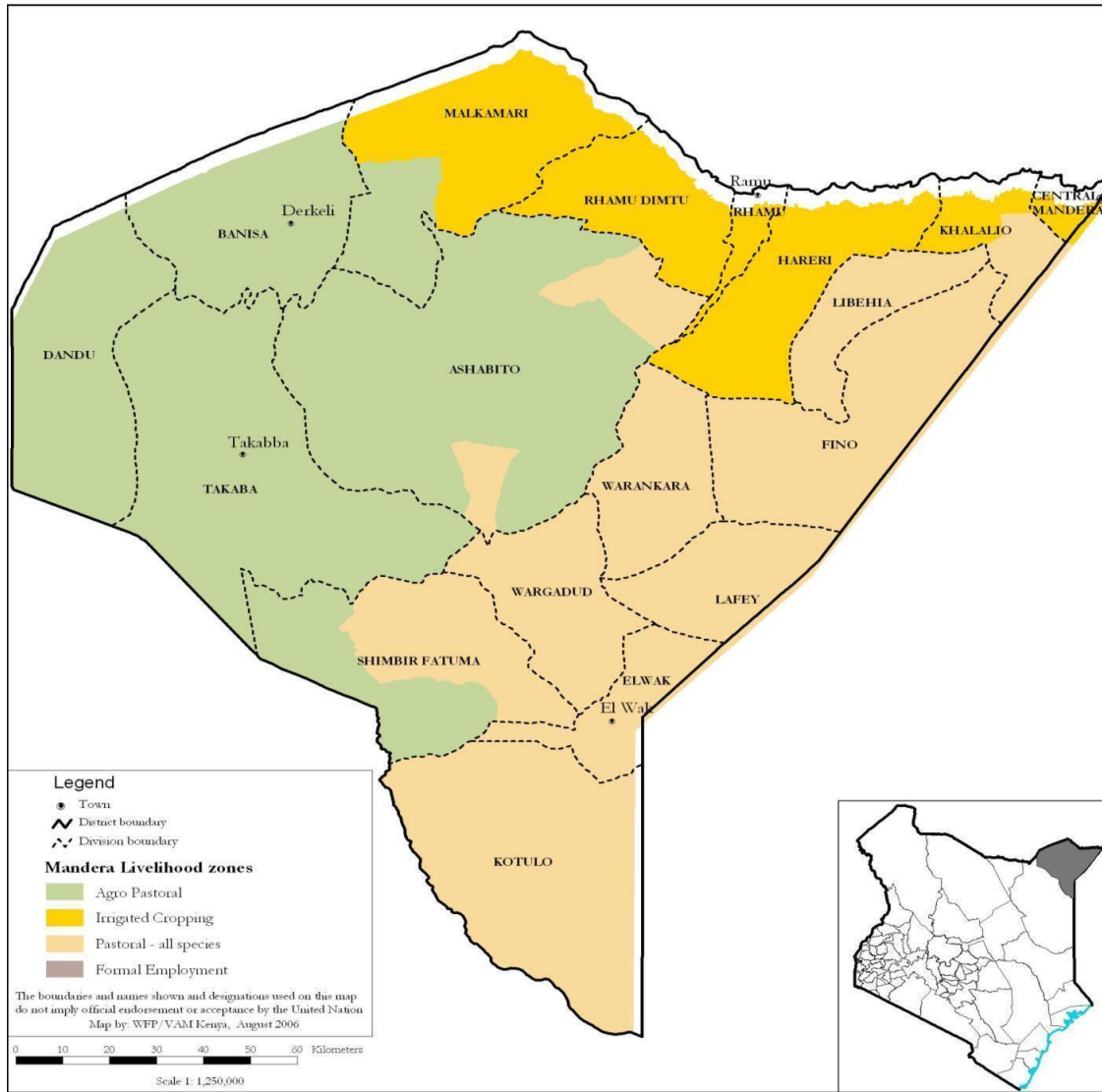


# MANDERA COUNTY 2019 LONG RAINS FOOD AND NUTRITION SECURITY ASSESSMENT REPORT



## A Joint Report by the Kenya Food Security Steering Group<sup>1</sup> (KFSSG) and County Steering Group, Mandera County

**July 2019**

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## **Executive Summary**

The Long rains food security assessment report was conducted by Kenya Food Security Steering Group (KFSSG) and County Steering Group (CSG) members of Mandera County. The objective of the assessment was to know the impact of long rains on food and nutrition indicators at household level. The long rains assessment was conducted from 8<sup>th</sup> to 21<sup>th</sup> July 2019. The food security situation worsened in all the livelihood zones in the County during the long rains due to delay of the rains by 30 days and poor performance of long rains resulting to poor pasture and browse condition affecting livestock productivity of the households as they are majorly pastoral communities. Milk consumption at household level is at currently at one litre compared to three litres during the normal season.

Most of contributing factors worsened during the season which included increase in distances to water sources which are between 15-20 kilometers for livestock. Most of Earth Pans, Dams and Underground Tanks did not impound enough water during the season and have dried up. Currently the County government and other actors are conducting water trekking to over 150 centers which is very costly and unsustainable. Terms of trade (TOT) are unfavourable and declining as from January and this has resulted to poor purchasing among the pastoral communities. Market access was also disrupted by closure of the Somali border hiking the price of essential commodities. Livestock prices are also poor for all species. There was cholera outbreak in Kutulo on April 2019; the outbreak was controlled and center closed,

According to SMART Survey conducted in July 2019 indicated the proportion of households with poor food consumption at 6.2 percent, borderline with 7.7 percent and acceptable at 86.1 percent showing improvement compared to last assessment.

Coping strategy Index is one of the indicators used in integrated food security phase classification. The current coping strategy index is 10.8 according to the SMART survey conducted in July 2019 compared to 12.0 for the same period in the previous season. The percentage of children with Mid Upper Arm Circumference (MUAC) below 135mm was 25.3 percent in June 2019. The MUAC trend were on increasing levels as from January 2019.

The GAM rates are above the WHO emergency threshold of 15percent and the current GAM rate is 21.9 percent (18.1 - 26.4cl) while SAM rates is 4.0 percent (2.4 - 6.7cl) based on June 2019 SMART survey results. Compared to GAM of 16.6 percent and SAM of 2.8percent in 2018 same period, the rate of malnourished children 6 to 59 months has increased. Prevalence of Underweight has increased from 16.6percent in 2018 to 18.6 percent in 2019. Stunting reduced from 16.2% in 2018 to 13.1 % (10.3 - 16.7cl) in 2019. This is according to the SMART survey conducted June 2019.

Based on the above food security outcome indicators, the county is classified as crisis phase. All the three Livelihood zones are classified under crisis (IPC phase3) IPC food security phase classification

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# 1.0 INTRODUCTION

## 1.1 County background

Mandera County is situated within northeastern part of Kenya and borders Somalia to the east and Ethiopia to the north and has an area of 26,470 square kilometers. There are seven sub counties namely: Mandera East, Mandera North, Mandera South, Kotulo, Mandera West, Banissa and Lafey with total population of 1,025,756, persons (KNBS, 2009). The County has three major livelihood zones that include Pastoral all species livelihood zone, Agro-pastoral livelihood zone and irrigated cropping zone

