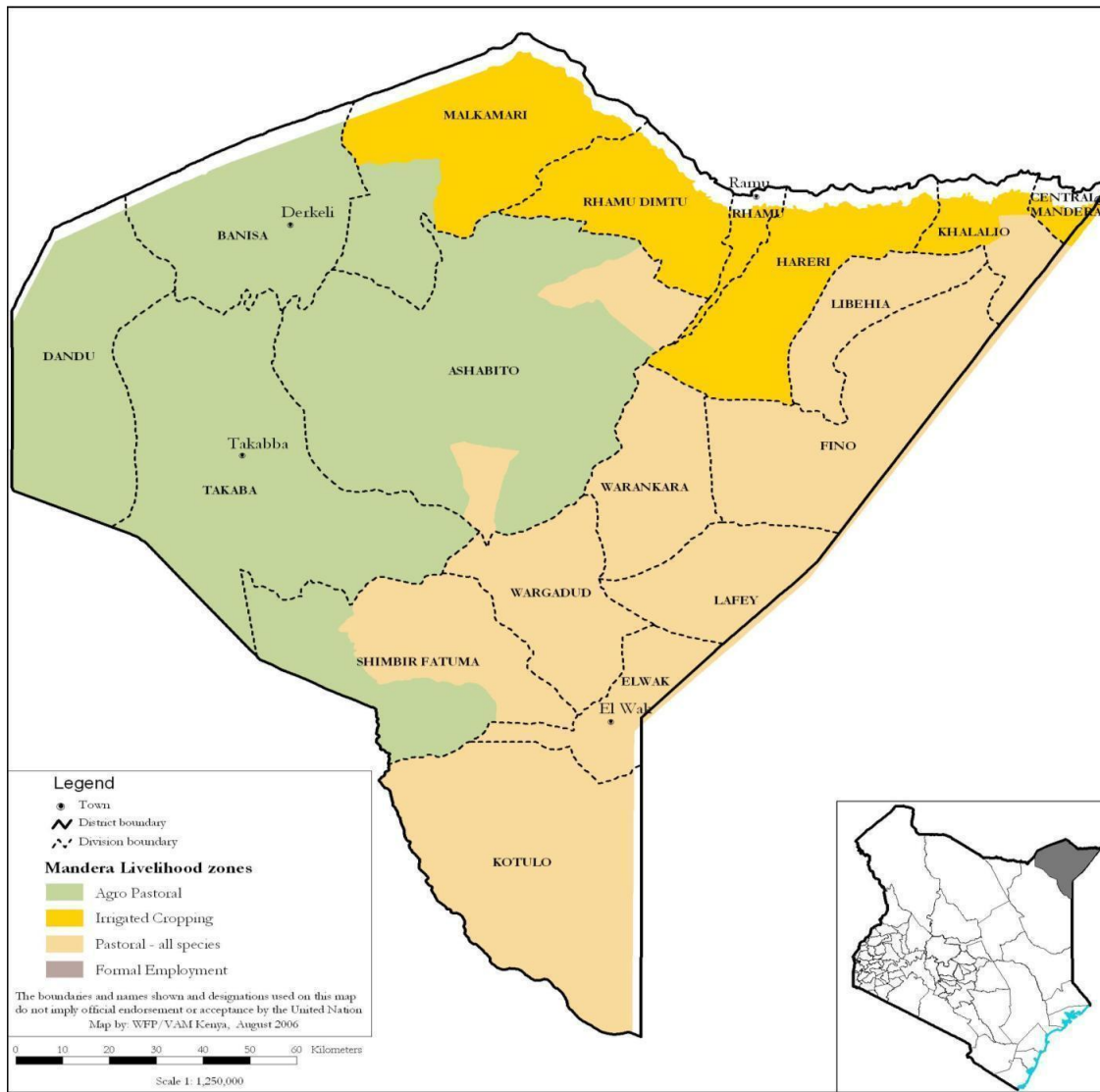


MANDERA COUNTY 2018 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report by the Kenya Food Security Steering Group¹ (KFSSG) and County Steering Group, Manderla County

August 2018

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Executive Summary

The long rains food security assessment was conducted by Kenya Food Security Steering Group (KFSSG) and County Steering Group (CSG) members for the three livelihood zones in Mandera County from 6th to 19th August 2018. The objective of the assessment is to establish the impact of long rains season on food and nutrition security at household level. Mandera County receives two rain seasons - short rains between October and November and long rains between March and May. Annual normal precipitation amounts to 155mm per year, temperatures ranges between 24 degrees to 42 degrees centigrade. It is a national exercise conducted in twenty-three arid and semi-arid counties.

Most of contributing factors improved during the season which included decreased distances to water sources which is normal of 5–10 kilometers for livestock. All Earth Pans, Dams and Underground Tanks filled up in April 2018. The long rains had negative effects on 37 of the 146 Earth Pans and Dams. 25 percent of the Earth Pans and Dams in the County had their Spillways and Earth Embankments completely washed away or extensively damaged by the heavy long rains

Favourable terms of trade (ToT) has improved the purchasing power and market access for the predominantly pastoralist households. Dietary diversity is good as households are consuming 2-3 meals per day comprising 4-5 food groups mainly sugar, milk, cereals and oil. However, the diet is mostly lacking legumes, vegetable and fruits, making it deficient of the much-needed minerals, vitamins and plant proteins. There was measles and dengue fever outbreak reported in the entire County while diarrhea and Malaria cases were high due water borne disease resulting from contaminated water.

There is significant improvement in household food access, as evident in the increase in proportion of households with acceptable food consumption score (FCS) 71.0 percent to 88.1percent during the season². Households in border line and poor FCS have also reduced from 25.5 percent and 3.5 percent to 9.9 and 2 percent respectively. The significant shift of households from poor and borderline to acceptable FCS is indicative of improved household dietary diversity and meal consumption, resulting from the enhanced livestock production and increased household milk consumption.

The Global Acute Malnutrition (GAM) rates have reduced from very critical level of 24.6 percent to critical levels of 16.6 percent.³. The proportion of Pregnant Lactating Women who are moderately malnourished has remained stable at six percent while those at risk of malnutrition has reduced from 23.9 percent to 19.9 percent over the same period. The percentage of children with Mid Upper Arm Circumference (MUAC) below 135mm was 20.5 percent in July 2018. The MUAC trend were on decreasing trends as from March 2018. Based on above outcome indicators, Mandera County is classified as stressed (IPC Phase 2) IPC food Security phase classification.

² WFP Food Security Outcome Monitoring - May 2018

³ Mandera County Nutrition Survey_ July 2018

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1.0 INTRODUCTION

1.1 County Background

Mandera County is situated in north eastern part of Kenya and borders Somalia to the east Ethiopia to the north and Wajir County to the south with 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 711,117, persons (KNBS, 2016 projected). The County has three major livelihood zones that include Pastoral all species livelihood zone, Agro-pastoral livelihood zone and irrigated cropping zone.

