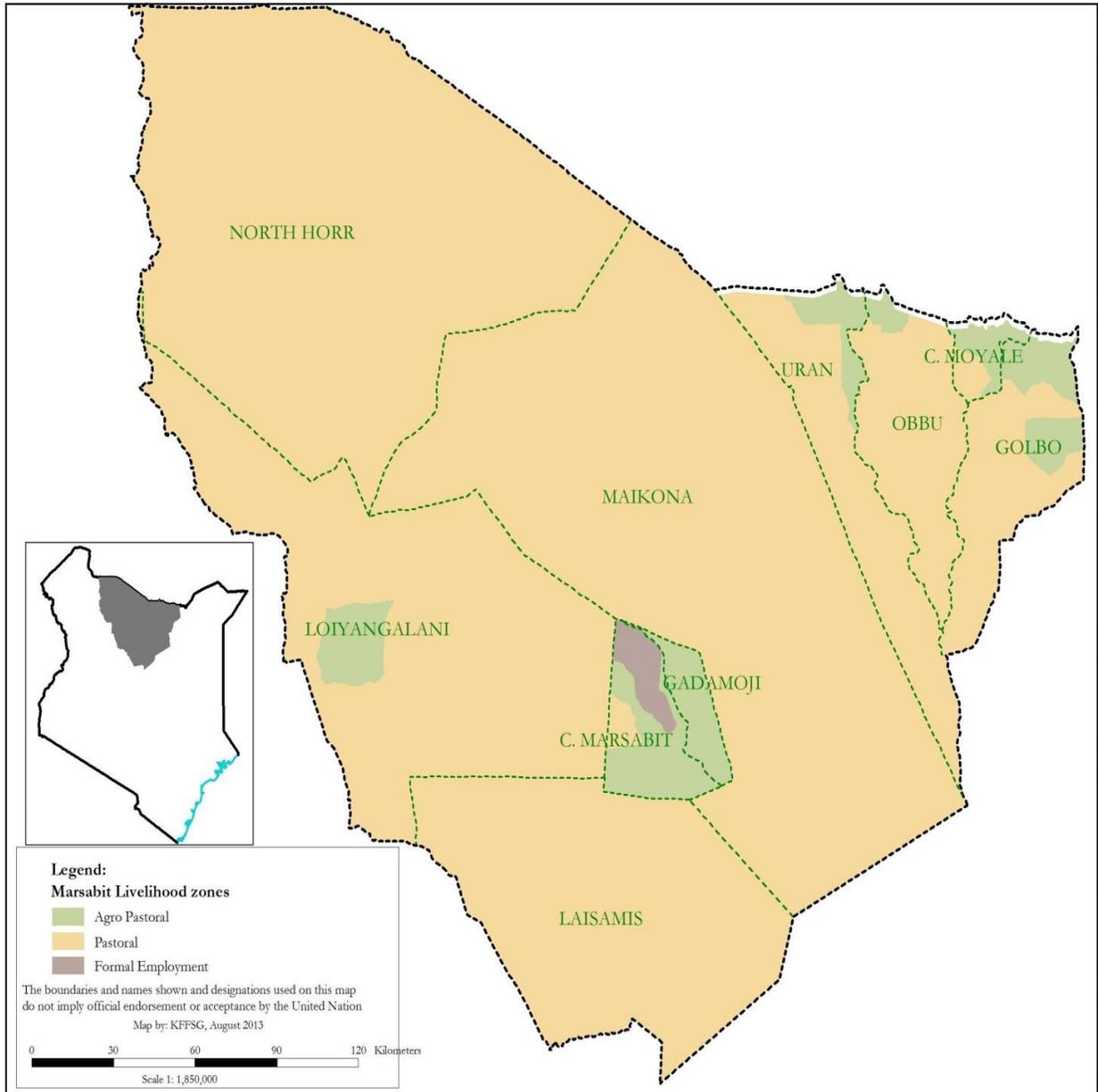


MARSABIT COUNTY
2018 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



**A Joint Report of Kenya Food Security Steering Group¹ and
Marsabit County Steering Group**

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Executive Summary

The long rains food security assessment (LRA) was conducted by the Kenya Food Security Steering group. The assessment is bi-annual and mainly covered pastoral and agro-pastoral livelihood zones of Marsabit County. The main objective of the assessment was to develop an objective, evidence-based and transparent food security situation analysis following the Long rains season of 2018 March, April and May (MAM), 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. Rainfall performance was good with early onset in the 1st dekad of March instead of the expected 3rd dekad of March. Temporal and spatial distribution was good. Rains ceased in the 1st dekad of June instead of the usual 3rd dekad of May.

Food crops production was low associated with late land preparation which led to low acreage planted hence subsequent low harvests. Stalling of irrigation scheme, pests and diseases also reduced crop performance. Maize stocks held by households are 66 below the LTA respectively. Livestock body condition is good. The trekking distance has reduced to 4-8 kilometers for range lands from the normal 5-25 kilometers. The average household milk production per day in the pastoral zone is 3-5 litres compared to the LTA of two to three litres while most households in agro-pastoral zone are producing between 2-4litres compared to the normal 2-3 litres. Due to good forage and good body condition, most cattle and small stocks are in-calf/ in-kind and birth rates are expected to increase between October and November. The average household milk production per day in the Pastoral zone is 3-5 litres compared to the LTA of 2-3 litres while most households in agro-pastoral zone are producing between 2-4litres compared to the normal 2-3 litres.

The food markets operated normally, however livestock markets were interrupted by Quarantine due to Rift Valley Fever between mid-June and early July. The average market maize price is Ksh. 40 per Kilogram compared to the long term average (LTA) of Ksh. 50 per Kg. Average market goat price is Ksh. 4,500 compared to the LTA of Ksh. 3,000. Forage is good across the county and all livestock species are in good body condition. With a sale of one goat, a household is able to buy 113 kilograms of maize.

Return distances in the pastoral areas are less than 6km while in agro-pastoral areas return distance is 4-5km. waiting time has significantly reduced to less than 10 minutes. The average water consumption have improved to 15-20 litres per person per day across the county. School enrolment has increased and attendance is regular sustained by school meals programs. Minimal drop outs have been noted.

Most households applied reduced consumption based coping strategy of which rCSI was 16.5. The dietary diversity was good with more than 50 percent of households consuming more than five food groups. There has been significant improvement in nutrition status with 14.1 percent of children being at risk of malnutrition. The Global Acute Malnutrition (GAM) levels for the county being at 12.4 percent which is an improvement from the previous year by 4.5 percent. Stunting levels dropped marginally and are currently at 24.7 percent. Over 70 percent of households had acceptable food consumption. No livelihood change is expected while under five and crude mortality rates are within the normal range.

Food is readily available and accessible except vegetables and fruits. Most indicators are pointing towards stable situation until the next rainy season. However, utilization remains an issue. Marsabit County is classified in Stressed Food Insecurity (IPC Phase 2), which is an improvement from the previous assessment.