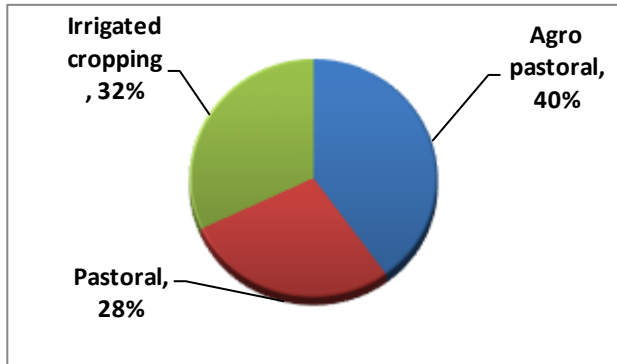


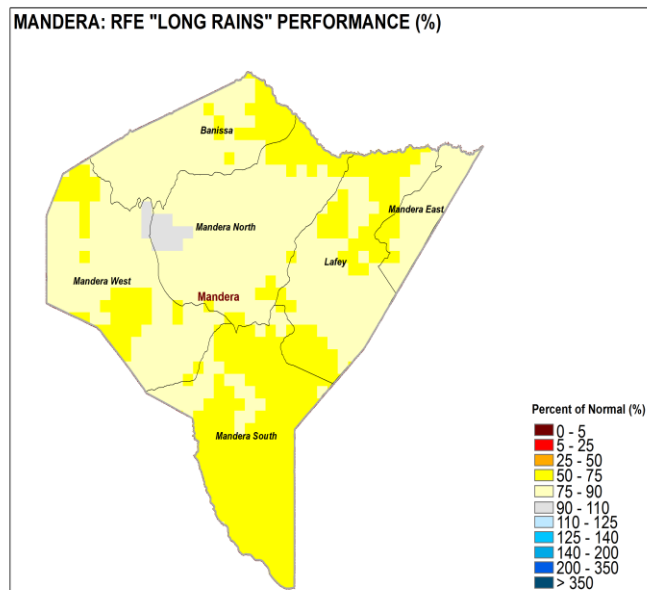
Figure 1 population proportion per livelihood zone

## 1.2 Methodology and approach

The main objective of long rains food security assessment was to develop an objective, evidence-based and transparent food security situation analysis following the performance of long rains season of 2019, considering the cumulative effect of previous seasons, and to provide immediate and medium-term recommendations for possible response options based on the situation analysis. The methodology used was review of the existing data on the current situation as well as historical data from different sources. Review of checklists from line sectors and focus group discussions were also carried out. SMART survey results were also included into the report. The team composed of Kenya Food Security Steering Group (KFSSG) and County Steering Group (CSG) members made transect drives, carried out interviews and did market surveys in order to get a picture of the current situation. The analysis took into consideration the different data and carried out evidence-based analysis depending on convergence of the evidence from various sectors. The March April and May (MAM) long rains assessment was conducted from 8<sup>th</sup> to 21<sup>th</sup> July 2019. The assessment was coordinated and conducted by the KFSSG and the CSG in Mandera County in all the three livelihood zones. The overall assessment processes and methodologies was developed by the coordination teams. First, secondary data was collected, analyzed and collated into briefing packs. The data included livelihood zone baseline data, drought monitoring information, monthly nutrition surveillance data, price data and satellite imagery.

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

### 2.1 Rainfall Performance



The onset of the long rains was late by 30 days and started in the third dekad of April 2019 instead of the third dekad of March normally. Mandera South sub county including Kutulo sub county and Northern part of Mandera North and Banisa sub counties received 50–75 percent of normal rainfall, while the rest of the County received 75–90 percent of normal rains (Figure 2). The temporal distribution was poor, and the spatial distribution was uneven as shown by the different amounts of rain received across all the sub counties. The cessation was normal in the third dekad of May.

Figure 2. Rainfall performance as a percent of Normal

### 2.2 Insecurity/Conflict

Inter clan resource-based conflict was reported along Wajir Mandera border in Burmayo and Gulani area and Banissa Malkamari Ethiopian border resulting from competition for scarce and inaccessibility to resources (water and pasture). Tension was high over grazing and water points during the dry season resulting in injuries of 6 persons, household's displacement and livelihoods disruption of access to basic services negatively impacting community's food security. However, through the intervention of Mandera and Wajir county governments, peace building and conflict dispute resolution mechanisms the conflicts were addressed, and communities resolved to coexist and share the little resources available. The Closure of border along Somalia by Kenya Government due to insecurity has resulted in decrease in the stock available and hiking the prices of essential commodities. There is need to upscale peace building initiatives and drought responses mechanisms.

### 2.3 Other shocks and hazards

The other key drivers of food insecurity include human (Cholera outbreak at Kutulo sub county) and livestock (PPR and CCPP) diseases out breaks and flooding of river Daua. There were about 130 small stocks died as a result of PPR attack in Mandera west and Mandera south sub counties. Insecurity due to terror threats led to high food prices due to closure of Somalia border

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

#### 3.1 Availability

##### 3.1.1 Crops Production

There are three major crops grown in the County both under rain fed and irrigation including Maize, sorghum and cowpeas while vegetables are grown along River Daua. Maize contributes 30 percent to food and 30 percent to cash income in the agro-pastoral livelihood zone while sorghum contributes to 100 percent to food to income in the pastoral Livelihood zone. Maize contributes to 85percent to food and 2 percent to cash income in the irrigated livelihood zone.

The season under review had very little or no harvest due to total failure of Long rains. County received very little rainfall which was poorly distributed both in time and space and depressed. The erratic rainfall was not enough to support almost all the crops to maturity under rain fed agriculture. Farmers did not replant their main season crop due to poor rains and lack of seeds.

#### Rain-fed crop Production

**Table 1 Rainfed crop production**

Crop	Area planted (Ha)		Production (90 kg bags)	
	2019 Long Rains	Long Term Average Long rains	2019 Long Rains	Long Term Average (5 years) Long rains
Maize	834	783	734	6,338
Sorghum	982	1,155	540	2,941
Cowpeas	289	277	341	1,522

The three main crops grown under rain-fed agriculture during the season are maize and sorghum. The area put under maize during the season was only 834 hectares representing 6 percent increase compared to long term average of 783 hectares. The total area under maize crop planted for the season was more than long term average in hectares due to increase in support from stakeholders to farmers that created some incentives, however production failure is due to inadequate rainfall received during the season. The area planted for sorghum and cowpeas also reduced by 15 and 4 percent compared to the long term averages respectively. The reduction in areas planted was mainly attributed to food preference and unpredictable weather condition and early cessation of rains. Maize production was 11 percent of LTA while that of sorghum and cowpeas was 18 and 22 percent of LTA respectively. Maize production was the most affected as there was a total crop failure. The decline in production for all the major crops was caused by the poor performance of the rains. The rains were far below the normal average in all the sub counties that resulted into total crops failure/withering for maize, sorghum and cowpeas in the season in all rain fed farms as compared to long term average production in 90kg bags during the season. was the straw that broke the camel's back.

## Crop production under irrigated agriculture

**Table 2 Crop production under Irrigated cropping**

Crop	Area planted (Ha)		Production (90 kg bags)	
	2019 Long Rains	Long Term Average Long rains	2019 Long Rains	Long Term Average (5 years) Long rains
Maize	1,824	1,284	987	4,610
Cowpeas	632	573	275	790
Onions	36	24	18	266

Area planted during the long rain season under review was more than the long term average by 540 Ha for maize crop (42%) and 59 Ha for cowpeas crop (10%) than long term average (5 years). The seasonal production was 21 percent and 34 percent below LTA for maize and cowpeas respectively. Increase in area planted is attributed to opening of more potential land while reduction in seasonal production is as a result of flooding and delay in flow of seasonal river Daua. The reduction in maize production will affect food and income levels of households.

## MAIN CEREAL STOCKS IN THE COUNTY/ SUB COUNTY

**Table 3: Cereals stocks in the county (90kg bag)**

Commodity	Maize (90 kg bags)		Rice		Sorghum	
	Current	LTA	Current	LTA	Current	LTA
Farmers	256	557	0	0	0	279
Traders	480	1,595	8,500	10,425	0	687
Millers	20	24	0	0	0	0
Food aid/NCPB	0		0		8,333	0
<b>Total</b>	<b>756</b>	<b>2,176</b>	<b>8,500</b>	<b>10,425</b>	<b>8,333</b>	<b>966</b>

The volume of cereals stocks held by actors are below long term average. Maize Stocks held by farmers are 45 percent compared to LTA as a result of reduced production. Most households rely on markets for the purchase of cereal stocks. The volumes of stocks were affected by border closure due to insecurity. Overall, the cereal stocks held in the county are 34 percent of LTA for maize and 22 percent for rice. The implication is that, though food stocks are inadequate at the household level.

### 3.1.3 Livestock Production

Livestock keeping is a major contributor to the overall economy of the county and the main livestock reared in the county are Cattle (Boran breed), Sheep and Goats, Camel, poultry and donkeys. Livestock contributes to 90 percent of the population livelihood and employs about 80 percent of the rural labour force. Livestock production is one of the major sources of income contributing to 60 percent for pastoral, 10 percent for irrigated and 52 percent for agro pastoral livelihoods. Small stocks are mainly sold for food and income while cattle and camels are sold for income and other households investments and provision of milk and meat production. The long rains below average performance impacted negatively on the sector, leading to inadequate pasture and browse regeneration.