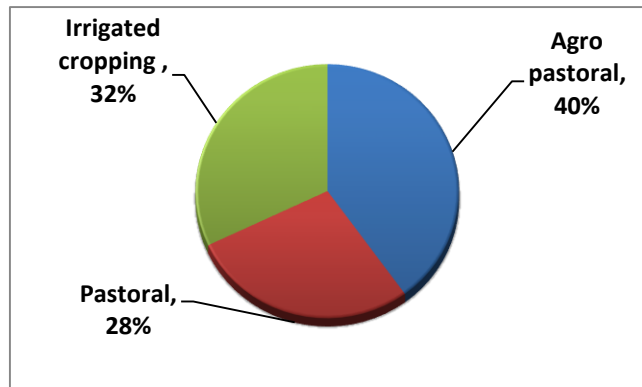


Figure 1 Population proportions per livelihood zone

1.2 Objectives 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 March, April and May long rains season of 2018, taking into account 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 secondary data from line sectors and focus group discussions were also carried out. The team composed of Kenya Food Security Steering Group (KFSSG) and Mandera 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 6th to 19th August 2018. 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

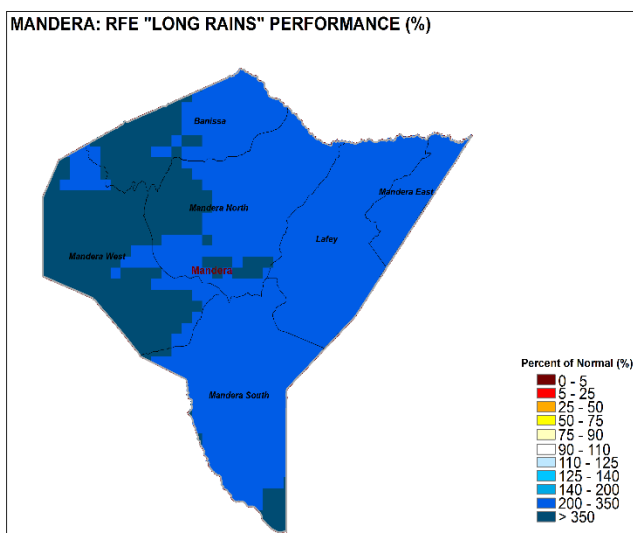


Figure 2 Rainfall performance

The onset of long rains was early in the third dekad of the month of February compared to the normal second dekad of March. The amount of rainfall received during the season was 295mm of rainfall compared to normal of 154mm. The spatial distribution was even and temporal was good while most parts of the County received 200 to 350 percent of normal with western part of the county specially Takaba and Dandu divisions receiving above 350 percent of normal. The cessation was normal as it occurred in the third dekad of May.

2.2 Insecurity and Conflict

There were no major cases of insecurity related incidence reported in the County that had an impact on food security. There was however influx of livestock to Banisa from Ethiopia following conflicts there, which is likely to affect pasture availability. Livestock is also not accessing pasture into Somalia due to insecurity at the border. The market supplies and livestock movements were normal and no inter clan conflicts were reported in the entire County during the period.

2.3 Other shocks and hazards

The current hazards include suspected cases of PPR and CCPP of small stock across the county and also The Rift Valley Fever advisories greatly affected the livestock market. Floods also destroyed crops and washed away farm implement along the irrigated cropping zone. There is influx of livestock from Ethiopia into Banisa and Mandera west sub-counties following conflict between the Somali and Oromo of Ethiopia. This is likely to affect the pasture and water situation in the area as the number of animals using pasture and water will tremendously increase.

3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1.0 Availability

3.1.1 Crop Production.

Maize, cow peas, fruits (pawpaw, banana) and vegetables (kales, tomatoes and onions) are mainly grown for both food and income under irrigated agricultural production. Sorghum contributes 70 percent of food and cash income in Agro pastoral livelihood zone while it contributes 100 percent to food and cash income in pastoral livelihood zone under normal condition.

Maize contributes 85percent of food and cash income in Irrigated cropping livelihood zone while

Onions and Banana contribute 25percent and 36percent respectively.

Rain-fed crop Production

Under rain fed crop production area planted with maize during the long rains was 69 percent of the long-term area planted, while seasonal production was 71 percent of the long term. Hectares under sorghum production were 64 percent of the long-term average, while long rains production was 68 percent of the long-term average production. Area planted under cow peas was 57 percent of the long-term average area planted but no subsequent production realized. The variation in area planted and seasonal production is attributed to delayed land preparation which resulted into late planting and subsequent wilting of crops, inadequate supply of certified seeds (no farm inputs suppliers in the county), pest and disease infestation. The production of cow peas is nil as it is harvested as fodder

Table 1. Area planted under rainfed crop production for three major crops

Crop	Area planted during 2018 long rains season (Ha)	Long Term Average area planted during the long rains season (Ha)	2018 long rains season production (90 kg bags) Projected/Actual	Long Term Average production during the long rains season (90 kg bags)
1.MAIZE	132	191	1189	1667
2.SORGHUM	128	197	2972	4379
3.COW PEAS	82	Nil	Nil	Nil

Irrigated Crop production

Area planted with maize under the irrigated cropping livelihood was 73 percent of the long-term average area cultivated, while seasonal production was 71 percent of the long-term seasonal production. There was no cow peas harvested as a result of floods which swept the crops and delayed replanting, extension staff to farms, inadequate supplies and availability of certified seeds and general farm inputs for proper land preparations and replanting of farms, increase in pest and disease infestation during and after flooding, and harvesting of cow peas and maize for fodder before maturity.

Table 2. Crop production under Irrigated Agriculture

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 (90 kg bags) Projected/actual	Long Term Average (3 years) production during long rains season (90 kg bags)
1.Maize	71.5	97.5	602	850
2. Cowpeas.	63.5	110.3	517	715

3.1.2 Cereal Stocks

The stocks held by different actors in the market are below long-term stocks. The stocks of maize held by households, traders and millers, were 64, 62, and 67 percent of long term respectively. Rice stocks held by traders were 73 percent of the long-term average stocks. The stocks of sorghum held by farmers and traders, were 65 and 66 percent of the long term respectively. The variation in stocks held was due to insecurity threats, community conflict in Ethiopia and intensified border controls for quality assurance which interfered with market supplies from Nairobi, Moyale and cross border trade from Somalia and Ethiopia. Variation is also due to stoppage of general food aid supplies and also poor seasonal harvests as explained under crop production analysis.