TABLE OF CONTENT

Executive Summary	1
1.1 County Background	4
1.2 Methodology and Approach	4
2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY	4
2.1 Rainfall Performance	4
2.2 Insecurity / Conflict	5
2.3 Other Shock and Hazards.....	5
3.0 IMPACT OF IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY	5
3.1 Availability	5
3.1.2 Cereal stock.....	7
3.1.3 Livestock Production	7
3.2 Access	12
3.2.1 Market Operations	12
3.2.2 Terms of trade	13
3.2.3 Income Sources	13
3.2.4 Water Access and Availability.....	13
3.2.5 Food Consumption Score.....	15
3.2.6 Coping Mechanisms.....	15
3.3 Utilization.....	16
3.3.1 Health and Nutrition	16
4.0 CROSS CUTTING ISSUES	19
4.1 Education	19
5.0 FOOD SECURITY PROGNOSIS	21
5.1 Prognosis Assumptions	21
5.2 Food Security Outcomes from August to October	22
5.3 Food Security Outcomes from November to January 2019.....	22
6.0 CONCLUSION AND RECOMMENDATIONS	22
6.1 Conclusion	22
6.1.1 Phase Classification	22
6.1.2 Summary of the Findings.....	22
6.3 Recommended Interventions	3

1.0 INTRODUCTION

1.1 County Background

Marsabit County is located in the Northern part of Kenya bordering Turkana County to the West, Samburu County to the South, Wajir County to the East and Ethiopia to the North.

The county covers an approximate area of 75,750 square kilometres (km²) with an estimated population of 315,936 people (KNBS projections 2016). The county is divided into four administrative sub-counties namely; Moyale, North Horr, Laisamis and Saku. There are two main livelihood zones in the county namely: Pastoral constituting 81 percent and Agro-pastoral with 16 percent of the county population while other livelihood zones have a combined population of three percent as shown in figure 1. The main source of cash income in the county is livestock production contributing 82 percent in the pastoral livelihood zone and 60 percent in the agro-pastoral livelihood zone. Food crop production comes second in the agro-pastoral livelihood zone contributing 20 percent of cash income while in the pastoral zone, formal waged labour and petty trade contribute to 11 percent of cash income.

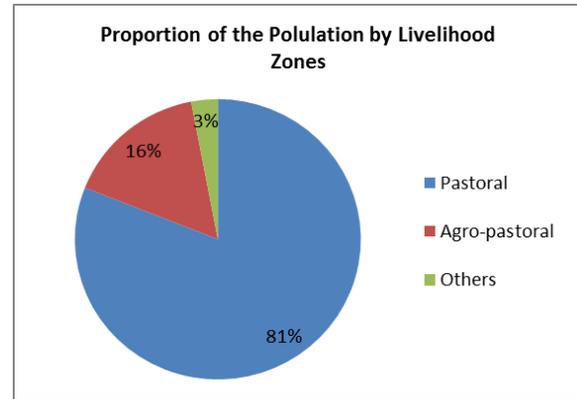


Figure 1: Proportion of Population by Livelihood Zones

1.2 Methodology and Approach

The assessment used both qualitative and quantitative data. Primary data was collected during the field visits at the county where community and market interviews were conducted. Secondary data was collected using structured questionnaires for each sector that were sent two weeks prior to the assessment. Technical reports were also provided by the sectoral technical members at the county level. Secondary data collected from the early warning system and SMART survey was relied upon to provide trends for the different food security indicators.

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

The onset of the long rains was early in the 1st dekad of March as compared to 3rd dekad of March. However, the North Western part of the County received rains one dekad later in the 2nd dekad of March. Temporal distribution was good across the County, with all the livelihood zones receiving rainfall during the entire season. Marsabit Mountain station received a total of 947mm with a total of 37 rainy days while Moyale rainfall station recorded a total of 564 mm with

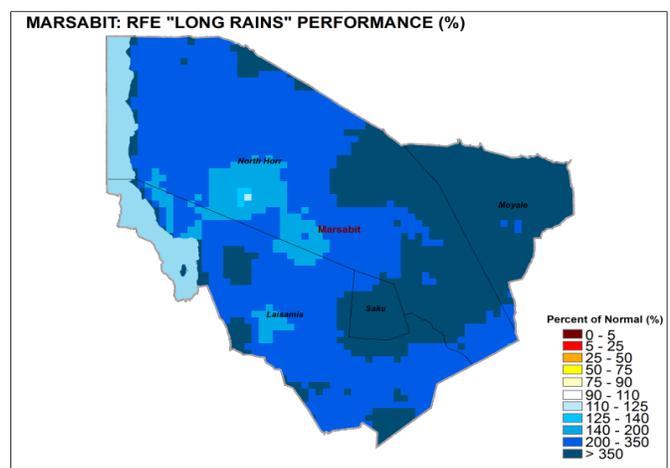


Figure 2: Spatial distribution of rainfall

a total of 36 rainy days. Highest rainfall intensity of 160mm was recorded on 14th April by Marsabit Mountain station. Spatial distribution was even with most areas in Moyale and Saku receiving over 350 percent of normal rains while other areas received between 200 and 350. North Horr and few pockets of Laisamis received between 110 and 125 percent of normal rains. Rains ceased late in the 1st dekad of June compared to the usual 3rd dekad of May.

2.2 Insecurity / Conflict

Insecurity was reported in Laisamis sub-county especially Mt. Kulal ecosystem which limited access to pasture and browse. Tribal clashes in Moyale sub-county restricted access to Gorumesa livestock market in the month of July. Asylum seekers from Southern Ethiopia also that led increased cases of insecurity in Moyale which also contributed to high food prices due to increased competition. Human wildlife conflicts due to predation by hyena have led to loss of livestock hence reduced small stocks which are mostly sold for income. Destruction of water structures by wildlife been reported in areas neighbouring the forest hence limiting access to domestic and livestock water sources.

2.3 Other Shock and Hazards

The main hazards contributing to food insecurity in the county include Rift Valley Fever outbreak led to closure of markets for one month between Mid-June and Mid-July. Army worms and maize stock borer infestations led to about 40 percent loss in maize production. Locust invasion mainly in Moyale and North Horr was reported to affect browse. Flash floods swept 675 sheep and goats in Funanyata, Diridima, Bori and Dabel. Floods also affected access to households by health workers during outreaches.

3.0 IMPACT OF IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

3.1.1 Crop Production

Marsabit County is short rain dependent with the Long rains season contributing to about 20 percent of the County's food crop production.

Rain fed Crop Production

Food crop production contributes 20 percent of cash income in the agro-pastoral livelihood zones. Maize contributes 20 percent to food and 10 percent to cash income in the agro-pastoral livelihood zone while beans contribute 20 percent to both food and cash income. Green grams contribute to about 10 and five percent to food and cash income respectively. The three main crops grown under rain fed production include maize, beans and green grams. Area planted under maize, beans and green grams declined by 57, 48 and five percent respectively compared to the long term average. The decline in areas planted is attributed to unanticipated early onset of rains in early March which was contrary to weather forecast that indicated the County was likely to experience depressed rainfall. About 80 percent of farmers had not prepared their farms by the onset of rains and this led to difficulties in use of mechanized services for land preparation during the rains. Projected production of maize is expected to decline by 53 percent while actual production of beans and green grams declined by 62 and 33 percent respectively compared to the LTA. The decrease in production for the three main crops is attributed to decline in areas

planted, late land preparation hence late planting, effects of insufficient and untimely weeding operation and inadequate labor as a factor of production. Prolonged rains and low temperatures resulted to rampant fungal infestations and spoilage of pulses while wildlife destruction in Karare led to loss of crops. Army worm infestations will lead to about 40 percent loss of maize crop. Areas that are expected to realize good harvests include Songa, Badassa, Karare and Maduadi.