#### Pasture and browse situation

The pasture and browse situation are poor across all livelihood zones. Some areas like Khalalio ward of Mandera east sub-county, Ashabito and Guticha wards of Mandera North sub-county, Malkamari ward of Banisa sub-county, Lagsure ward of Mandera west sub-county and Shimbir fatuma ward of Mandera South and Gari ward of Lafey sub-county are in critical condition where the pasture situation is currently depleted. The pasture and browse conditions are on downward trend and is expected to last by end of July 2019. Livestock are migrating towards drought fall back areas of Ethiopia and Somalia and areas bordering Wajir East such as Burmayo, Gulani, Bogi garse, Sake, Gagaba where browse conditions is fair especially for camels.

**Table 4 showing 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 all species	Very Poor	Fair	Less than one month	2	Nil	Poor	Fair	1	2	Nil
Agro-pastoral	Poor	Fair	Less than one month	2	Nil	Fair	Fair	1	2	Nil
Irrigated cropping	Poor	Fair	Less than one month	2	Nil	poor	Fair	1	2	Nil



## Livestock Productivity

### Livestock body condition

Body condition of all livestock species in all livelihood zones is currently fair but deteriorating to poor. Livestock in areas like Khalalio ward of Mandera east sub-county, Ashabito and Guticha wards of Mandera North sub-county, Malkamari ward of Banissa sub-county, Lagsure ward of Mandera west sub-county and Shimbir Fatuma ward of Mandera South and Gari ward of Lafey sub-county are in poor body condition where the pasture situation is currently very poor and livestock are being fed on maize grains. As body condition deteriorates production will also go down impacting negatively on household food security.

**Table 5 showing livestock body condition**

Livelihood zone	Cattle		Sheep		Goat		Camel	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	Poor	Fair	Poor	Fair	Fair	Good	Fair	Good
Agro-pastoral	Fair	Fair	Poor	Fair	Fair	Good	Fair	Good
Irrigated	Poor	Fair	poor	Fair	Fair	Good	Fair	Good

### Tropical livestock units (Tropical Livestock Units)

The average TLUs per household for both poor and middle-income households reduced. The average tropical livestock units (TLUs) per household reduced across the all the livelihoods zones and this attributed negative effects of the below average performance the previous seasons. The reduction in herd size is a result of sales for water trucking, school's fees and failure of crops. This implies negative effects on non-food expenditure. The herd numbers for each species for poor and middle-income households is as follows.

**Table 6 Tropical livestock Units by Household income groups**

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral all species	2	3	7	8
Agro-pastoral	2	4	8	13
Irrigated cropping	2	3	4	5

### **Milk Production and consumption**

Milk availability is poor in all livelihood zones which is not normal at this time of the year. This is associated to lack of pasture and browse across the county.

The current average milk production per household is one liter in the pastoral livelihood zone and 2 liters in Agro-pastoral and irrigated cropping zones. Milk production is very low and the little produced is sold to buy cereals for the family, drugs for livestock and pay for water hence low consumption as well leading serious implication on the household food security

**Table 7 Milk production, Consumption and Price**

<b>Livelihood zone</b>	<b>Milk Production (Litres)/Household</b>		<b>Milk consumption (Litres) per Household</b>		<b>Prices (Ksh)/Litre</b>	
	<b>Current</b>	<b>LTA</b>	<b>Current</b>	<b>LTA</b>	<b>Current</b>	<b>LTA</b>
<b>Pastoral</b>	1	3	1	2	100	120
<b>Agro-pastoral</b>	2	4	1.5	2	80	100
<b>Irrigated cropping</b>	2	4	1.5	2	80	100

### **Migration-**

Massive Livestock migration witnessed which started earlier than normal in May and continued throughout July due to decline in water, pasture and browse. Livestock from Mandera east have moved to the Daa river basin, Libehia and towards Somalia. Those from Mandera north migrated from Ashabito and Guticha wards towards Olla, Daa River and Malka mari ward. Livestock migration from Lafey sub-county, Gari, Warankara, Bambo areas moved to Sala farms, Lafey, Kabo, Fino areas and to Kenya –Somalia border. Those from Banissa sub-county moved towards Banissa, Lulis and Eymole and Ethiopian border. Livestock moved Mandera west towards Dandu, Gither wards, Gulani, Burmayo and Bji Garse locations bordering Wajir County and to Ethiopia. Those from Mandera south sub county moved towards Boji garse location, Burmayo, Gulani, and areas bordering Tarbaj Sub-county of Wajir County. The large stocks have migrated to Wajir north sub-county and Somalia (Afmadow) and Ethiopia. Generally, there was massive in ward and out ward large numbers of livestock migration to areas bordering Ethiopia and Somalia. Large numbers of Camels and cattle have crossed the border to Ethiopia and are currently in Galgalu and Hawan locations in search of pasture. This massive livestock resulted from poor regeneration and pasture and browse across the county. This has negatively impacted milk availability and income. children under age of five will be affected.

### **Mortalities**

The main livestock diseases reported are PPR, CCPP, black quarter across all the livelihood zones in the county. There are cases of reports of cases of mortality of Cattle in Mandera south sub county. Livestock diseases affect livestock productivity and body condition resulting into

low milk production and poor livestock prices in the markets, which translated into compromised household food security situation. The livestock disease outbreaks are not normal at this time of the year. However, vaccinations against PPR in small stocks is ongoing in all the sub counties and is supported by Resilience project and other actors. The department of veterinary service continues to carry out routine treatment and deworming of reported cases.

### Water for Livestock

The main water sources for human and livestock include boreholes, shallow wells, earth pans, and River Daua. Out of 146 number of earth pans in the county, only 14 percent have impounded water which will last for 1-2 months and 86 percent of surface water pans across the all the livelihoods zones have dried up. Return trekking distance to water is 22 km for the pastoral livelihood zone, 16 km for the agro-pastoral livelihood zone and 8 Km for the irrigated cropping livelihood zone. Watering frequency is daily for the all livestock species in irrigated livelihood zone and after 2 days for cattle, 5-7 days for camels and 3-5 days for sheep and goats for the other two livelihood zones. Trekking distances are normal during the same period of the season.

**Table 8 Water for Livestock**

Livelihood zone	Return trekking distances (Kms)		Expected duration to last (Months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
<b>Pastoral</b>	22	8	Less than One	Less than one	Cattle-2 days Sheep and Goats- 5 days Camel- 7 days	Cattle -1 day Sheep&Goats-3 days Camel-5 days
<b>Agro pastoral</b>	15	6	Less than one	Less than one	Cattle-2 days Sheep and Goats- 3 days Camel- 5 days	Cattle -1 day Sheep&Goats-2 days Camel-3 days
<b>Irrigated</b>	8	4	4	4	Daily	Daily

### Impact on availability

Generally, season performance was below average in terms of crop and livestock production. The 2019 Long rain was generally inadequate across the county. Poor regeneration of pasture and browse across the county following the rainfall was observed. few earth pans impounded water which dried up with in a short time. pasture and browse depletion and inadequate availability of water coupled with long trekking distances to pasture and water and poor livestock body condition negatively affects livestock and crop food security at household level. Massive livestock migration across all the livelihood zones have resulted into reduced milk availability at household levels which might resulted into increased cases of malnourished children under-fives.

Increased livestock trekking coupled with increased frequency to water will affect livestock body condition and productivity due to stress while animals move in search of pasture and water

### 3.2 Access

#### 3.2.1 Markets- prices – functioning

All markets for both livestock and crops were operational in the entire county. Market operations were disrupted by terror threats in Mandera east, Mandera south and Lafey sub counties resulting into border closure and high commodity prices. Mandera town market is the Main market in the county with others being Rhamu, Banissa, Takaba, Lafey and Elwak. Major commodities, agricultural and livestock products traded are Maize, Rice, sugar, beans, milk, meat, camel, cattle, and goats. Major sources of supplies to this market are cross border trade from Somalia and Ethiopia and Nairobi respectively. The Somali border was closed by Kenya government and this has affected communities. Prices of essential commodities have increased. Border closure reduced markets supply volumes from Somalia. Market disruptions due insecurity threats, led to border closure resulting into Low volumes of commodities traded and high commodity prices .