Table 3. Cereal stock in the County

Commodity	Maize		Rice		Sorghum		Green gram	
	Current	LTA	Current	LTA	Current	LTA	Current	LTA
Farmers	245	380	0	0	222	338	0	0
Traders	387	617	5412	7410	275	413	187	279
Millers	289	428	0	0	0	0	0	0
Food Assistance/ NCPB	0	0	0	0	0	0	0	0
TOTAL	921	1425	5412	7410	497	751	187	279

3.1.3 Livestock Production

Livestock is the most important natural resource and the mainstay of the economy of the county. The main livestock reared in the county include; Cattle (Boran breed), Sheep and Goats, Camel and donkey. Approximately 95 percent of household incomes in Mandera County come from the livestock sub-sector. In terms of composition of the total livestock, the respective percentages for different species

are: goats 51 percent, sheep 17 percent, camel 15 percent, and cattle 13 percent while donkeys represent three percent of the total. Livestock takes the largest proportion of the rangeland resources. The irrigated livelihood zone depends on both livestock and crops for their food and income while Agro-pastoral and pastoral zones depend on livestock for their food and income. Livestock numbers and distribution have changed overtime dictated by natural as well as human related catastrophe like drought, diseases and mushrooming settlements which have shrunk the land available for grazing and browsing. Land is the most important resource as far as livestock production is concerned and livestock takes the largest proportion of the rangeland resources in the County.

Pasture and browse situation

The pasture and browse situation are generally good across all livelihood zones. The pasture and browse trend are on downward but is not expected to deteriorate to poor condition until the beginning of short rains. There is influx of livestock from Ethiopia into Banisa and Mandera west sub-counties following conflict between the Somali and Oromo of Ethiopia. This is likely to affect the pasture and water situation in the area as the number of animals using pasture and water will tremendously increase. Livestock in Mandera East, Lafey and Mandera South which used to access pasture in Somalia cannot do so due presence of militant groups close to the Kenya –Somalia border that collect Zakat forcefully from Herders who cross into Somalia. Riverine farmers are feeding crop residues to their livestock which is normal.

Table 4. Pasture and Browse conditions

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	Poor	2	Less than one	Nil	good	Fair	2	Less than one	Nil
Agro-pastoral	good	Poor	2	Less than one	Nil	good	Fair	2	Less than one	Nil
Irrigated	good	Poor	2	Less than one	Nil	good	Fair	2	Less than one	Nil

Livestock Productivity

Livestock body condition

Body condition of all livestock species in all livelihood zones is currently good. This is due to good pasture availability all over the county. This is above normal at this time of the year. However, the trend will be downward as the pasture situation will deteriorate as the dry season progresses. As body condition deteriorates production will also go down impacting negatively on household food security,

Table 5. Livestock Body Condition

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

Tropical livestock units (TLUs)

The average livestock TLUs per household for both poor and middle-income households increased by almost 50 percent especially for the small stock and about 20 percent for cattle and camel. This is a great improvement compared to normal when the herd size used to increase by a very small margin of about 5 percent or even less in the preceding years. The increase in herd size will positively translate to increased milk production and also animals for sale thereby improving household food security.

Table 6. Tropical Livestock Unit (TLUs) per Household Income group

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	40	20	80	55
Agro-pastoral	30	10	60	35
Irrigated	10	5	20	10

Birth rate

Livestock in the county usually breed during the MAM long rains. The small stock kid and lamb during the months of September- October. Cattle calve in the month of January - February and camels from April. However, the calving rate for the small stock is currently high at 60 percent due the above normal MAM rains that caused adequate regeneration of pasture and browse. The birth rate for camel and cattle will also increase when the animals start to calve around December-January 2019.

Milk Production and consumption

Milk availability of all livestock species is good in all the sub-counties which is above normal at this time of the year. This is associated to adequate availability of pasture and browse across the county. The current average milk consumption per household is five litres for the pastoral livelihood zone, six litres for the Agro-pastoral and four liters for the Irrigated agriculture livelihood zone.

Table 7. Milk production, Consumption and Price

Livelihood zone	Milk Production (Liters)/Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	5	4	3	2	50	80
Agro-pastoral	6	5	4	2	50	80
Irrigated	4	6	2	2	70	90

Migration

Migration of livestock is minimal within the county. Pasture, browse and water is available and accessible to livestock all over the county. There is influx of livestock from Ethiopia into Banisa and Mandera West sub-counties following conflict between the Somali and Oromo of Ethiopia. This is likely to affect the pasture and water situation in the area as the number of animals using pasture and water will tremendously increase. Livestock in Mandera East, Lafey and Mandera South which used to access pasture in Somalia cannot do so due presence of militant groups close to the Kenya –Somalia border. They usually collect Zakat forcefully from Herders who cross into Somalia.

Mortalities

There are no cases of livestock mortality reported. There were unconfirmed reports of PPR and CCPP cases of small stock across the county. The department of veterinary service continues to carry out routine treatment exercise and deworming of other reported cases. CCPP, PPR and CBPP vaccinations are expected to start when funds for logistics and staff facilitation is available.

Water for Livestock

The main source of water for livestock and domestic use across the county is earth pans for pastoral and Agro-pastoral livelihood zones and Daua river for the Irrigated Agriculture livelihood zone. Most boreholes are currently not in use due to available alternative sources of water. Earth pan water is expected to last for the next two months. Return trekking distance to water is 6km for the pastoral livelihood zone, 4 km for the Agro-pastoral livelihood zone and 2 Km for the irrigated livelihood zone. Watering frequency is daily for the irrigated livelihood zone and after one day for the other two livelihood zones.

Table 8. Water for Livestock

Livelihood zone	Return trekking distances (Kms)		Expected duration to last (Months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
Pastoral	6	10	2	Less than one	After one day	2 days
Agro pastoral	4	8	2	Less than one	After one day	2 days
Irrigated	2	4	4	4	Daily	Daily

3.1.4 Impact on availability

The MAM rainfall which was above normal caused adequate regeneration of pasture and browse across the county. All the earth pans and natural depressions impounded water. With adequate availability of pasture and browse and water at a short distance, livestock body condition and productivity increased greatly impacting positively on household food security. Households have enough milk to use at the household level and also for sale. Income from sale of milk can be used to purchase and meet other household needs. Crop production in the Irrigated and Agro pastoral livelihood zones were below normal and these was a result of floods which swept away crops and delayed replanting of crops, the stocks held by different actors in the market are below long-term stocks. These will greatly affect households at the Irrigated livelihood zone.

3.2 Access

3.2.1 Markets prices

Market Operation

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, Ethiopia and Nairobi respectively. There was no major disruption of market reported across the county and supply volumes and movements of goods to these markets were normal during the season.