Table 1: Rain-fed Crop Production

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	280	645	2,000 (Projected)	4,220
2. Beans	240	461	1200 (Actual)	3,140
3.Green grams	40	42	80 (Actual)	120

Irrigated Crop Production

The main crops produced through irrigation are maize, tomatoes and kales as illustrated in Table 2. The area under maize, tomatoes and kales decreased significantly by 88, 50 and 46 percent respectively. The decline in area under irrigation in Saku was attributed to non-operational greenhouses due to inadequate knowledge on greenhouse management and competition over time from external importers that flood the local market leading to low demand for local produce. In Moyale Sub-county, decline in area planted was due to inadequate water in the pans during planting followed by flooding of the irrigated areas before planting was over. Projected production for maize, tomatoes and kales is expected to be 21, 31 and 30 percent of the LTA respectively. Decrease in production is attributed to decline in area planted, inadequate availability of right type of agro chemical for spraying stalling of Kurungu irrigation scheme since 2016 due to constant break down of the intake at the irrigation system, breakdowns and high maintenance costs for irrigation infrastructures and pest and diseases. Of the few operational greenhouses, farming was highly hampered by unreliable water supply and have been neglected. About 80 percent of production of tomatoes and kales is done by male youths while the rest are women. Retail marketing is women mainly by women.

Table 2: Irrigated Crop Production

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 2018 Long rains season (90 kg bags)
1.Maize	3	25	45	210
2.Tomatoes	7	14	130 MT	420 MT
3.Kales	6	13	290 MT	760

3.1.2 Cereal stock

The main staple foods consumed in the different livelihoods are maize, beans and rice. Maize stocks held by households and Traders are 66 and 43 percent below the LTA respectively as indicated in Table 3 as a result of low harvest of the long rains crop, damages by pests and diseases. Households normally don't buy stocks in bulk but get weekly supplies from the markets. Estimated stocks held by traders is low due to low production at local level, inadequate supply and increased prices from external markets of Meru, Isiolo and cross border trade from Ethiopia. No millers are available within Marsabit County while NCPB only holds stocks temporarily for relief agencies. The few available stocks are mainly in the agro-pastoral areas and are expected to last for less than a month which is normal. Households within the pastoral zone are buying food on weekly basis during market days which is normal. Moyale sub-county mostly relies on cross border imports while the County governments have been providing relief food to Moyale and North Horr while Saku and Laisamis have been receiving food assistance from national government.

Table 3: Cereal Stocks held compared to LTA

Commodity	Maize		Rice		Sorghum		Green grams		Total	
	Current	LTA	Current	LTA	Current	LTA	Current	LTA	Current	LTA
Households	2,890	8,400	140	200	160	660	140	180		
Traders	8400	14,800	6,400	6,000	70	240	160	240		
Millers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Food Assistance /NCPB	-	-	-	-	-	-	-	-	-	-

3.1.3 Livestock Production

The main livestock species in the county are Camels, Cattle, Goats, Sheep and Donkeys. Livestock production is the main source of income contributing about 80 percent of cash income in the pastoral livelihood zone and 60 percent of cash income in the agro-pastoral livelihood zone. Market stimulation activities across the major terminal and feeder markets are expected to boost improve livestock sales and prices.

Pasture and Browse Condition

The condition of pasture and browse is generally good across all livelihood zones occasioned by enhanced and above normal long rains received across the County. In few isolated areas of Korr, Dukana and Shurr mainly around the watering points, pasture and browse is fair due to overgrazing. Currently, there is no limiting factor to access forage across the county except in Mt.Kulal ecosystem and some few pockets in Golbo ward where cases of insecurity were

reported. Though Shurr and Bubisa have water sources, livestock are moving towards Maikona in search of salty water which contains key minerals. An upsurge of non-palatable vegetation was noted to be predominant in some parts of North Horr and Laisamis sub-counties. The good pasture and browse which has been observed across the livelihood zones is expected to last for the next 4-5months against the normal 1-2months. 70 percent of livestock grazing is mainly undertaken by male morans (youth), young elders and children.

Table 4: Pasture and Browse Condition

Livelihood zone	Pasture					Browse				
	Condition		How long to last (Months)		Factors Limiting access	Condition		How long to last (Months)		Factors Limiting access
	Current	Normal	Current	Normal		Current	Normal	Current	Normal	
Pastoral	Good	Poor	4	1	Insecurity	Good	Fair	4	2	Insecurity
Agro-pastoral	Good	Fair	5	2	None	Good	Fair	5	3	None

3.1.3.1 Livestock Productivity

Livestock Body Condition

Cattle, camels, donkeys, goats and sheep are all in good body condition across all the livelihood zones with exception of the young kids (3-4 months old) which exhibited poor body condition as a result of maternal antibodies and PPR outbreak in Dukana, Balesa, Elhadi and southern parts of Laisamis sub-county. At this time of the year, body condition is usually fair for all the livestock species apart from cattle in the pastoral zone that usually range from fair to poor. Body condition is expected to remain good for the next 3 months which will coincide with the onset of the short rains in October. With livestock body condition remaining good, livestock prices are anticipated to remain high improve thereby increasing households' purchasing power.

Table 5: Livestock body condition

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

Tropical livestock units (TLUs)

Livestock ownership (TLUs) significantly declined due to successive droughts. Poor households own an average of two TLUs equivalent to two cows and two calves, while the medium income households have between 3-4 TLUs. Poor households have lost about 60 percent while medium households have lost about 50 percent of their normal livestock since 2007 when drought was at

extreme levels. Livestock herd is expected to increase from October 20018 due to expected improvement in the birth rates of all livestock species.

Table 6: Tropical Livestock Units (TLUs) by household income groups

Livelihood Zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	2	5	4	10
Agro-pastoral	2	4	3	8

Birth Rate

The peak season for calving, lambing and kidding after the long rains season is usually between October and November. Kidding and lambing also picks between March and April but was lower than normal due to previous drought. Due to good forage and good body condition, most cattle and small stocks are in-calf/ in-kid and birth rates are expected to increase between October and November.

Milk production and consumption

Available milk produced is mainly from camels and goats. Households in both pastoral and agro-pastoral areas experienced slightly above normal. The average household milk production per day in the Pastoral zone is 3-5litres compared to the LTA of two to three while most households in agro-pastoral zone are producing between 2-4litres compared to the normal 2-3 litres as shown in Table 7. Most households are majorly consuming between 1-2litres of milk per day. Some households are relying on powdered milk supplies from retailer shops. Transportation of milk to the market is mainly done by youths while marketing is done by women who also make decision on the milk sale proceeds.

Table: 7: Milk Production, Consumption and Prices

Livelihood zone	Milk Production (Litres)/ Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	3-5	2-3	1-2.5	1-2	60-90	90-100
Agro-pastoral	2-4	2-3	1-2	0.5-1	80-90	90-120

Livestock Diseases and Mortalities

Livestock disease outbreaks were reported in all the sub-counties. Outbreak of anthrax was reported in North Horr sub-county (Sabarei, Dukana Ward) where 11 cattle died, high mortalities in young kids with clinical symptoms suggestive of PPR was reported in Garwole area of Dukana ward. Livestock were being infected just after weaning. The outbreaks have also been reported in Balesaru and Sabarei areas. Reported cases of outbreak of PPR from Moyale sub-county affected all ages but more pronounced in 1-2 years of age. Areas that have reported suspected cases PPR were Mader Kayo, Bisan Biliko, Adhe Chiracha, Garse, Mansile, Dirdima and Dabel. The total number of livestock at risk is 22,450. In Saku sub-county, active severe outbreak of sheep and goat pox was reported in Dokatu, Lupus, Songa, Dirib Gombo and

Jaldesa. About 50 percent of livestock are infected and its spreading at alarming rate. In Laisamis sub-county, cases of disease outbreak in camel in Korr and Kargi areas were reported with clinical signs of haemorrhagic septicemia. Rabies outbreak was also reported where more livestock were vaccinated against the disease while outbreak of Lumpy Skin Disease was reported in Moyale sub-county. Moyale, Laisamis and North Horr sub-counties reported Rift Valley Fever (RVF) outbreak and cases of massive abortion in both camel and small stock. RVF cases were particularly high in Moyale and Laisamis sub-counties. Bori, Antut, Funan Nyata, Ittir and Yabalo areas of Moyale sub-county revealed abortion and bleeding which was on the increase especially in Funan Nyatta and Bori. In Laisamis, reported cases of Rift Valley Fever (RVF) came from Kargi, Olturot, Loglogo, Korr and Laisamis with similar signs. RVF in livestock was confirmed in Bori, Yaballo and Ittir in Moyale sub-county, Demo in North Horr sub-county and Karare in Saku sub-county.