### Market Prices

#### Maize Prices

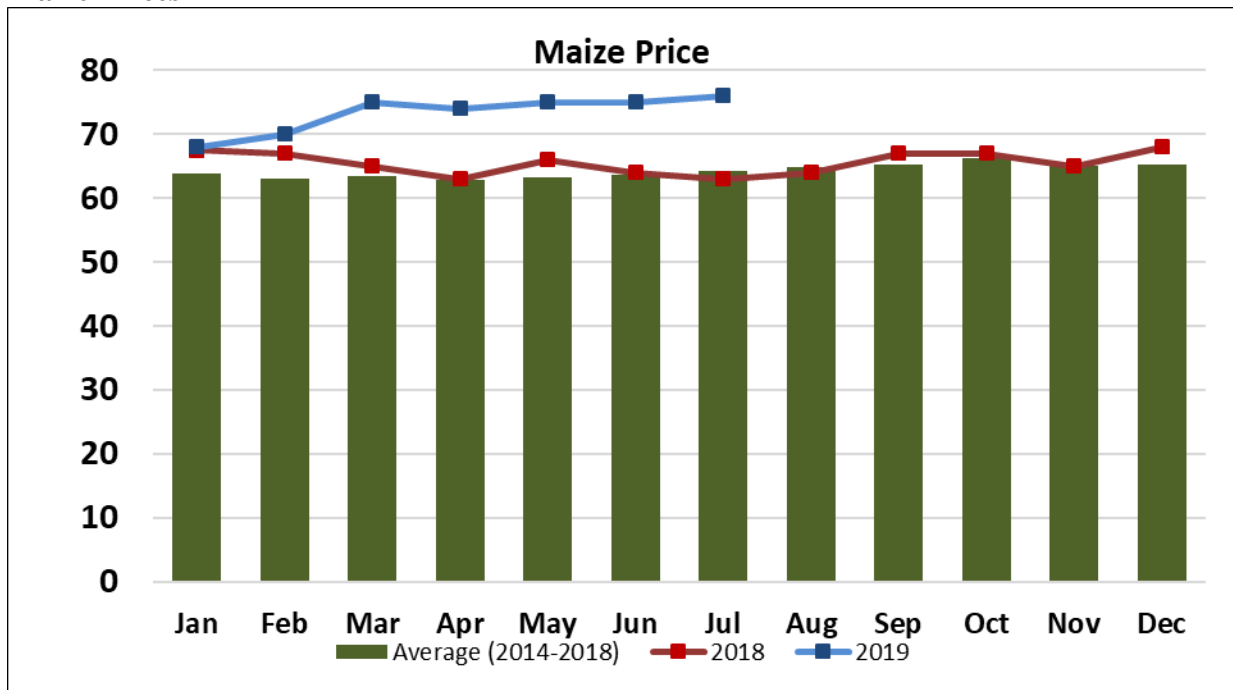


Figure 3. Maize Price

The average price of maize for the month of July 2019 was 76 per Kg and is generally following the seasonal trend but were above the long-term averages as from January 2019. There was one percent increase in the month of July compared to long term average. The price of maize is expected to increase as the dry spell progresses and closure of border

## Goat Prices

The average goat price for the month of July 2019 was 2800, when compared with the long-term average of 3511 which is less by 39 percent. The prices were gradually decreasing as from January to July 2019. The decrease in price is attributed to poor body condition that resulted from below normal performance of the long rains. The price of goats is expected to decrease.

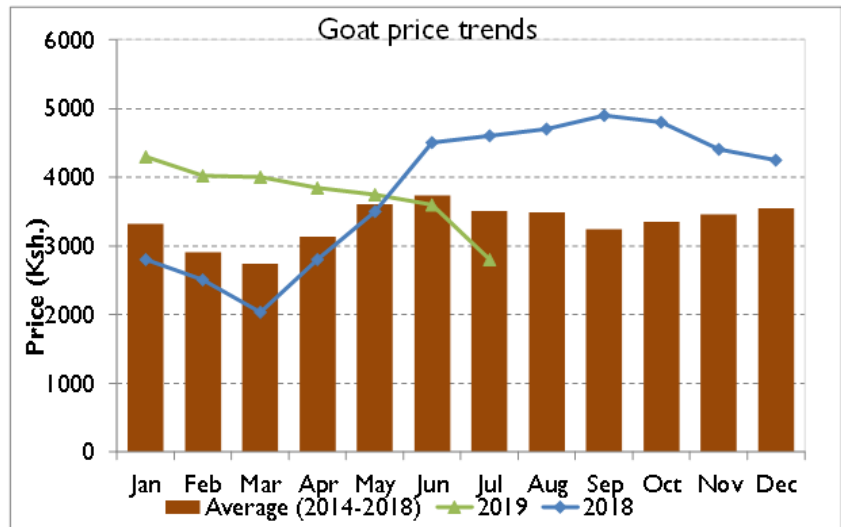


Figure 4. Goat Price

### 3.2.2 Terms of Trade

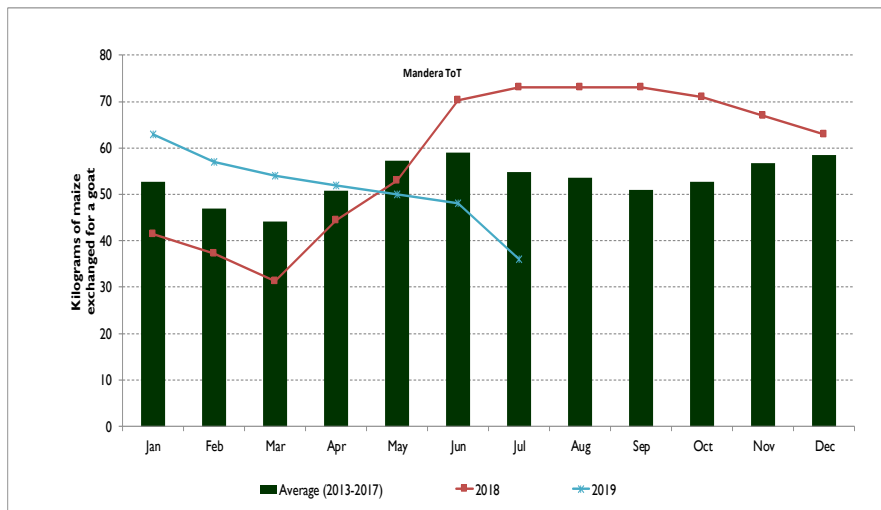


Figure 5: Terms of trade

The current terms of trade for the month of July indicated households were able to purchase 36 kilograms of maize from a sale of a goat which was 33 percent below long-term average. There was decrease in terms of trade from January 2019, the terms of trade are currently below long-term average and same period last year. The decrease is mainly

attributed to the decrease in the goat prices and relatively increase in maize prices over the same period. Terms of trade are unfavorable

### 3.2.3 Income Sources

The main sources of income in the county include livestock food, crop production and small business contributing 52%, 22% percent and 10% respectively for agro pastoral livelihood zones. The income sources were supplemented by petty trades, casual waged labour and poultry production. In pastoral livelihood zone the main sources of income include livestock, small business and petty trades contributing 60,15 and 10 % respectively while irrigated cropping livelihood zone has food crop production accounting 34%, cash crop production accounting for 22%, livestock production accounting for 10 % and small nosiness accounting for 10%. In pastoral livelihood where livestock production has the majority income sources farmers are

unable to sell their livestock due to poor condition of the livestock body condition and disruptions of markets.