Maize Prices

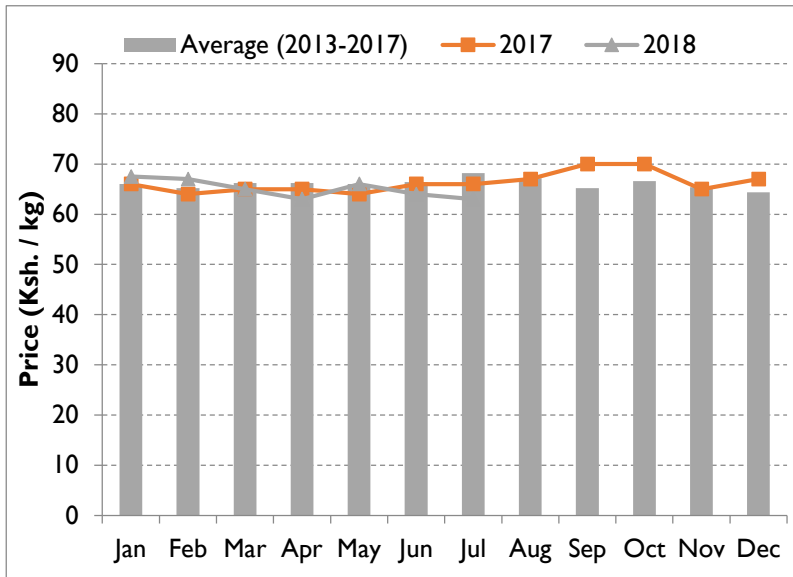


Figure 3. maize price in Mandera County

The average price of maize for the month of July 2018 was 63 per Kg and is within the seasonal trend though slightly below the long-term averages as from March 2018. There was eight percent decrease in the month of July compared to long term average and these is a result of flow maize from cross border of Ethiopia. The price of maize is expected to increase as the dry spell progresses.

Goat Prices

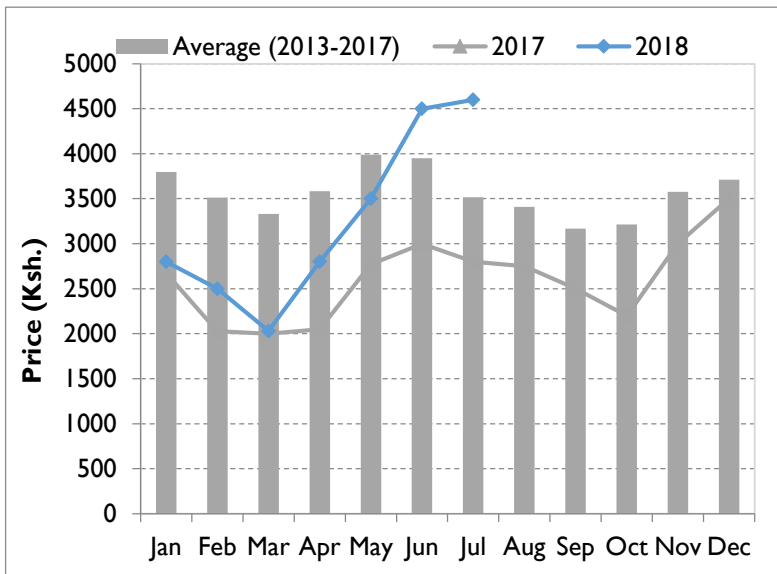


Figure 4. Goat Price in Mandera County

The average price of a goat gradually increased from April 2018 though was following the seasonal trend. The prices were above the same period last year and above long-term average in the month of June and July. The increase in price is attributed to good body condition that resulted from above normal performance of the long rains. The price of goats is expected to remain stable until short rains due to availability of pasture and browse and water in most parts of the County

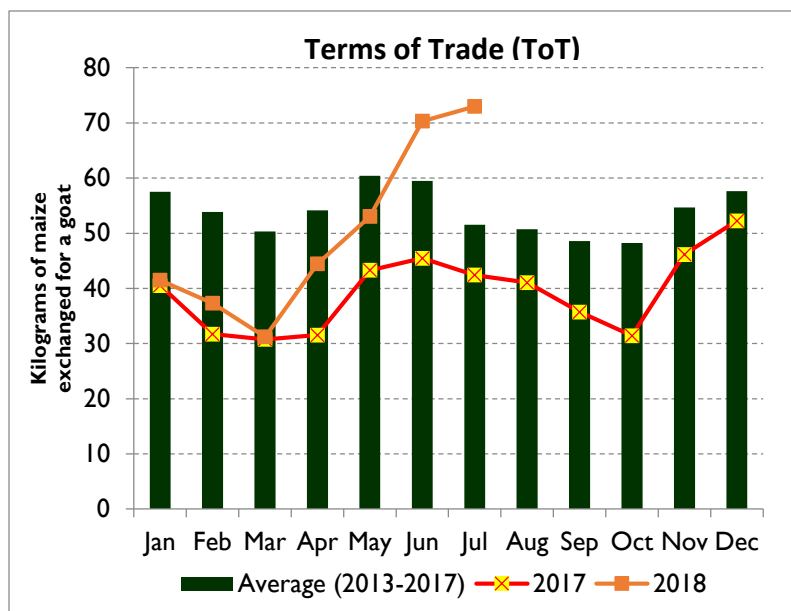


Figure 5. Terms of Trade in Mandera County

goat price increases.

3.2.2 Terms of Trade

The current term of trade for the month of June indicated households were able to purchase 73 kilograms of maize from a sale of goat which was 42 percent above long term average. There was increase in terms of trade from April which was above same period last year and was following the seasonal trends. The terms of trade for June and July were above the long-term averages. The increase is mainly attributed to the increase in the goat prices and relatively stable maize prices over the same period. Terms of trade are expected to remain stable as

3.2.3 Income Sources

The main sources of income were casual labour followed by sale of livestock and petty trade as indicated in SMART survey conducted in July as shown in the table below.

Table 9. Income sources

Main Source of Income	% - 2017	N - 2018	% - 2018
No income	0.7%	50	9.3%
Sale of livestock	7.9%	103	19.1%
Sale of livestock products	32.7%	45	8.3%
Sale of crops	5.4%	19	3.5%
Petty trading e.g. sale of firewood	18.6%	78	14.4%
Casual labor	25.1%	220	40.7%
Permanent job	4.9%	15	2.8%
Sale of personal assets	1.3%	6	1.1%
Remittance	1.8%	4	0.7%

3.2.4 Water access and availability

The major sources of water for domestic, irrigation and livestock use within the County are Dawa River, Boreholes and Earth pan. The County has 133 boreholes and County's population entirely depends on Boreholes to meet their water needs. -There are 146 earth pans and dams in the County which store between 10,000 and 110,000M³ of water every normal rainy season.