Currently there is no disease outbreak but fear of RVF recurring and endemic Contagious Caprine Pleuro-Pneumonia (CCPP). Most frequently reported clinical symptoms during the outbreaks in livestock included abortions, fever, diarrhoea and death of young animals and newborns across all sub-counties for all livestock species. RVF was confirmed in two human patients whose blood samples tested positive. Table 8 shows disease statistics from a survey conducted by county government in the month of July.

Table 8: Disease Statistics in Laisamis Sub-county

SPECIES	No DEAD	CAUSE OF DEATH	LOCATION- LAISAMIS SUB-COUNTY
Goats	560	Abomasal Impaction, PPR, CCPP, Entero,	Laisamis, Merille, Kargi, Korr, Loglogo, Moite, Olturot, South Horr, Ngurunit, Mt Kulal
Sheep	580	Abomasal Impaction, PPR, Entero	Laisamis, Merille, Kargi, Korr, Loglogo, Moite, Olturot, South Horr, Ngurunit, Mt Kulal
Cattle	255	Three days sickness, LSD, FMD,	Laisamis, Mt Kulal, South Horr, Ngurunit, Loglogo
Camels	126	HS, Tryps, ACDS	Moite, Laisamis, Kargi, Olturot, merille, Loglogo

Table 9: Disease Statistics in North Horr Sub-county

No	Ward-North Horr Sub-County	Sheep And Goats	Cattle	Camels
1.	Dukana	364	0	11
2.	Illeret	212	0	3
3.	North Horr	226	0	7
4.	Turbi	45	0	4
5.	Maikona	0	6	18
Totals Deaths		847	6	43

Table 10: Disease Statistics in Moyale Sub-county

S/No	Ward- Moyale Sub-County	Sheep And Goats	Cattle	Camels
1.	Uran	22	53	3
2.	Sololo	0	2	0
3.	Obbu	0	10	12
4.	Butiye	30	13	24
5.	Golbo	836	21	0
Totals		888	99	39

To manage the situation, the following measures were taken: quarantine was imposed, Regional Pastoral Livelihood Resilience Project-Kenya (RPLRP-K) supported active surveillance for Rift Valley Fever where the disease in livestock was confirmed as follows Bori (Moyale Subcounty); Sheep 5,Caprine 1, Ittir (Moyale Subcounty); sheep 6,Caprine 2 Camels 3, Demo (North Horr Subcounty); caprine 2,Camels 2, Karare (Saku Subcounty); Sheep 1, Yaballo (Moyale Subcounty); camel 1. Three radio talk shows to sensitize community on RVF were done in Borana, Swahili and Rendille languages each local radio Njanguani station. Participatory disease surveillance for RVF was done in Moyale and North Horr Sub-Counties with support from NDMA. Concern Worldwide supported the training of 60 Community disease reporters county wide on RVF recognition and reporting. Lastly With support from RPLRP a total of 107,327 animals 58,523 goats, 46,613 sheep 10,624 cattle and 2,191 camel were vaccinated against RVF using 60,938 doses of RVF vaccine and vector control was done in 122,574 animals using 935 litres of Bayticol.

The current mortality rate is normal for cattle averaging 0.5 percent. However, mortality rate has increased for sheep and goats to about 10 percent due to outbreak of several diseases that came with enhanced rains. High mortality rate for Camel in North Horr sub-county were reported to be highest at about 0.1percent.

Migration

Few cases of in migration have been reported in the county, which are normal. However, internal movements of cattle have been noted as livestock move in search of water and some cases better pasture. In North Horr sub-county few herds from Shurr and Bubisa which have moved to Maikona- Medate area, Dukana and El hadi to Kubiadi, North Horr, Hurri hills to Kalacha in search for salty water. In Moyale sub-county, livestock are moving from Korondile (Wajir County) through Dabel- Bute (Wajir County) through Watiti-Golbo ward. Southern Ethiopia towards Uran, Obbu, Butiye and Golbo wards. In Laisamis, livestock are migrating normally from Korr- Lontolio-Merille, Korr-Oldonyo, Mara-Mt. kulal, Korr-Loglogo- Gudas-Soriadi, Laisamis- Koya, Laisamis- Soriadi. Kargi- Mt Kulal. Loiyangalani –Moite. Loiyangalani- Mt Kulal with exception of movement of livestock from Kargi - Maikona which is unusual. No major migration is anticipated since most parts of the county have forage to last until the onset of the short rains. Livestock movements are limiting access to milk at household level.

Water for Livestock

The main water sources for livestock in the pastoral zone are water pans and shallow wells. Normally at this time of the year, livestock heavily rely on boreholes. Return trekking distances have decreased from the normal 10-15Km to 4-8Km in the Pastoral zone. Return distances to

water sources have also decreased from the normal 8-10Km to 2-4Km in the agro-pastoral zone. Some shallow wells in Korr and Dukana were fully covered by silt due to heavy rains. Some water pans breached and others broke their embankments due to overflow. Watering frequency for cattle is every 2 days while shoats are watered after 2-3 days. Camels are watered after every 6-7 days.

Table 11: Water for livestock

Livelihood zone	Return trekking distances (Kms)		Expected duration to last (Months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
Pastoral	3-5	10-15	3	2	Cattle: 2 Shoats 2-3 days Camel: 6-7 days	Cattle: 2 days Shoats:3 days Camel: 7-10days
Agro pastoral	2-4	8-10	4	3	Cattle: 2 days Shoats:3 days Camel: 6-7days	Cattle: 2 days Shoats:3 days Camel: 7-10days

3.2 Access

3.2.1 Market Operations

The major food commodity markets in the County are Moyale and Marsabit in the agro-pastoral livelihood zone and Laisamis and North Horr in the pastoral livelihood zone. The main Livestock markets are Jirime, Merille and Moyale. Others include Turbi, Illaut, Korr, Olturot, Forolle and Arge. Outbreak of Rift Valley Fever in the month of June justified imposition of quarantine that led to closure of all major livestock markets until mid-July. Markets are expected to operate normally without disruption for the next six months. Staple foods in the county include maize and rice. Maize is being sourced from Moyale and Nyahururu. Sale of goats, sheep and poultry was observed to key in all markets. Key items households purchase include sugar, tea leaves, beans, milk and cooking oil whose prices have increased with a kilogram of sugar and beans selling between Ksh. 100 and Ksh. 200 each. All pastoralists are relying on market purchase while about 80 percent of households in agro-pastoral zone are relying on market purchases, which is normal. No distress sales of unusual purchases were observed.