### 3.2.4 Water access and availability (including cost and consumption)

#### Introduction

The major sources of water for domestic, irrigation and livestock use within the County in order of importance include: Dawa River, Boreholes, Earth Pans, “Berkads”/ Underground Tanks: - Infiltration Gallery Wells (IGW). However, 85% surface water sources have dried up, which is not normal at this time of the season. This is due to poor recharge level Increased Convergence of livestock and human populations and long working hours of the boreholes and

#### Major water sources

##### *Impact of the March - April 2019 rains on the status of Water Sources:*

Generally, the impact of the 2019 Long rains had negative devastating effects in terms of dams not impounding water, low recharge and replenishing of shallow ground water, this is due to shortage of rains (March –April 2019). Major surface water sources have dried up and the remaining is expected to last one month. Boreholes are operational and over stretched due to high livestock concentration leading to frequent breakdowns. Interventions/mitigations are underway by the County Government through the department to ease the recurrent drought issues Countywide. Albeit the recurrent drought Challenges, The County Government and other stakeholders are tasking up to truck water services close to more than 150 centers with approximate population of 230,000 people to ensure it is residents get free water in this trying moment (drought spell season). Currently, water trucking is being done by the County government in all the sub counties. The average cost of water trucking is Kshs 12,000 to Kshs 15,000 per 10,000 – 15,000lt capacity water Bowser. The cost of water depends on the distance of the target village from the nearest source of water. Out of the County’s 141 Boreholes, 131 are operational presently. 15 of the Boreholes are newly drilled and some are in the process of being equipped. while 10 Boreholes have breakdowns and need repair and rehabilitation efforts ranging from replacement of pumping equipment’s, water storage facilities and draw pipes. Currently, 13 Infiltration Gallery Wells, 102 Under Ground Tanks, 138 Boreholes and 98 Water Pans and Dams are operational County wide. Most affected wards across the county includes Guba, Ashabito, Marodiley, Malkamari, Derkale, Kiliwehiri, Lag Sure, Takaba East, Dandu, Gither, Alungu and Takaba South Wards. Areas where Water Sources have dried up are over 150 centers and water trucking are ongoing.

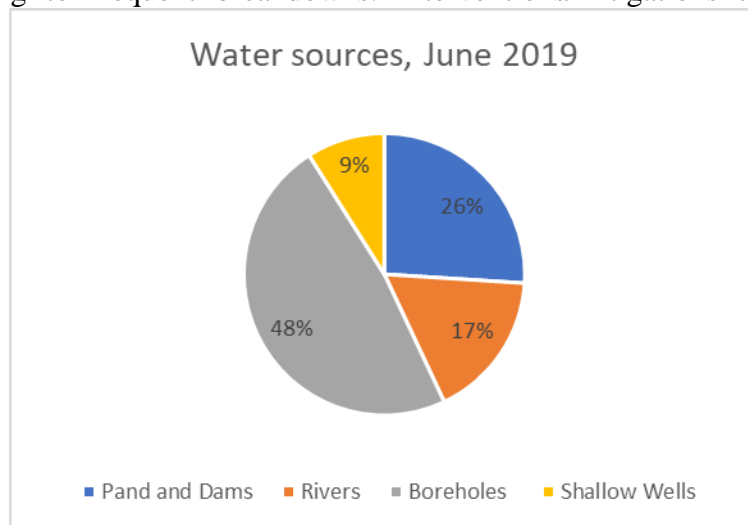


Figure 6 Water Sources

#### Distance to water sources

The current average distances to domestic water sources in comparison with the normal distances by livelihood zones is as follows; -

**Table 9 distance to water sources**

<i>No</i>	<i>Sub-County</i>	<i>Livelihood Zone</i>	<i>Normal Distances (Km)</i>	<i>Current Distances (km)</i>	<i>Remarks</i>
1	Mandera North	Pastoral	5 - 12	10-15	Pastoralist communities are more affected than agro-pastoralist communities
2	Mandera East	Agro-pastoral	5 -10	5-10	
3	Mandera South	Pastoral	5 -1 2	10-15	
4	Mandera West	Pastoral	10-1 5	15-20	
5	Banisa	Pastoral	10 -1 5	15-20	
6	Lafey	Pastoral	5 -1 0	5-10	

The Implications of this situation include: -

- ✓ Continuation of high expenditure water trucking efforts
- ✓ Increased Convergence of livestock and human populations around the few Boreholes and,
- ✓ Increased incidences of breakdown of Borehole water pumping equipment.

**Waiting time at the source**

The current waiting time at the sources to normal by livelihood zones is as follows: -

**Table 10 Waiting Time at Source**

<i>No</i>	<i>Sub-County</i>	<i>Livelihood Zone</i>	<i>Normal W/Time (Min)</i>	<i>Current W/Time (Min)</i>	<i>Remarks</i>
1	Mandera North	Agro-pastoral	0-30	30-50	Pastoralist communities are more affected than agro-pastoralist communities
2	Mandera East	Agro-pastoral	0 - 30	0-30	
3	Mandera South	Pastoral	20- 40	40-50	
4	Mandera West	Pastoral	30-40	40-50	
5	Banisa	Pastoral	30 - 40	35-50	
6	Lafey	Pastoral	20 - 30	20-30	

**Cost of water**

The current cost of water (20 liters jerrican) compared to normal by livelihood zones is as follows: -

**Table 3 showing Cost of Water**

<i>No</i>	<i>Sub-County</i>	<i>Livelihood Zone</i>	<i>Normal Cost (Ksh)</i>	<i>Current Cost (Ksh)</i>	<i>Remarks</i>
1	Mandera North	Agro-pastoral	5-10	8-15	This indicates a dry

2	Mandera East	Agro-pastoral	5-10	5-10	spell situation (high cost of water)
3	Mandera South	Pastoral	10-15	15-20	
4	Mandera West	Pastoral	10-15	10-20	
5	Banisa	Pastoral	5-10	10-15	
6	Lafey	Pastoral	5-10	5-10	

### Water consumption

The current average water consumption rates per person per day compared to normal levels by livelihood zones is as follows: -

**Table 4 showing Water consumption**

<i>No</i>	<i>Sub-County</i>	<i>Livelihood Zone</i>	<i>Normal (lts/P/d)</i>	<i>Current (lts/P/d)</i>	<i>Remarks</i>
1	Mandera North	Agro-pastoral	20	13-15	Below average consumption is due to drying up earth pans
2	Mandera East	Agro-pastoral	20	13-15	
3	Mandera South	Pastoral	20	13-15	
4	Mandera West	Pastoral	20	13-15	
5	Banisa	Pastoral	20	13-15	
6	Lafey	Pastoral	20	13-15	

### 3.2.5 Food Consumption

The proportion of households with poor food consumption is at 10.9 percent, borderline with 12.3 percent and acceptable at 76.3 percent for the county. Most households are consuming an average of 1 - 2 meals per day across the livelihood zones with poor dietary diversity. Common foods groups consumed mainly are cereals and cereal products. Relief food supplies supported most poor households

### 3.2.6 Coping strategy

Majority of households in all livelihood employed stressed and crisis strategy. The reducing coping strategy (rCSI) are 7.5% non-stressed, 59.4% stressed and 33 % on crisis. Common consumption related coping strategies employed by households included Restrict consumption by adults so that children can feed, borrowing food, relying from relatives and reducing number of meals Limit Portion sizes and asset depletion