Impact of the March - April 2018 rains on the status of Water Sources:

All earth pans, dams and underground tanks filled up in April 2018. However, the long rains had negative devastating effects on 37 of the 146 Earth Pans and Dams. 25 percent of the Earth Pans and Dams in the County had their Spillways and Earth Embankments completely washed away or extensively damaged by the heavy long rains.

Operational Water Sources

Currently, 13 Infiltration Gallery Wells, 102 Under Ground water Tanks, 74 Boreholes and 98 water pans and dams are operational County wide while 50 boreholes are sound and on standby.

Areas where Water Sources have dried up

Currently there are 74 villages without operational water sources or where existing water sources have either dried up, damaged by floods or depleted and that are receiving County Government funded water trucking services. Out of these 74 villages, 18 are new and created after October 2017 when the last previous water trucking efforts were under taken. No reliable data of the number on the livestock in these areas is available. However, the total human population living in these 74 villages is estimated to be about 89,000 people.

Distance to water sources

The current average distances to domestic water sources was normal in comparison with the long-term averages as shown follows; -

Table 10. Distance to Water sources per livelihood zone

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

Waiting time at the source

The current waiting time at the sources was normal as compared long term averages as shown below:

Table 11. Waiting time at Water source per livelihood zone

No	Sub-County	Livelihood Zone	Normal W/Time (Min)	Current W/Time (Min)	Remarks
1	Mandera North	Agro-pastoral	0-30	0-30	Pastoralist communities are more affected than Agro-pastoralist communities
2	Mandera East	Agro-pastoral	0 - 30	0-30	
3	Mandera South	Pastoral	0 - 30	0-30	
4	Mandera West	Pastoral	0-30	0-30	
5	Banisa	Pastoral	0 - 30	0-30	
6	Lafey	Pastoral	0 - 30	0-60	

Cost of water

The current cost of water (20 liters jerrican) was normal compared to long term averages as shown below:

Table 12. Cost of Water per livelihood zone

No	Sub-County	Livelihood Zone	Normal Cost (Ksh)	Current Cost (Ksh)	Remarks
1	Mandera North	Agro-pastoral	2-5	2-5	This indicates a normal situation
2	Mandera East	Agro-pastoral	2-5	2-5	
3	Mandera South	Pastoral	2-5	2-5	
4	Mandera West	Pastoral	2-5	2-5	
5	Banisa	Pastoral	2-5	2-5	
6	Lafey	Pastoral	2-5	2-5	

Water consumption

The current average water consumption rates per person per day was normal to compared long term averages as shown below.

Table 13. Water consumption per livelihood zone

No	Sub-County	Livelihood Zone	Normal (lts/P/d)	Current (lts/P/d)	Remarks
1	Mandera North	Agro-pastoral	20	15-20	The prevailing cool weather could be responsible for low water consumption rates
2	Mandera East	Agro-pastoral	20	15-20	
3	Mandera South	Pastoral	20	15-20	
4	Mandera West	Pastoral	20	15-20	
5	Banisa	Pastoral	20	15-20	
6	Lafey	Pastoral	20	15-20	

Sanitation

Though the county sanitation is poor, there is no sanitation facility that is known to be causing the contamination of any water point. However, there are other known and potential sources of water contamination by livelihood zones as shown below: -

Table 14. Sanitation per livelihood zone

No	Sub-County	Livelihood Zone	Known & potential Contamination sources	Remarks
1	Mandera North	Agro-pastoral	Flooding & open defecation	Pastoralists and IDP communities are more affected than Agro-pastoralists & urban communities
2	Mandera East	Agro-pastoral	Flooding & open defecation	
3	Mandera South	Pastoral	Open defecation & Silting	
4	Mandera West	Pastoral	Flooding, Open defecation & Silting	
5	Banisa	Pastoral	Open defecation & Silting	
6	Lafey	Pastoral	Open defecation & Silting	

Hygiene

At the moment water treatment chemicals are largely not available at the HH level and are not widely used even in normal times mainly because they are not available in significant amounts. The use of household water purification chemicals is widely accepted by the County's population.

A few households in major centres use chlorine obtained from the Water department stores, some enlightened individuals buy aqua tabs, Purr or Water guard. Mothers who regularly visit health facilities and have received health education boil water for infants below age of 3 years.

Generally, the local community being also predominantly of the Muslim faith use water-based toilet hygiene practices. However, most mothers do not really observe high levels of hygiene in the handling of food. 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 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.

3.2.5 Food Consumption

There was significant improvement in household food access, as evident in the increase in proportion of households with acceptable food consumption score (FCS) from 71.0 percent to 88.1 percent during the season⁴. Households in border line and poor FCS have also reduced from 25.5 percent and 3.5 percent to 9.9 percent and two percent respectively as shown in figure 2.0. The significant shift of households from poor and borderline to acceptable FCS is indicative of improve household dietary diversity and meal consumption, resulting from the enhanced

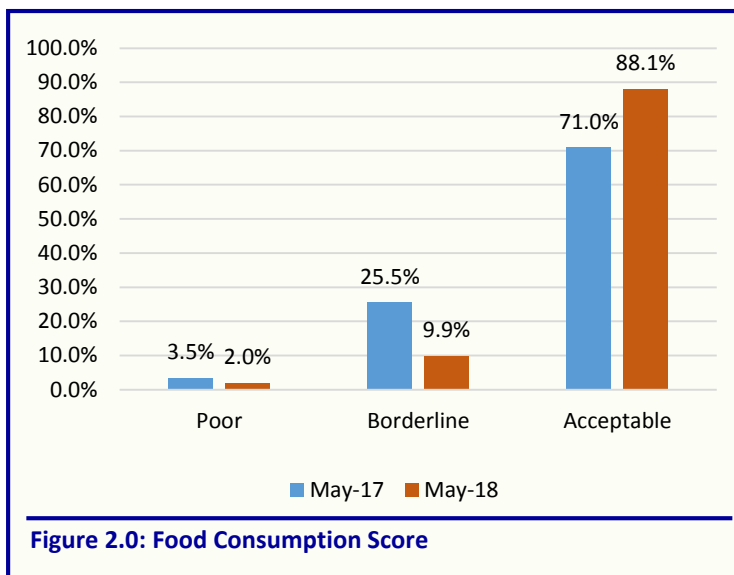


Figure 2.0: Food Consumption Score

livestock production and increased household milk consumption. Favourable terms of trade (TOT) has improved the purchasing power and market access for the predominantly pastoralist households. Dietary diversity is good as households are consuming 2-3 meals per day comprising 4-5 food groups mainly sugar, milk, cereals and oil. However, the diet is mostly lacking legumes, vegetable and fruits, making it deficient of the much-needed minerals, vitamins and plant proteins.