Maize Prices

The average market maize price in the month of August stands at Ksh. 40 per Kilogram (Kg), which is 19 percent lower compared to the long term average (LTA) of Ksh. 50 per Kg as illustrated in Figure 3. The average price of maize in the both mixed farming and pastoral zone range from Ksh. 50 to Ksh. 60 per Kg with exception of North Horr where maize is sold at Ksh. 40 mainly supplied from Ethiopia through Moyale. Other main source of maize supplied by traders is Nyahururu through Samburu. Maize

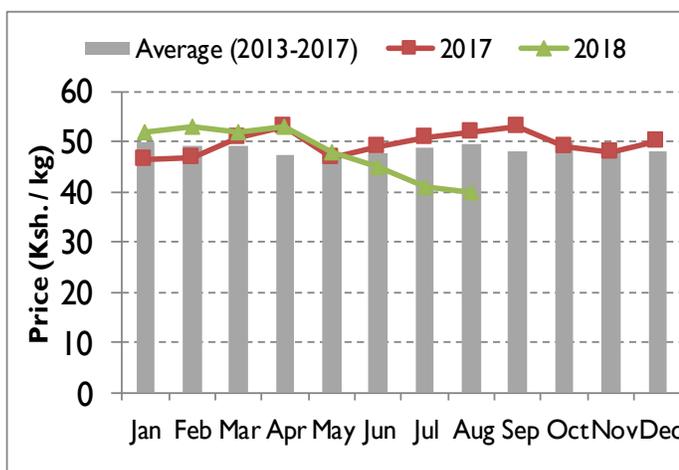


Figure 3: Trend of maize prices

prices are expected to remain lower than LTA in the next three months.

Goat Prices

Average market goat price is Ksh. 4,500 in the month of August, which is 32 percent higher than the LTA of Ksh. 3,000 as illustrated in Figure 4. The average price in both the both mixed farming and pastoral zone range from Ksh. 3,500 and 4,000 mainly supplied locally. Maize prices are expected to remain higher than LTA in the next three months due to sustained good body condition.

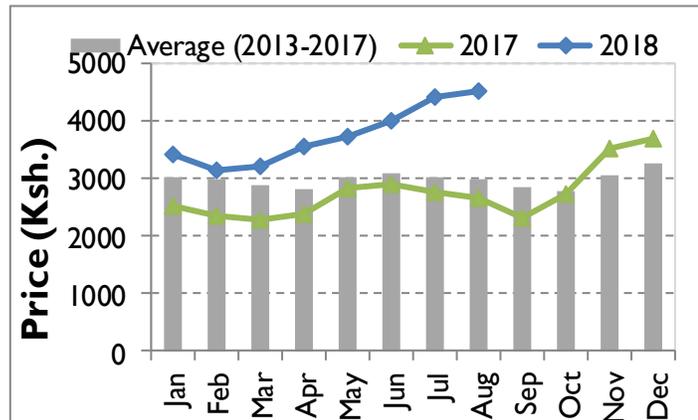


Figure 4: Trend of goat prices

3.2.2 Terms of trade

The current terms of trade (ToT) are favourable to livestock keepers. Households are able to purchase 113 Kgs of maize with the sale of one medium-sized goat. Normally, households would access about 60 Kgs of maize with the sale of a medium sized goat as indicated in the Figure 5. There is no major variation between the pastoral and agro-pastoral zone. Due to good body condition, goat prices are expected to remain high while maize prices are likely to decline therefore improved ToT is expected in the next three months.

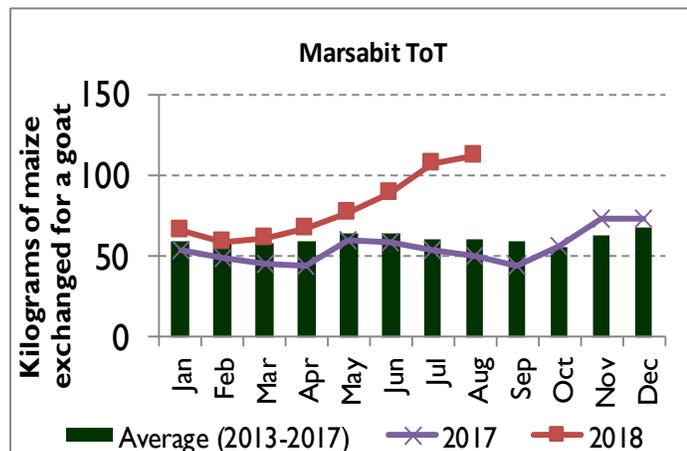


Figure 5: Terms of trade

3.2.3 Income Sources

The current main income source of income in both the pastoral and agro-pastoral zone is sale of goat and sheep. Other sources of income include sale of food and cash crop, petty trade, casual and formal waged labour. Income sources are normal at this time of the year.

3.2.4 Water Access and Availability

The major water source in both agro-pastoral and pastoral areas are boreholes, shallow wells and water pans. Water pans are largely utilized in Moyale sub-county whereas shallow wells are mainly predominant in North Horr. In Laisamis the most utilized water source are boreholes. Other water sources include rock catchments and springs in North Horr ward, Lonyagalani, South Horr, Kalacha and part of Saku. Most of the water schemes are operational but lack adequate piping system to deliver water at household level. Most shallow wells and water pans remains unprotected and are subject to pollution as observed in Kituruni, Karare, Lekuchula, Lontolio.

About 51 percent of population is relying on pans and dams, 24 percent are relying on boreholes and 16 percent are depending on shallow wells. All water pans and dams were fully recharged and about five were leached as a result of flash floods in Moyale Sub-County. Over 90 percent of the total 300 water pans are holding about 80 percent of their water capacity especially in Moyale. However, most have silted-up and de-silting plans have been put in place. Nine out of 116 boreholes have broken down across the county. Non-operational boreholes include Gadamoji Dam, Kubi Qalo 2 Borehole, Haro Bota Earth Pan, Maikona Shallow Wells, Ramata Dam and Shallow Wells-North Horr (Horr Gudha).

Some shallow wells in Korr and Dukana were fully covered by silt due to heavy rains. At this time of the year, most households rely on the same main sources but a large proportion of water pans are usually dry and most households rely on boreholes to meet their domestic water needs. Kubi Adi does not have a water source and only rely on rain water and water trucking. Most concentrated water points serving between 3,000 and 5,000 persons include Gadamoji Dam, Kubi Qalo 2 Borehole, Haro Bota Earth Pan, Maikona Shallow Wells, Ramata Dam, Shallow Wells-North Horr (Horr Gudha). Boreholes and shallow wells are expected to provide water throughout the year while pans/ dams are expected to last until mid-October except Goro Rukesa which will last until end of August due to siltation and larger pans in Madoadi and Elebor which have larger pans projected to last for the next 4-5months. Water table in Shallow wells is quite good with high yield. Normally, most pans/dams get depleted towards end of August.

Distance to Water Sources

Return distances in the pastoral areas are less than 6km while in agro-pastoral areas return distance is 4-5km. The normal return distances to water sources is usually 2-7Km and 2-6Km in the pastoral and agro-pastoral zones respectively. However, in the next two weeks, households in Kubi Adi (Dukana ward) in North Horr Sub-county, human and livestock will trek for 30km to access the nearest water source in Dukana town once their rainwater storage is depleted. The only water source for the community is two underground tanks of 40 m³ serving 80 households. Highest distance was observed in Mpagas (pastoral zone) in Ngurnit ward where households trek for 12 km to access water for domestic use from shallow wells at banks of Maglis River. A 10 km pipeline serving the community is currently broken therefore cannot deliver water to the village.

Waiting Time at the Source

The average waiting time across all the livelihood zones is less than 10 minutes compared to the normal 30-45 minutes due to recharge of most sources. However, extreme cases were encountered in Karare scheme where households were waiting for two hours to collect clean drinking water from a pipeline. High waiting time of 60-90 minutes was noted in Qalaliwe in Moyale sub-county due covering of shallow wells by silt during the rainy season and damage of water pans due to breaching of wall embankment. Marsabit township continue to experience high waiting time of between 2-3 hours.