## 3.3 Utilization

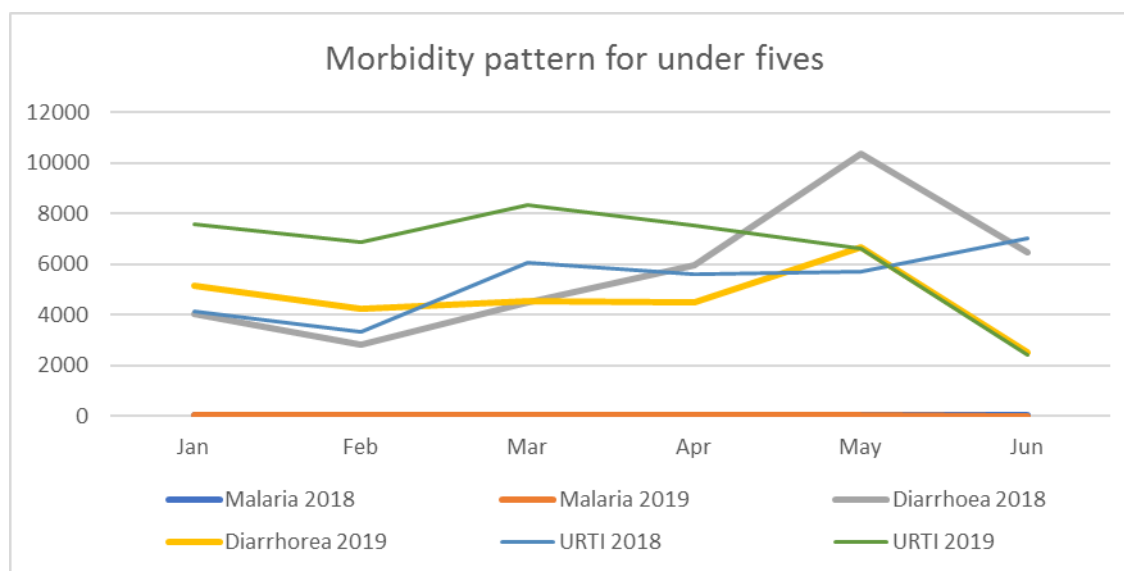
### 3.3.1 Morbidity patterns

The top five common diseases for under-fives in the county were upper respiratory tract infections (URTI), diarrhea, pneumonia, Anaemia and flu. The Malaria cases for the general population during the January to June 2019 season increased while Diarrhea cases for both under five and general population decreased.

There was increase in URTI cases for under-fives and General population when compared to January to June 2018 against January to June 2019. URTI conditions could have been aggravated



by the prevailing dusty conditions. The new settlements or villages have access of healthcare services since they settled far from health facilities. Likewise, the nomadic population who move in and out of the County to neighboring Countries (Ethiopia and Somalia) and Wajir County in search of better grazing area for their livestock. Mandera East recorded highest URTI cases due to, it was most affected during the dry spell and storm dust clouds cover its environment. The County referral hospital is in Mandera East Sub-county, where most patients wish seek medical services



**Figure 7 morbidity patterns for under five**

### Epidemic prone diseases

There was cholera outbreak in Kutulo on April 2019; the outbreak was controlled, with all the other sub-counties on high alert and focused on cholera control measures such distribution of water treatment chemicals, provision of hand washing facilities to schools, community sensitization and health education sustained throughout the Sub Counties. During the cholera outbreak 278 cases were line listed and one adult person died. There are also cases of Diarrhea and dysentery reported during the season for under five and the general population in the entire County. Also reported was dengue fever outbreak still in the entire county

**Table 135 Epidemic Disease cases for Mandera County**

Disease	January to June 2018		January to June 2019		Children <5 years
	Cases	Deaths	Cases	Deaths	
Measles	259	1	19	0	
Cholera	0	0	278	1	
Dysentery	1265	0	933	0	0.0%
Diarrhea	56805	0	48419	0	22.0%
Malaria	627	0	929		27.0%

Typhoid	3364	0	2561	0	
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### 3.3.2 Immunization Coverage and Vitamin A coverage

Fully immunized child (FIC) coverage is 49.2% for the county from January to June 2019 compared to 2018, FIC has dropped down and it is below national target (80 percent). This attributed to poor health seeking behavior of the community and data related issues because good numbers of the populations in towns set seek health services in private clinics, so their data is not available in government health record system.

**Table 6 Immunization Coverage**

Year	Percentage of fully immunized children in the county	Percentage of children immunized against the mentioned diseases in the county
January to June 2019	49.2%	1. OPV 1 86.8% 2. OPV 3 84.4% 3. Measles 70.6%_
January to June 2018	60.9%	1. OPV 1 89% 2. OPV 3 85.9% 3. Measles 92.4%_

### Vitamin A supplementation

The coverage of Vitamin A supplementation for children six to 11 months and children 12 to 59 months has increased from 46.0 percent to 59.2 percent and 31.8 percent to 53.9 percent in January to July 2019 respectively as shown in the table below.

**Table 7 Vitamin A supplementation coverage**

Year	Children 6-11 months		Children 12 to 59 months		Children 6-11 months	Children 12 to 59 months
	Received vitamin A supplementation	Total Population (6-11 months)	Received vitamin A supplementation	Total Population (12-59 months)	Proportion of children Received Vit A supplementation in the last 6 months	Proportion of children Received Vit A supplementation in the last 6 months
January to June 2019	16,416(67.9%)	24,176	37,955 (21.9%)	173,214	59.2%	53.9%
January to June 2018	54.0%	16,164	19.7%	117,805	46.0%	31.8%

### 3.3.3 Nutritional status

The GAM rates are above the WHO emergency threshold of 15 percent and the current GAM rate is **21.9 percent (18.1 - 26.4cl)** while SAM rates is **4.0 percent (2.4 - 6.7cl)** based on June 2019 SMART survey results. Compared to GAM of **16.6 percent** and SAM of **2.8percent** in 2018 same period, the rate of malnourished children 6 to 59 months has increased. Prevalence of Underweight has increased from **16.6percent** in 2018 to **18.6 percent** in 2019. Stunting reduced from **16.2%** in 2018 to **13.1 % (10.3 - 16.7cl)** in 2019. This is according to the SMART survey conducted June 2019. The percentage of children with Mid Upper Arm Circumference (MUAC) below 135mm was 25.3 percent in June 2019. The MUAC trend were on increasing levels as from January 2019. Generally, the level of malnourished has increased in children 6-59 months, although reduction in started has been observed. This high malnutrition can be related to various factors such as disease burden , poor health seeking behaviors, sup optimal child feeding practices and poor social care or home-based care. The numbers of meals currently consumed by households are one to two meals per day which is normal at the same time of the year. However, the meals comprise of two to three food groups compared to a normal of more than three food groups. Currently, most households are consuming tea with milk, maize meal with milk or rice with pulses.

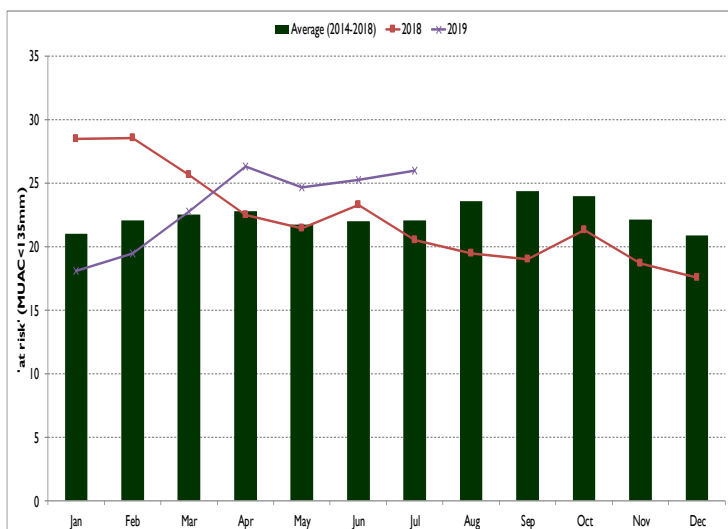


Figure 6: Children at risk of malnutrition.

### 3.3.4 Sanitation and Hygiene Latrine Coverage & Utilization

The latrine coverage was for January to July 2019 was 85.4 percent which is above the national target which is 80 percent. When compared to same period last year there was an increase by 5 percent. This is attributed to an increase in the construction of the number of toilets by the county government and other partners. Water treatment chemicals are largely not available at the household level and are not widely used even in normal times mainly due to their not being available in significant amounts. The use of household water purification

chemicals is widely accepted by the larger population.

Generally, the local community being also predominantly of the Muslim faith uses water-based toilet hygiene practices. The standard traditional practice is that people eat together and wash or rinse their hands with water before and after eating. There is thought to be a more profound relationship between the current prevalence of water-borne diseases and poor sanitation, especially the problem of open defecation. The relationship of the water-borne incidences to personal hygiene exists in a lesser context. The contamination of water sources and poor household hygiene, especially related to food handling, could also be significantly contributing to the incidences of water-borne diseases.