3.2.6 Coping strategy

The mean reducing coping strategy (rCSI) is 16, as most households are less frequently engaging in consumption-based coping strategies and are employing less severe coping strategies such as; reduction in portion size and number of meals eaten per day and reliance on less preferred/less expensive food. Only 27.3 percent employed severe consumption coping strategies such as borrowing food and reducing quantity of food consumed by adults to ensure that children had enough to eat. Female headed (rCSI 19.2) households employed more coping strategies than male headed households (rCSI 16.6). Most households (52.3%) are using stressed livelihood coping strategies and the proportion of households employing crisis and emergency livelihood coping strategies has reduced significantly from 23.4 percent and 17.9 percent in May 2017 to 12.3 percent and 5.6 percent in May 2018 respectively. Nonetheless, there are more female headed households using crisis and emergency livelihood coping strategies compared to male headed households.

⁴ WFP Food Security Outcome Monitoring _ May 2018

3.3 Utilization

3.3.1 Morbidity patterns

The main causes of morbidity for under five and general population were Malaria, Upper respiratory tract infection (URTI) and Diarrhea. There was increase in Diarrhea and URTI cases for under-fives and General population when compared to previous season. The Malaria cases for under-fives and the general population were within the season but increased sharply in the month May for the general population compared to the same season of 2017 and attributed to water contamination. Below is the graph below showing morbidity trends.

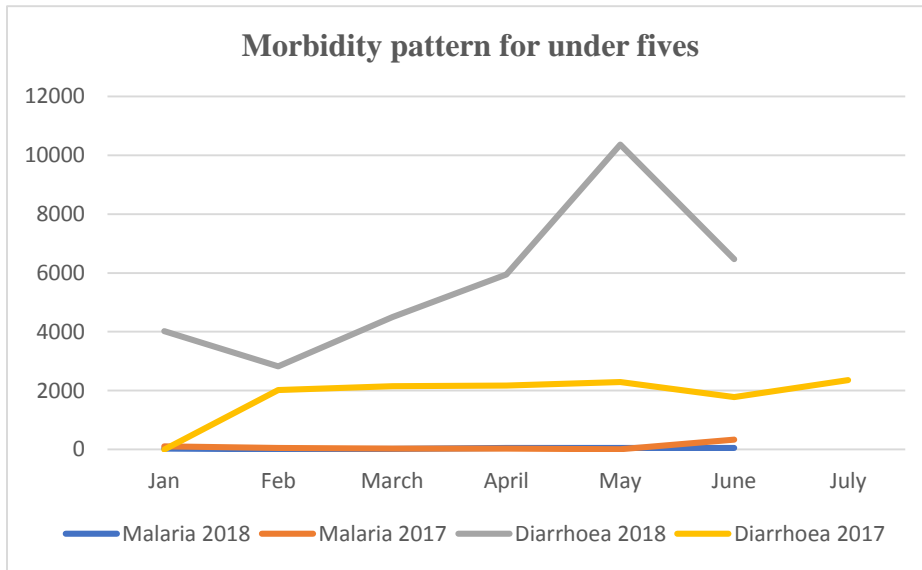


Figure 6. Morbidity patterns for under fives

There was outbreaks of measles disease reported in the entire County during the season of January to June 2018 where one death and 259 cases were reported in the district health information system (DHIS). Dysentery have been the leading causes of morbidity for under five and the general population in the county during the wet season of the long rains when water is contaminated. Also reported was dengue fever outbreak in the entire county.

Epidemic prone diseases

There was outbreaks of measles disease reported in the entire County during the season of January to June 2018 where one death and 259 cases were reported in the district health information system (DHIS). Dysentery have been the leading causes of morbidity for under five and the general population in the county during the wet season of the long rains when water is contaminated. Also reported was dengue fever outbreak in the entire county.

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3.3.2 Immunization Coverage and Vitamin A coverage

Immunization coverage for fully immunized child (FIC) in the county increased from 38.1 percent in January- June2017 to 66.1 percent for current season of January- June 2018, the increase is attributed to health awareness created by County Government and also high staff turnover, the coverage is still low compared to the national target. Source (DHIS)

Table 15. Immunization Coverage

Year	Percentage of fully immunized children in the county Source DHIS MOH 710 Vaccines and Immunizations	Percentage of children immunized against the mentioned diseases in the county Source: (Nutrition survey if available)
Jan to June 2018	66.1%	1. OPV 1 _89%_ 2. OPV 3 _85.9%_

		3. Measles 78.3% ___
Jan to June 2017	38.1%	1. OPV 1 96.6% ___ 2. OPV 3 94.9% ___ 3. Measles __92.4%__

Vitamin A supplementation

According to July survey data, the proportion from children for six to 11 months and 12 to 59 months who received vitamin supplementation was 46.0 percent and 31.8 percent when compared to the same season., the coverage of Vitamin A supplementation has decreased compared to the same season which is attributed to low campaigns coverage.

Table 16. 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 Source> DHIS MOH 710 Vaccines and Immunizations	Total Population (6-11 months)	Received vitamin A supplementation Source> DHIS MOH 710 Vaccines and Immunizations	Total Population (12-59 months)	Proportion of children Received Vit A supplementation in the last 6 months Source: Nutrition Survey (If available)	Proportion of children Received Vit A supplementation in the last 6 months Source Nutrition Survey (If available)
Jan to June 2018	54.0%	16,164	19.7%	117,805	46.0%	31.8%
Jan to June 2017					85.7%	36.7%

3.3.3 Nutritional status

Global Acute Malnutrition (GAM) rates have reduced in Mandera County from very critical level of 24.6 percent in July 2017 to critical levels of 16.6percent in July 2018, ⁵.

The proportion of PLWs who are moderately malnourished has remained stable at 6percent while those at risk of malnutrition has reduced from 23.9percent to 19.9percent over the same period.