Cost of Water

In most areas of pastoral and agro-pastoral the water is free of charge. This is with exception of areas where borehole is pumped using generator. In Karare scheme, the cost of 20 litre jerrican is Ksh.5 while vendors charge Ksh.30 per 20 litre jerrican. In Sakandala in Laisamis sub-county, households pay Ksh.50 per household per month, a herd of goat is charged Ksh.200 per month

whiles a herd of camels and a herd of cattle is charged a similar payment of Ksh.500 per month. In Arge located in South Horr, consumers pay Ksh.10 per 20 litre jerrican to access water pumped from 14km borehole. Currently, Marsabit town, Moyale town and Goro Rukesa village in Saku, vendors sell water at Ksh.40- 50) per 20 litre jerrican.

Water Consumption

The average water consumption in both Agro-pastoral and pastoral areas is 15-20 litres per person per day across the county. Current consumption level is has improved from the normal 10-15 litres per person per day in Pastoral zone while consumption level is normal in the agro-pastoral zone. Exceptional cases were noted in Qatab where piped water is rationed. In Lekuchala which is in Laisamis sub-county, households are accessing 20 litre jerrican clean drinking water from a rock catchment after 3 days and water for other uses is sourced from a water pan.

Table 12: Water consumption

Livelihood Zone	Distances to water sources for domestic use.		Cost of Water		Waiting time at the source.		Average HH use (litres/ person /day)		Projected duration of water in Months.	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	2-4 km	2-6	0-10	5-10	3-6 min	30-45 min	15-20	10-15	1 month	0 month
Agro-Pastoral	2-4 km	2-7	0-10	5-10	3-6 min	45-60min	15-20	15-20	2 months	0 month

3.2.5 Food Consumption Score

According to the July 2018 SMART survey, over 70 percent of households have acceptable food consumption in the during the review period. More households in Laisamis have poor FCS than the other sub counties. The July 2017 NDMA bulletin indicates that the proportion of households in the agro-pastoral livelihood zone that were within the acceptable, borderline and poor food consumption score were 73.6 percent, 18.4 percent and 8percent respectively. Similarly, in the pastoral livelihood zone; proportion of households who were within the acceptable, borderline and poor food consumption scores were 72.4 percent, 27.1 percent and 0.5 percent respectively. The high FCS across all livelihoods is associated with consumption of staples and inclusion of animal products mainly milk, complemented by a frequent four days per week consumption of oil and pulses, vegetable consumption was conspicuously missing in the diet across all livelihoods.

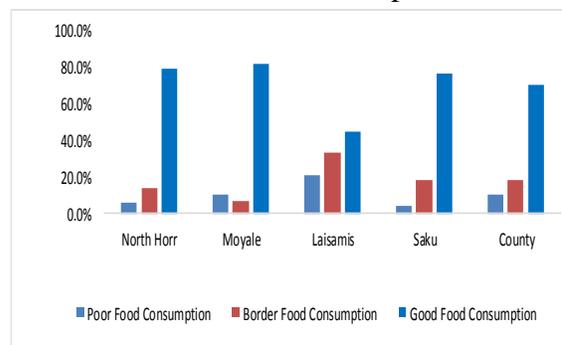


Figure 2: Food Consumption Scores

3.2.6 Coping Mechanisms

According to NDMI July 2018 bulletin, reduced consumption based coping strategy index (rCSI) was 19.1. rCSI in the preceding month was 17.2 which was a slight increase. Reduced coping

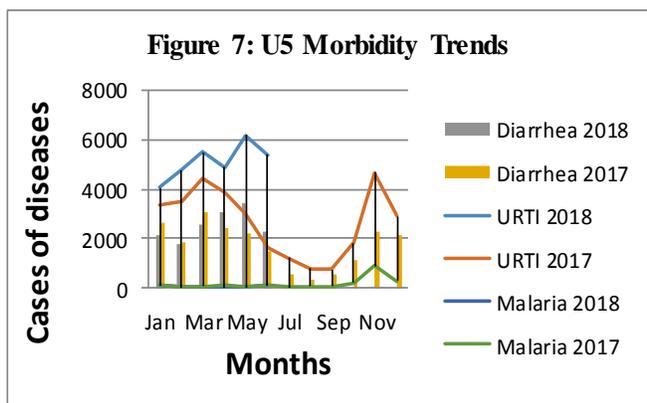
strategy index for both agro-pastoral and pastoral livelihood zones were 19.1. Majority of households were able to cope except in North Horr- El-hadi, where some household employed severe coping strategies of borrowing. According to the July 2018 SMART Survey, the county CSI was 16.4 percent which is an improvement from the previous year at 18.2 percent, the improvement is associated with improved milk availability and good livestock body condition which positively influence household purchasing power. The social safety nets and cash transfers have also helped the poor households to cope. It was noted that in the majority of households the reduced meals frequency based coping was employed when there were household stocks for staples even when not necessary citing the need to save for the unpredictable future. This could be a contributing factor in the high levels of chronic malnutrition especially stunting.

3.3 Utilization

3.3.1 Health and Nutrition

Morbidity and Mortality patterns

The most common morbidities for both the under-fives and the general population were URTIs, diarrhea and malaria, which were the normal in this season but notable increase in prevalence compared to the previous year. The increased cases of URTIs were associated with cold weather, poor shelter conditions and prolonged rainfall. Diarrheal diseases increased due to high rainfall that contributed in terms of contamination of open water sources and use of untreated water coupled with low latrine coverage and poor hand washing practices. Highest cases due to use of untreated water were noted in Laisamis (Elmollo Bay) while heavy downpour contributed to contamination of water sources in North Horr-El-hadi, and Moyale. There was no interruption of health services in the review period compared to the previous year therefore more cases were reported and treated. Malaria increased due to increased vector population in the low lands Chalbi, Maikona, Turbi, Mubisa in North Horr, increased vegetation around homesteads, stagnant and open water sources coupled with lack or low use of long lasting insecticides treated nets (LLITNs). There were no outbreaks reported as these were the common morbidities in this season, Kalaazar was however reported in Shurr in Saku, Sakardala in Laisamis. There was no interruption of health services therefore outreaches and health support activities were carried out well. Increase in morbidities reduces productivity as households a lot of time is spent during hospital visits and also reduces households' income at the expense of other important necessities such as food.



Immunization and Vitamin A Supplementation Coverage

The county immunization coverage stood at 84 percent which was above the national target of 80 percent. There were no variations on coverage across the livelihoods. This was an improvement from the previous year by 14 percent. The positive improvement was associated with smooth flow of health services and support activities mainly outreaches across the county. Vitamin A supplementation coverage was at 81.6 percent according to SMART survey July 2018 while from DHIS was over 100 percent both for 6-11 months and 12-59 months. This was an improvement from the previous year by 40 percent. The remarkable improvement was associated with improved facility services supported by outreaches and Malezi Bora activities. Vitamin A supplementation helps to boost the immunity of the children and reduce severity of infections.

Nutrition Status and Dietary Diversity

Children at risk of malnutrition

Children at risk of malnutrition in the month of July 2018 was 14.1 percent which is a progressive improvement throughout the season with a reduction of 2.7 percent in the same season the previous year and a reduction of 6.9 percent of long term average. The improvement is associated with enhanced screening, improved household purchasing power as a result of good livestock prices and availability of milk at household level. Reduction of children at risk of malnutrition indicates improved food availability and utilization.

