and Nutrition Sector

Sub County	Intervention		Location	No. of beneficiaries		Implementers	Estimated Cost (Ksh.)	Time Frame
				Male	Female			
All	Vitamin A Supplementation		Health facility	18834	17807	CDH	200,000	Twice every year
All	Zinc Supplementation		Health facility	12077	11604	CDH	Ksh.23,682	Continuous
All	Management of Acute Malnutrition (IMAM)		Health facility/ Outreach sites	1457	5081	CDH/ WV	Ksh.40,000,000	Continuous
All	IYCN Interventions		Health facility	17640	16850	CDH/ WV		Continuous

	(EBF and Timely Intro of complementary Foods)							
All	Iron Folate Supplementation among Pregnant Women		Health facility	0	29759	CDH	Ksh. 300,000	Continuous
All	Deworming		Health facility	20541	20370	CDH	Ksh. 330,320	Continuous
All	3.development of urban community led total sanitation in Kajiado town		Household level					Continuous
All	Water safety and quality control		Kajiado West, South, Central, East and North			CDH	340,000	September-November

Agriculture Sector

Sub County	Intervention	Ward	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost	Time Frame
Kajiado East and Kajiado South	Survey on FCM	Kaputiei North, Olsirikon, Kitengela,	Tomato, Capsicum, citrus, beans	KALRO,CGK	Reduce crop losses	500,000	Aug - sept
County wide	Monitor and control of FAW	All wards	15,000	CGK	Reduce crop losses	1,000,000	Aug-sept
Kajiado South	Training on post-harvest Management	Rombo, Kuku and Kimana	413 farmers 14 staff trained	County and IITA	Reduce yield losses	500,000	Aug-sept
County wide	Seed distribution (DTC- Maize)	All wards	400	CGK	To boost food security	1,300,000	Aug- sept

Livestock Sector

Sub County	Intervention	Division	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost	Time Frame
All	Provision of Demand	all sub-counties	all farmers in the sub counties	livestock department	Enhance food security	as per county	continuous

	Driven Extension Services			staff	through provision of information and interventions for maximum livestock production.	livestock extension budge	
All	Capacity building and sensitization on invasive weeds, rangeland reseeding and pasture conservation	Kajiado Central and East	100 community members	Livestock production ASDSP Kajiado RPLRP	Ensure livestock feed security	as per project budget	December 2016
All	Regional Pastoralist Livelihood Resilience Project	all sub-counties	all farmers/pastoralists in the sub counties	livestock department and RPLRP staff	Enhance food security through provision of information and interventions for maximum livestock production.	as per project budget	as per project timeframe

5.3 Recommended Interventions

5.3.1 Food interventions

No food interventions have been recommended in the county.

5.3.2 Non-food interventions

Agriculture Sector

Sub County	Intervention	Ward	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Countywide	Provision of DTC (Beans, Maize, Cow peas, Green grams)	All	10,000	County Government of Kajiado (CGK)	30,000,000		Aug-Sept
Kajiado West	Rehabilitation of Nguruman irrigation scheme	Magadi	300	CGK and National Government, Development partners	100,000,000		Immediate
County Wide	General Extension	All	20,000 Households	CGK	5,000,000		Aug-Sept

Livestock Sector

County	Intervention	Division	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Kajiado	Rangeland reseeding	Kajiado West, East and Central	1500 households	CGK, NDMA, and other Partners	10 M		January – July 2019
	Livestock diseases surveillance and control	5 sub counties	5000 Households	CGK, NDMA, and other Partners	15M		All year round
	Facilitate farmers with hay baling equipment	5 sub counties	2000 Households	CGK, NDMA, and other Partners	5 M		All year round
	Rehabilitation of Cattle dips	5 group ranches	2000 households	CGK, NDMA, and other Partners	20M		January – July 2019
	Provision of extension services	County wide	5000 households	CGK, NDMA, and other Partners	10M		All year round
	Conduct regular monitoring/survey of livestock markets	Ilbisil, Kimana, Shompole, Kiserian, Mashuru, Emali, Sultan Hamud	2000 Households	CGK, NDMA, and other Partners	10M		All year round

Health and Nutrition Sector

Immediate Recommended Interventions							
Sub-county	**Intervention**	**Location**	**No. of beneficiaries**	**Proposed Implementers**	**Required Resources**	**Available Resources**	**Time Frame**
All	Capacity building on M&E on sanitation	Kajiado West, South, Central, East and North	25	CDH and Development partners	875,000	100,000 Training personnel	October - December
All	Capacity building on CLTS	Kajiado West, South, Central, East and North	20	CDH and Development partners	420,000	100,000 Training personnel	October - December

All	Distribution of water treatment tabs	Kajiado West, South, Central, East and North	50,000	CDH and Development partners	350,000	50,000 Training personnel	September-November
All	Sensitization forums for vulnerable groups	Kajiado West, South, Central, East and North	10,000	CDH and Development partners	250,000	50,000 Training personnel	September-December
Medium and Long term Recommended Interventions							
Sub-county	**Intervention**	**Location**	**No. of beneficiaries**	**Proposed Implementers**	**Required Resources**	**Available Resources**	**Time Frame**
	Provision of public sanitary facilities in urban centers	Kajiado West, South, Central, East and North	7 (urban towns)	CDH, Development partners	49,000,000		
	Provision of portable water testing kits(chemical and bacteriological)	Kajiado West, South, Central, East and North	5 (one per sub county)	CDH, Development partners	6,000,000		
	Baby friendly community initiative	Central, East and North sub counties	580 health workers	CDH, Development partners	8,880,000	2,000,000	

Education Sector

Medium and Long term Recommended Interventions							
County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Kajiado East, south	Initiate Day secondary schools	Lenkisim and Lisa		MOE/ County Govt and Dev partners	4,000,000	Nil	2018/2019