The percentage of children with Mid Upper Arm Circumference (MUAC) below 135mm was 20.5

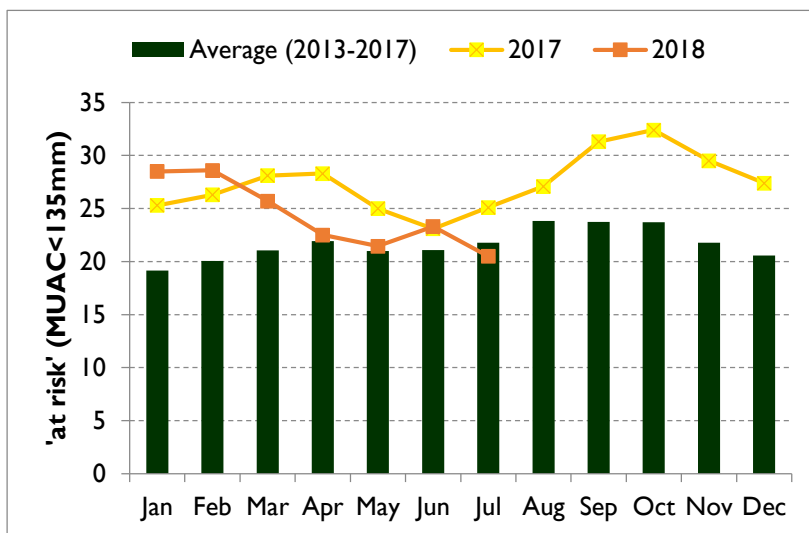


Figure 7 MUAC trends in the County

percent in July 2018. The MUAC trend were on decreasing trends as from to February 2018. The significant reduction in the prevalence of malnutrition is largely attributed to the improvement in household food access, resulting from the enhanced livestock production and increased household milk consumption. Favorable terms of trade (TOT) has improved the purchasing power and market access for the predominantly pastoralist households. Dietary diversity is good as households are consuming 2-3 meals per day comprising 4-5 food groups mainly sugar, milk, cereals and oil. However, the diet is mostly lacking legumes, vegetable and fruits, making it deficient of the much-needed minerals, vitamins and plant proteins.

⁵ Mandera County Nutrition Survey_ July 2018

3.4 Trends of key food security indicators

Table with key indicators showing previous and current season level

Table 17. Food Security trends in Mandera County

Indicator	Long rains assessment, July 2018	Short rains assessment, Feb 2018
% of maize stocks held by households (Agro-pastoral)	Less than a month	Less than a month
Livestock body condition	Good	Fair
Water consumption (litres per person per day)	10	15
Price of maize (per kg)	63	68
Distance to grazing	5	18
Terms of trade (pastoral zone)	73	41
Coping strategy index	16	18
Food consumption score	Acceptable 71.0, Borderline 25.5 percent, Poor 3.4 percent	Acceptable 88.9, Borderline 9.5 Poor 1.5 percent

3.5 Cross Cutting

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

ECD and Primary school enrolment slightly increased by two percent in term two when compared to term one 2018. The highest increment in enrolment for primary school was recorded in Mandera North at 10 percent. The improvement is largely attributed to the increased household food access following the enhanced long rains, 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 (42%) through primary school (38%) to secondary school (33%). 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 1-7 percent registered in the second term of 2018 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.

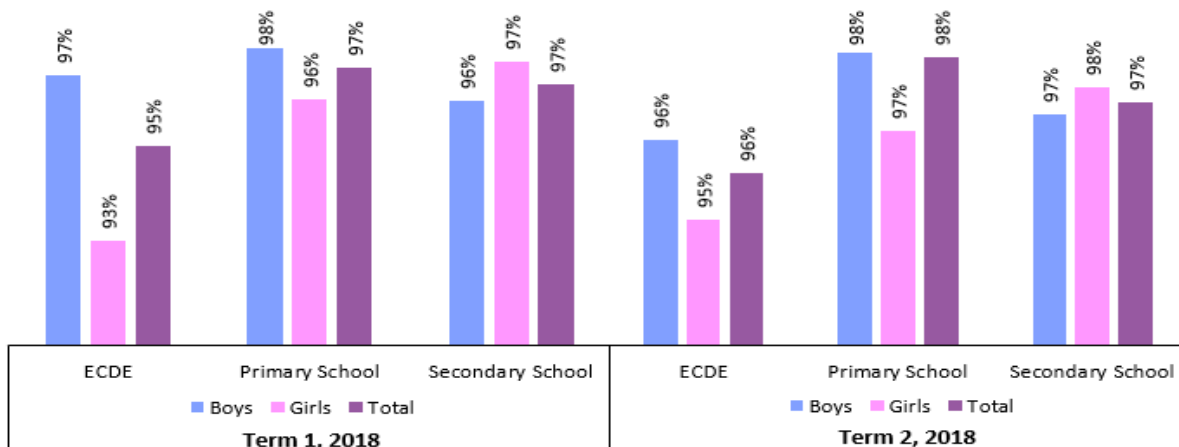
Table 18. Access (Enrolment in Numbers)

Enrollment	Term I 2018			Term II 2018		
	No Boys	No Girls	Total	No Boys	No Girls	Total
ECD	12935	9609	22548	13314	9662	22976
Primary	54379	33206	87584	55640	33974	89614
Secondary	8985	4511	13486	9101	4535	13626

3.5.2 Participation

The average attendance rate for term two of 2018 was above 95 percent for ECD, primary and secondary school and slightly higher compared to term one of 2018. The significant improvement in rangeland conditions, following the above-normal rainfall, means that livestock are grazing within the homestead thus minimizing migration and enabling children to attend and concentrate in school. As a result of the improvement in milk availability as well as increased household purchasing power due to favorable TOT, children are less involved in household coping activities hence the opportunity to attend school. Nonetheless, the attendance for girls remain 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.

Figure8: Attendance as a percentage of enrolment



3.5.3 Retention

The drop-out rate for both boys and girls was low at less than 0.1 percent for primary and secondary schools. In Primary schools, the boy were most affected as they are engaged in animal husbandry. 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 19. Retention (Dropout Rate)

Indicator	End of Term I 2018			End of Term II 2018		
	Nº Boys	Nº Girls	% dropout	Nº Boys	Nº Girls	% dropout
Students dropped out from school						
ECD	393	339	3.4%	308	250	2.5%
Primary	534	346	0.9%	409	271	0.8%
Secondary	35	55	0.6%	33	49	0.5%

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). WFP systematically handed over provision of

meals to the Government by June 2018 in line with the transitioning strategy that among other things ensured strengthening of government capacities to lead and manage the programme. The government has gradually taken over the responsibility of providing meals to schools since 2009, hence the transitioning demonstrated strong national commitment to continuing and expanding the school feeding programme and shifting from a donor-finance programme to a nationally-led programme.

3.5.5 Inter Sectoral links

All schools in the county are having water although sanitation and hygiene is very low in schools compared to other towns. No interventions like Vitamin A, deworming and Iron supplements are carried out in schools. The availability of milk production at household level has enhanced participation and retention in schools as drop has reduced.

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 water situations are projected to last until October and expected to support livestock productivity,
- Available food stock is likely to decrease by one month.

4.2 Food Security Outcomes for the Next Three Months (March – October 2018)

The Food security situation is projected to remain stable due to the above normal rains received during the long rains. Pasture and water situations are projected to last to the next rains in October and expected to support livestock productivity. Milk availability at household level has increased reducing the malnutrition levels at households' levels. Food Consumption Score improved thus increasing household dietary diversity and meal consumption, resulting from the enhanced livestock production and increased household milk consumption. Favorable terms of trade (TOT) has improved the purchasing power and market access for the predominantly pastoralist households. Dietary diversity is good as households are consuming 2-3 meals per day comprising 4-5 food groups mainly sugar, milk, cereals and oil.