### 3.4 Trends of key food security indicators

Table 8 Food Security trends in Mandera County

Indicator	Long rains assessment, July 2019	Short rains assessment, Feb 2019
% of maize stocks held by households (agro-pastoral)	Nil	One month
Livestock body condition	Fair to Poor	Fair
Water consumption (litres per person per day)	13-15	10
Price of maize (per kg)	75	68

<b>Indicator</b>	<b>Long rains assessment, July 2019</b>	<b>Short rains assessment, Feb 2019</b>
Distance to grazing	15	8
Terms of trade (pastoral zone)	48	65
Coping strategy index	Non 7.5%, stressed 59.4 and crisis 33%	16
Food consumption score	Poor-10.9, Borderline 12.3 Acceptable- 76.3	Poor-6.2, Borderline 7.7 Acceptable-86.1

### **3.5 Cross – Cutting Issues**

#### **3.5 Education**

Education is considered one vital way to break the cycle of poverty. However, food insecurity remains a major barrier to achieving universal education in Mandera County. It affects school enrolment and attendance, and also limit the capacity to concentrate and perform in school. Food insecure families also face higher opportunity costs in sending children to school because they could earn and provide means of subsistence to the household members. Such opportunity costs are even larger if school fees exist.

##### **3.5.1 Enrolment**

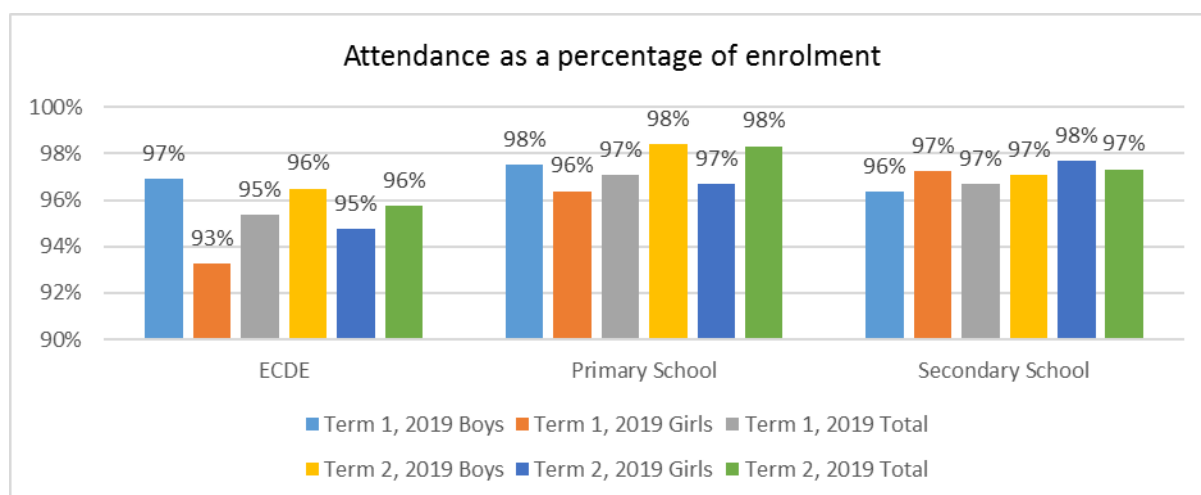
There was slight increase in enrolments from term one to term two for ECD Primary and Secondary schools. ECD Enrolment increased by 24653 (15,023boys, 9,630 girls) at the end of Term 2 2019. Primary school enrolment was 87,770 (54,357 boys, 33,383 girls) while the Secondary school enrolment was 13,562(9008 Boys, Girls-4554) The improvement is largely attributed to the establishment of new schools in the numerous emerging settlements as well as availability of school meals. However, the proportion of girls in school is still low and keeps dropping as they progress from ECD (39%) through primary school (38%) to secondary school (34%). This reflects a strong need for promoting programmes aimed at increasing enrolment. In addition, the provision of quality education to this group hinges on establishment of more ECDE centres and recruitment of more teachers. Enrolment for secondary school remain relatively stable and on an increasing trend with an improvement of between 1-3 percent registered in the second term of 2019 in various sub counties. Despite many obstacles enrolment rates are improving, suggesting a change in attitude of parents towards education which could, in part, be attributed to the campaign by government and non-governmental organizations to promote school enrolment. Other contribution factors include free primary and secondary education, Digital Literacy Programme, and provision of school meals.

**Table 9 Access ( Enrolment in Number**

Enrollment	Term I 2019			Term II 2019		
	№ Boys	№ Girls	Total	№ Boys	№ Girls	Total
ECD	12935	9609	<b>22548</b>	15023	9630	<b>24653</b>
Primary	54379	33206	<b>87584</b>	54387	33383	<b>87770</b>
Secondary	8985	4511	<b>13486</b>	9008	4554	<b>13562</b>

### 3.5.2 Participation

The average attendance rate for term two of 2019 was above 95 percent for ECD and a total of 97 percent in both primary and secondary school and slightly lower compared to term two of 2019. The decrease is attributed to current drought situation with children moving with their parent during migration. The attendance for girls remains lower than boys in primary schools as girls continue to face challenges related to menstrual hygiene and their role in supporting domestic chores. Thus, there is a need to invest in programmes that improve girls 'enrolment and participation in schools.



**Figure 9 attendance as a percentage of Enrolment**

### 3.5.3 Retention

The drop-out rate for both boys and girls were low at less than 0.3 percent for primary and secondary schools. In Primary schools, the boy child was most affected as they are most engaged in animal husbandry. In ECD the drop outs have dropped from 1.8 percent to 1.2 percent in term two of 2019, Girls had the highest dropout rate in secondary school, which could be attributed to early marriage and the negative cultural beliefs towards the girl child education. It is evident that regular food intake, either through improved household food access or provision of regular school meals, is vital for the continuity of retention of pupils in schools. The meals represent an indirect income transfer to households and a powerful incentive for families to continue to invest in education, despite their livelihoods being under stress.

**Table 10 Retention (Dropout rate)**

Indicator	End of Term I 2019			End of Term II 2019			
	Students dropped out from school	N <sub>o</sub> Boys	N <sub>o</sub> Girls	% dropout	N <sub>o</sub> Boys	N <sub>o</sub> Girls	% dropout
ECD		219	185	1.8%	171	128	1.2%
Primary		172	109	0.3%	127	84	0.2%
Secondary		29	30	0.4%	24	26	0.3%

### 3.5.4 School meals programme

The school meals program has contributed greatly to improved enrollment, retention and increased transition rate. There are 89,614 children from the 232 primary schools in Mandera who are benefiting from the regular school meals programme (RSMP).

## 4.0 FOOD SECURITY PROGNOSIS

### 4.1 Prognosis Assumptions

- The short rains of October- December are expected to be normal to above normal.
- Food prices are expected to remain high due to reduced supplies.
- Pasture and browse condition are expected to deplete and livestock will majorly depend on livestock feeds.
- Water situations is expected to worsen until October and distance to water increase,
- Livestock body condition are projected to deteriorate until after the onset of the short rains.
- Malnutrition cases are expected to increase
- Available food stock is likely to decrease.
- Normal supply market operations continue to be disrupted due to border closure.
- Deteriorating body condition of livestock
- Depletion of open water resources
- Livestock prices are likely to decrease
- Resource based conflicts and human wildlife conflicts are likely to arise as livestock compete for forage and water

### 4.2 Food Security Outcomes for the Next Three Months (July – September 2019)

The Food security situation is projected to worsen further due to the below normal rains received during the long rains. The current situation food security situation is expected to worsen. Pasture and browse conditions will diminish and livestock prices will decrease as body condition will deteriorate. More livestock migrations will be observed and livestock productivity decreases. Food prices are expected to continue increasing and the purchasing power of the communities will be affected. Malnutrition cases are expected to increase to continue worsening as access to food continue to be limited. Closure of border will continue to disrupt commodity supplies. After the onset of the short rains on second week of September, pasture and browse

conditions are expected to regenerate leading to increased milk production and consumption and improve water availability at household level. The livestock body condition is also expected to improve thus increasing the purchasing power of communities and food security at household level.

#### **4.3 Food Security Outcomes for October to December 2019**

After the onset of the rains, food security situation is projected to slightly improve further progressively. The malnutrition rates are to likely reduce due to increased milk consumptions. Food access will also increase thus improving household dietary diversity, the pasture and browse situation is likely to improve and reduces distance to water. Livestock prices are also likely expected to increase improving terms of trade to pastoral communities. Nutrition status for under five and lactating mother is likely to stabilize

### **5.0 CONCLUSION AND INTERVENTION**

#### **5.1 Conclusion**

##### **5.1.1 Phase classification**

Based on the above food security outcome indicators, the county is classified as crisis phase. All the three Livelihood zones are classified under crisis (IPC phase3) IPC food security phase classification.