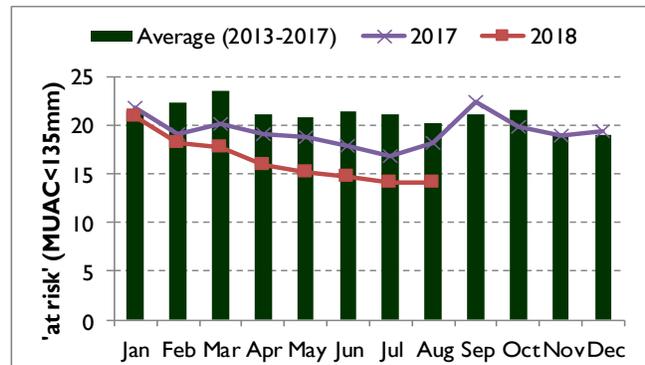


Figure 8: Percentage of children at risk of malnutrition

The hygiene and sanitation support activities have had some positive influence. The current CMR and under five mortality rates are 0.007 and 0.008 respectively which are within the normal threshold and less compared to the same period of 2017. The decline is associated with uninterrupted health service and scaling up of outreaches. Figure 8 indicate trend of children at risk of malnutrition.

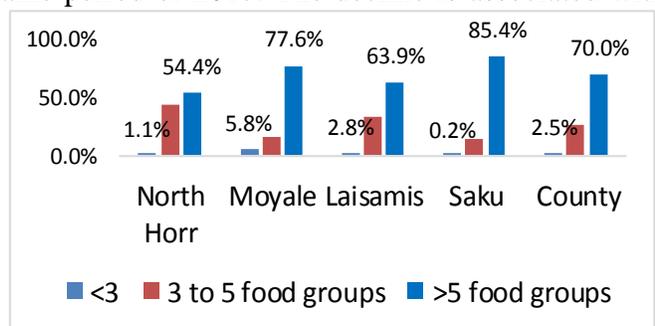


Figure 9: Dietary diversity

Over 50 percent of households across all livelihoods were consuming more than five food groups with highest proportion being in Moyale and Saku sub-counties. The main foods consumed include maize, beans, rice, sorghum, meat, sugar, oils, milk and condiments. Figure 9 shows

proportion of population taking different food groups in different sub-counties. There is a significant reduction in the number of children who are underweight compared to the previous years associated with increased maternal and young child health and nutrition interventions. This shows positive effects of proper food utilization in terms of quantities and nutrient density by the majority of population. Figure 10 shows underweight status trends in the last three years.

According to SMART Surveys, there were significant improvements in malnutrition status with GAM rates reducing from 16.9 percent in the previous year to 12.4 percent. However, Moyale sub-county had a marginal increase of 2.4 percent attributed to asylum situation in Dambala Fachana and Somare. The stunting levels reduced marginally. The improvements are associated with increased case finding, good IMAM coverage and cure rates. The improved food consumption score has had a significant impact. The percentage of children with severe acute malnutrition has reduced progressively in the last two years.

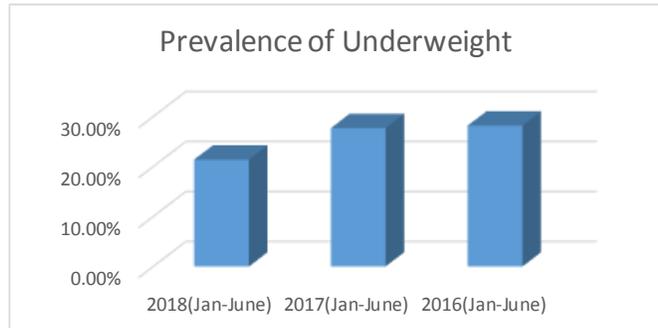


Figure 10: Trends of underweight

There has been intensified case finding and treatment throughout the year. According to the October 2017 KAP Survey, almost all infants are breastfed with 75.7 percent being exclusively breastfed for the first six months of life which is below the national target of 80 percent. 93.4 percent are breastfed up to 2 years. The identified key barriers identified to achieving the target were home deliveries, cultural practices, and maternal health and nutrition status. This implies that there is significant improvement in accessing food with subsequent utilization and information access for proper consumption.

Hygiene and Sanitation

SMART Survey conducted in July 2018 indicates that piped water for domestic use is mainly in urban towns of mainly in Saku and Moyale. About 14 percent of households are using unprotected shallow wells. Lack of adequate safe water was highly associated with increased cases of water borne diseases. Water borne diseases reported during the season include diarrhoea, dysentery, malaria and typhoid. One case of cholera was also reported. Water contamination could be attributed to unprotected water pans and shallow wells and low latrine coverage. Latrine coverage has remained constant at 50 percent with households in agro-pastoral livelihood zone having a higher coverage compared to pastoral zones where open defecation is common. Use of pits for disposal of household waste was almost nonexistent, with provided disposal facilities in some settlements like El-borr in North Horr was not utilized.

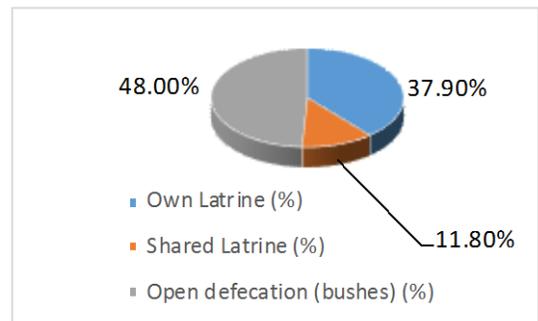


Figure 11: Latrine coverage

About 31 percent of households are treating water compared to 22 percent in the same period of 2017. The main treatment methods include boiling, use of treatment chemicals, use of traditional herbs and pot filters. Use of treatment chemicals at the household levels was at 78 percent, an improvement from the previous year by 13 percent among methods of treatment. However, the general water treatment is way below acceptable. There was a significant improvement from the previous year by nine percent. The increment is associated with increased awareness through health education at facility level and community support systems by volunteers and partners. Information from community focus discussion group indicated a lot of ignorance despite having treatment tablets given at facility level and by community health volunteers. This coupled with

likelihood of contamination of common water sources makes the population susceptible to diarrheal diseases.

While nearly all household are aware of good hygiene practices, only 26 percent of households are washing hands at four critical times an improvement from 17 percent in 2017. Moyale sub-county has the highest proportion of household with better hand washing facilities due to well utilized WASH services and support from partners. The low hand washing practice is highly associated with persistent prevalence of diarrheal diseases. The food storage practices were found to be suboptimal with households in pastoral livelihoods placing cooked food on the floor. This poses the risk of contamination by insects and rodents.

4.0 CROSS CUTTING ISSUES

4.1 Education

Enrollment

Enrolment in all levels of education has consistently improved from first term of 2018 as indicated in Table 14. This increment is attributed to improved infrastructure and sustained School Meals Program. The high enrollment was further maintained by availability of pastures, keeping herders within the reach of the learning facilities. In addition, establishment of stand-alone/satellite ECDE centers has positively contributed to high enrolments within all livelihoods. It has been observed that parents have learnt the value of education. They take their children to schools while they look after the animals themselves.

	Term I 2018			Term II 2018 (includes new students registered and drop-outs since Term I 2018)		
	No Boys	No Girls	Total	No Boys	No Girls	Total
ECD	9151	8936	18087	9171	8966	18137
Primary	27960	27048	55008	27978	27063	55041
Secondary	4293	4023	8316	4304	4038	8342

Participation (Attendance Rate)

The school attendance is regular across all the sub-counties associated with availability of meals. However, it was reported that the food did not last up to the end of the school term for some ECDEs and primary schools which share their meals with ECDEs. Regular attendance is also attributed to frequent monitoring by Ministry of Education officials.