4.3 Food Security Outcomes for November to January 2018

After the onset of the rains, food security situation is projected to improve further. 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 further 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 Stressed phase. All the three Livelihood zones are classified under Stressed (IPC phase2) IPC food security phase classification.

5.1.2 Summary of findings

The food security situation has improved in all the livelihood zones in the County during the long rain and the situation is projected to remain stable until the onset of short rains. all indicators are expected to improve as the October November and December rains are expected to improve the food security situation

5.1.3 Sub county Ranking

Table 20. Sub County ranking

S/No.	Sub-County	Population in the sub counties	Population in need (percent range min – max)	Proposed mode of intervention
1.	Banissa	109,587	15-20	Food aid/Cash transfers
2	Mandera west	112,101	15-20	Food aid/Cash transfers
3	Mandera east	132,770	15-20	Food aid/Cash transfers
4	Lafey	77,485	10-15	Food aid/Cash transfers
5.	Mandera south	111,088	10-15	Food aid/Cash transfers
6.	Mandera north	69,757	10-15	Food aid/Cash transfers
7.	Kotulo	70329	10-15	
Total		711,117	10-15	

5.2 Ongoing Interventions

Interventions 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)
WATER								
Neboi & Township / Agro- pastoral	Rehabilitation & expansion of Neboi water supply to Mandera TTC	Neboi	4,960	MCG-DoE	Improved accessibility to water for domestic needs	20,000,000	6 months	30%
	Improvement of Water distribution within Bulla Towfiq	Township	16,400	MCG-DWS	Improved accessibility to water for domestic needs	14,000,000	6 months	45%
Khalalio/ Agro- pastoral	Repair of flood damaged Gududiya Borehole Rising Main	Gududiya	9,360	MCG-DWS & UNICEF-KCO	Improved accessibility to water for domestic needs	1,500,000	1 month	20%
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	Degmarer, Garsey & Bur John villages	11,680	MCG-DWS	Improved availability & accessibility to water for	400,000	2 months	5%

					domestic needs			
Ashabito/ Pastoral	Equipping of Sukela Tinfa Borehole	Sukela Tinfa	3,360	NWSB	Improved availability & accessibility to water for domestic needs	7,500,000	1 week	90%
Guticha/ Pastoral	Water Trucking	Garab Laqa, Dagah Turtur, Korma Adow, Lan Qurac, Diley, Dayday, Shardarmot, Goofa, Sakira	14,960	MCG-DWS	Improved availability & accessibility to water for domestic needs	960,000	2 months	5%
Rhamu/ Agro- pastoral	Drilling & equipping of Towfiq Borehole	Towfiq village	4,000	MCG –DWS	Improved availability & accessibility to water for domestic needs	11,000,000	4 Months	20%
Waranqara/ 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%
Fino/ Pastoral	Equipping of Sheikh Barrow Borehole	Sheikh Barrow	13,360	MCG-DWS	Improved availability & accessibility to water for domestic needs	8,400,000	1 week	20%

9.1 Recommended Interventions

Division	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame (Months)
All Wards and Livelihood Zones	Maintenance of Motorized Borehole water supply schemes	26 Boreholes throughout the Sub-County	76,000	Well-wishers, MCG-DWS & Devt Partners	16,000,000	0.00	6 months
	Drilling & equipping of Boreholes	Hussein Hared & Bambi	7,000	Mandera County Government	23,000,000	0	0
All Wards and Livelihood Zones	Conduct of Hydro-Geological Surveys	Kheyra Ali, Halima Garmaja, Bambo,	16,000	Well-wishers, MCG-DWS & Devt Partners	600,000	0.00	1-2 years
	Drilling & Equipping of New and Replacement Boreholes	Kheyra Ali, Halima Garmaja, Bambo,	19,000	MCG-DWS, NG & Devt Partners	36,000,000	0.00	2-5 years
Libehia Ward/ Agro-Pastoral	Piping of Water from Daua Basin to Libehia and Farey via Sero-hindi	Libehia, Farey and Sero Hindi	22,000	MCG-DWS, NG & Devt Partners	140,000,000	0.00	2-5 years
Neboi	Rehabilitation of Rural Water Supplies	BP1, Fiqow & Bulla Haji	14,600	MCG-DWS & Devt Partners	42,000,000	0.00	1-2 years
Khalalio	Rehabilitation of Rural Water Supplies	Bella & Karo	9,860	MCG-DWS & Devt Partners	28,000,000	0.00	1-2 years
	Water Trucking	14 centres	21,600	Mandera County Government	2,800,000	1,400,000	2.5
Neboi & Township	Establishment and capacity building of an urban water supply & Sewerage Company	Mandera town & periphery	105,000	MCG-DWS & Devt Partners	48,000,000	0.00	1-2 years

Rhamu/ Agro- pastoral	Rehabilitation of Rhamu Water Supply	Rhamu, Dooday, Shantoley	38,600	MCG-DWS & Devt Partners	25,000,000	0.00	1-2 years
Rhamu Dimtu/ Agro- pastoral	Equipping of Beni Borehole and construction of a Water Rising Main	Rhamu Dimtu & Khorahey	19,000	MCG-DWS & Devt Partners	22,000,000	0.00	1-2 years
Ashabito/ Pastoral	Rehabilitation & expansion of Ashabito - 2 Earth Dam from 40,000 to 80,000M ³	Ashabito	13,400	MCG-DWS & Devt Partners	26,000,000	0.00	1-2 years
Guticha/ Pastoral	Equipping of Goofa Borehole and related Civil works	Goofa	5,400	MCG-DWS & Devt Partners	12,000,000	0.00	1-2 years
Marodiley/ Pastoral	Rehabilitation of Marodiley Borehole	Marodiley	1,600	MCG-DWS & Devt Partners	8,000,000	0.00	1-2 years
	Water Trucking	Sheikh Barrow, Halima Haret	3,200 1,250	Mandera County Government	800,000	400,000	2.5
All Wards and Livelihood Zones	Conduct of Hydro- Geological Surveys	Degmarer, Garsey, Garab Laqa, Dagah Turtur, Korma Adow, Diiley, Shardarmot, Dayday, Goofa, Sakira	65,000	Well-wishers, MCG-DWS & Devt Partners	2,000,000	0.00	1-2 years
	Drilling & Equipping of New and Replacement Boreholes	Degmarer, Garsey, Garab Laqa, Dagah Turtur,	69,000	MCG-DWS, NG & Devt Partners	120,000,000	0.00	2-5 years

		Korma Adow, Diiley, Shardarmot, Dayday, Goofa, Sakira					
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