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

The food security situation has worsened in all the livelihood zones in the County during the long rain, these is as a result of poor performance of long rains resulting to poor pasture and browse condition affecting livestock productivity of the households as they majorly pastoral communities.

##### **5.1.3 Sub county Ranking**

**Table 11 Sub County ranking**

<b>S/No.</b>	<b>Sub-County</b>	<b>Population in the sub counties</b>	<b>Population in need (percent range min – max)</b>	<b>Proposed mode of intervention</b>
1.	Mandera west	220,619	30-35	Food aid/Cash transfers
2	Mandera north	231,498	30-35	Food aid/Cash transfers
3	Banissa	215,670	30-35	Food aid/Cash transfers
4	Mandera south	337,842	25-30	Food aid/Cash transfers
5	Lafey	149884	25-30	Food aid/Cash transfers
6	Kotulo	78329	25-30	Food aid/Cash transfers
7	Mandera east	243,990	20-25	Food aid/Cash transfers
<b>Total</b>		<b>1,477.832</b>	<b>25-30</b>	



## 5.2 Ongoing Interventions

Wards/ Livelihood Zones	On-going Interventions	Target Locations	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (Kshs)	Time Frame (Months)	Imp. Status (% of completion)
<b>Water sector</b>								
Koromey/ Agro-pastoral	Water Trucking	Kamor Elle & Bita villages	1,680	MCG- DWS	Improved availability & accessibility to water for domestic needs	150,000	2 months	5%
Arabia / Pastoral	Water Trucking	Odha	5,120	Mandera County Government	Improved availability & accessibility to water for domestic needs	200,000	3.5	10% complete
	Maintenance of motorized water schemes	Arabia, Odha, Omar Jillaow	19,700	MCG – DWS – RRMT	Improved availability & accessibility to water for domestic needs	3,000,000	1 week	40%
Rhamu Dimtu/ Agro- Pastoral	Water Trucking	Degmar er, Garsey & Bur John villages	11,680	MCG- DWS	Improved availability & accessibility to water for domestic needs	400,000	2 months	5%
Guticha / Pastoral	Water Trucking	Garab Laqa, Dagah Turtur, Korma Adow, Lan Qurac, Diley, Dayday, Shardar mot, Goofa, Sakira	14,960	MCG- DWS	Improved availability & accessibility to water for domestic needs	960,000	2 months	5%
Waranq ara/ Agro- pastoral	Water Trucking	Bambo & Qeyra Ali	8,000	MCG – DWS	Improved availability & accessibility to water for domestic needs	400,000	2 Months	5%
Libehia/ Agro- pastoral	Water Trucking	Farey & Sero- hindi	4,680	MCG- DWS	Improved availability & accessibility to water for domestic needs	200,000	2 months	5%

Sub County	Ward	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (Kshs)	Time Frame
<b>Agriculture</b>							
Sala	Promotion of fruit crops (Citrus, Banana, Mangoes and Pawpaw production) 16 groups given 16 water pumps engines to boost crops production along the river.	Sala, Location	100 farmers	MOAL&F	Sold kales of kshs. 937,500 Sold tomatoes of kshs.1,154,250	5 M	2018-2019FY
Waranqara,Sala, Fino, Alungu and Lafey wards	Promotion of Traditional High Value Crops (Sorghum, pearl millets, Green-grams and Cowpeas)	All locations	545farmers	MOAL&F	Short rains food production-2018 across the Sub-County was: Sorghum harvest- 2.3 MT Maize harvest- 13.2 MT -Cowpeas harvest- 4.5 MT	140,000	2018-2019FY
Sala Ward	Promotion of Oil crops( Simsim and Sunflower production)	Sala Location	100 farmers	MOAL&F	Realized yields Simsim -1.6 MT Sunflower - 2.0MT	169,000	2018-2019FY
Waranqara and Lafey Wards	Promotion of soil and water conservation structures for crops production (Trapezoidal Bund and Contour bunds)	Waranqara, Kabo and Lafey Locations	100 farmers	MOAL&F	Construction of 3 trapezoidal bunds in Waranqara, Construction of 3 trapezoidal bunds in Lafey,covering 3Ha and Construction of 3 trapezoidal bunds and 1 contour bunds/ridge covering 6 Ha for enhanced rainfed production on cereals(Maize and Sorghum), pulses(Cowpeas) and oil crops(simsim/sunflower).	1 M	2018-2019FY
Fino, and Lafey Wards	Promotion of Vegetables(Tomatoes, Kales, Spinach and water melon ) through 1 Greenhouse irrigation(Fino) and 2 Open Drip Irrigation kit (Fino and Lafey)	Fino and Lafey wards	50 farmers	MOAL&F	Food security improved in the market(fruits and vegetables)	14 M	2018-2019FY

Fino Ward	Construction of Water Spreading Bunds.	Fino	20 farmers	MOAL&F	One group would produce cereals (Maize and Sorghum), pulses (Cowpeas) and Oil crop (simsim) through water spreading gabions technology.	4.2 M	2018-2019FY
Sala	Value addition and Agro-processing of Pawpaw, Sunflower, Mangoes, Banana ,sorghum and Tomatoes	Sala	200 Farmers	MOAL&F	Food security improved in the market	200,000	2018-2019FY
Health	Vitamin A supplementation	County wide	5000	MOH Partners	Improve healt and nutrition status		ongoing
	Management of acute malnutrition and IMMAM out reach	County wide	10,000	MOH Partners	Reduce malnutrition related cases	15M	ongoing
	IYCN Interventions (EBF and Timely Intro of complementary Foods	County wide	120,000	MOH/ Partners	Improve under nutrition status in the area	20M	ongoing
	Iron Folate Supplementation among Pregnant Women	County wide	300,000	MOH	Improve under nutrition	15M	Ongoing

### 5.3 Recommended Interventions

Sub-county	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Water sector							
All sub-counties	Water trucking	All sub-counties	280000	Mandera County Government/other actors	150M	Nil	July -oct
All sub-counties	Repair of breakdowns and purchase of fast-moving spare parts	All sub-counties	140000	Mandera County Government	30M	Nil	Continuous
All sub-counties	Provision of fuel subsidy to strategic livestock boreholes	All sub-counties	240,000	Mandera County Government	75M	Nil	July -Dec
All sub-counties	Purchase of stand by generator set	3 sub counties(Mandera East, South and North)	75000	Mandera County Government and other partners	25M	Nil	July -Dec
All sub-counties	Purchase of collapsible plastic tanks	All sub counties	25,000	Mandera county government, partners and national government	5M		July- dec 2019
County wide	purchase of water bowsers	County wide	400,000	Mandera county government, partners and national government	72M		July - Dec 2019
Education sector							
Entire County	School meals programme	All the schools in the sub counties affected	all	WFP, GOK, County Government,National Government ,NGOs			
12 schools ( 2 per sub county)	Food for fees	Selected Schools with most vulnerable population	1200	All actors	25M		July -Dec
Livestock							

All sub Counties	Offtake/destocking	Entire County	180,000	Department of livestock Production/TCG/National government	117M	30M	July-dec
All sub counties	Provision of livestock feed	Entire County	580000	Department of livestock Production/TCG/National government	150M	30M	July -Dec
All sub counties	Livestock vaccination	Entire County	240000	Department of livestock Production/TCG/National government	40M	10M	July Dec
Health Sector							
All sub counties	Enhanced water trucking to institutions health facilities	Entire County	87000	Department of Health and other actors	25M	5M	July Dec
All sub counties	Scale up of integrated health and nutrition outreaches.	Entire County	340000	Department of Health and other actors	50M	10M	July Dec
All sub counties	Facilitate Mass screening for children and mothers	Entire County	200000	Department of Health and other actors	25M	6M	July Dec
All sub counties	Up scale cash transfers program	County wide	20,000	NDMA & partners	180M		July - Dec 2019