Retention

Dropout rate has remained steadily low during the period under review. The improvement is associated with improved infrastructures, conducive learning environment and availability of water for meal preparation throughout the terms mainly from roof harvesting.

School Feeding Program

There are 182 public schools in the county which are providing school meals (Moyale: 58, Saku: 34, Laisamis: 48 and North Horr: 42). A total of 55,041 primary school and 18,137 ECD learners are benefiting from the program, totaling to 73,178. It was noted that there were instances where some schools were not able to provide the meals due to lack of water and firewood for cooking or meal exhaustion before the end of the school term. Some ECDEs particularly the stand-alone/satellites have no cooks. In such cases, learners go home for lunch as a coping mechanism. It was reported that some of the food provided is infested with weevils, thus discouraging learners from enjoying the meal. Delays in procurement and supply of food to schools have denied the children from accessing the meal in time. Another major challenge is poor storage of food in schools, reducing its shelf life. In all schools, there were no kitchen gardens to supplement the school meals Program. This was due to inadequacy of water as storage facilities were insufficient.

Generally, challenges related to hygiene and sanitation outcomes were cited in most schools. There were separate toilets for teachers, boys and girls in most schools. Although all schools had latrine, some did not have separate latrines for teachers. There is therefore need for more toilets to fill the deficit gaps in all schools. A major concern is that the available latrines are getting filled up very quickly. Most schools do not conduct hand washing practices due to inadequate supply of water even where the facilities are available. In fact 64.8 percent of schools did not have hand washing facilities and 47.2 percent did not provide safe drinking water. An isolated case was noted in Laisamis sub-county, at Lekuchula Primary where children from standard five walk over 7Km to access a school at Namarei. This was due to lack of classes for upper primary. At Sarima settlement, ECDE children used tree shade as classes. A plan is however underway for construction of a classroom there. In some schools, desks and chairs were not available, thus, discouraging learners.

Literacy level

According to July 2018 SMART Survey, the highest proportion of household heads have completed the pre-primary level of education, with Saku and Moyale sub-counties forming the majority. Only 8.2 percent have attained primary level of education and 4.1 percent have secondary education. This indicates high level of illiteracy in the population.

There were no reported cases of insecurity during the review period; hence no school closed due to insecurity and none is reported to shelter IDPs. However, five schools in North Horr sub-county were reported to have been damaged by the heavy rainfall where they were affected by sand slides and flooding.

Trends of key food security indicators

Table 14: Comparison of the Current Food Security Indicators with LRA 2017

INDICATOR	SRA 2017	LRA 2018
Distance from source(km)	5-25 km	4-8km grazing, 2-4 water
Waiting time (min)	30-40min	<10 mins
Consumption LPPPD	6-8 pastoral, 10-12 in agro pastoral	15-20 litres
Goat Prices	Average Ksh. 2,510	4,500
Maize prices/Kilogram	53 (15% above LTA)	40
Terms of Trade	66Kgs	113Kgs
Livestock Body condition	Cattle-fair, camel, goats and sheep-good to fair	Good for all livestock species
Milk Production	0.5 pastoral, 1 agro pastoral	1-2 for pastoral 0.5-1 for agro pastoral
Migration	In and out migration	No out migration or in migration, just normal movement
Livestock Mortality	Normal thresholds	0.5 cattle, 10% shoats, 5% camel
School Attendance	Normal and regular	Regular, no noted absenteeism
Coping Strategy Index	22.3	16.5 (SMART survey) 19.1 NDMA
Food Consumption Score (SMART Survey)	Acceptable: 40.3	Acceptable: 70.6
	Borderline: 41.1	Borderline: 18.6
	Poor: 18.6	Poor: 10.8
Food Consumption Score (NDMA)	Acceptable: 61.5	Acceptable: 73.6
	Borderline: 41.1	Borderline: 18.4
	Poor: 8.1	Poor: 8.0
Food Security Phase	Crisis	Stressed
MUAC<135mm	20.8	14.1
GAM	16.9	12.4

5.0 FOOD SECURITY PROGNOSIS

5.1 Prognosis Assumptions

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

- According to the preliminary forecast by Kenya Meteorological Department, the onset of the short rains will be timely and performance will be good in terms both spatially and temporal distribution.
- Due to the good performance of the long rains, pasture and browse available will impact positively on livestock productivity. No influx of livestock from neighbouring counties is expected since they also have adequate forage.
- With improved households' purchasing power, maize deficit in the County is likely to be met through imports by traders, and this is likely to stabilize prices of maize
- Assessment findings will timely disseminated to stakeholders and recommendations provided will be actualized. Therefore, farmers will get a bumper harvest after the short rains.

5.2 Food Security Outcomes from August to October

Food consumption is likely to stabilize as food is expected to be physically available until October. With improving livestock prices and low maize prices, households' purchasing power will be enhanced thereby accessing and utilizing foods effectively. Nutrition status is likely to improve as calving has started which will enhance milk consumption at household level. With sustained peace, security and on-going programs especially provision of supplementary feeds for children less than five years, pregnant and lactating women and elderly, no abnormal mortalities are expected. No livelihood change is expected.

5.3 Food Security Outcomes from November to January 2019

The expected good performance of the short rains, being the most reliable season and timely actualizing immediate recommended interventions is likely to lead to good agricultural production. Forage will improve significantly thereby improving livestock productivity. This will lead to improved food consumption. Dietary diversity is likely to improve with more household taking more than five food groups which will improve nutrition status. Neither unusual mortalities nor livelihood change is expected.

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

6.1.1 Phase Classification

Marsabit County could be classified under stressed Food Insecurity Phase (IPC Phase 2). The phase classification has improved since the previous assessment when the County was under Stressed Food Insecurity Phase (Phase 2).

6.1.2 Summary of the Findings

Though Marsabit County is not long rains dependent, significant improvement was noted due to the good rainfall performance that impacted positively in all sectors. Most farmers had not prepared their farms by the onset of the long rains which led to low area planted. Though harvests were minimal, they were better compared to the previous five seasons. The livestock and water sectors are the most improved and due to good livestock productivity, lambing, kidding and lambing is expected to peak from October. Most livestock are grazing within and therefore households are accessing milk. Purchasing power has also significantly improved and

markets are functioning well. Food Security is expected to remain stable until the next short rains season. To ensure good performance of the main season, the following needs to be addressed with speed: provision of tractor services, certified seeds, and other farm inputs before the onset of short rains, manage pests and diseases, facilitate extension services, keep track of weather forecast with attention to the seven days forecast coupled with use of traditional knowledge, de-silt water pans, support re-stocking of livestock, provide water treatment chemicals to household level and schools and clear focus on asset creation programs.

6.1.3 Sub-County Food Security Ranking

Table 15: Sub-County Food Security Ranking (Worst to best)

Sub-County	Sub-County Ranking (1=Most food insecure,....6=Least food insecure)	Main food security threats			
Very Good (9-10)	Good (7-8)	Fair (5-6)	Poor (3-4)	Very Poor (<2)	
North Horr	5	Highest GAM rates (23.5), quarantine due to RVF, High distance between grazing areas and water points, Pasture depleted in some pockets, Poor access to markets – Poor infrastructure and few markets, locust invasion, high cases of abortion, loss of livestock due to successive droughts, Low milk production (camel) until October, poor dietary diversity, floods swept away high number of goats and sheep in Dukana			
Laisamis	6	GAM: 13.2, high market food prices, fair forage condition, Highly affected by quarantine due to RVF			
Moyale	7	RVF quarantine, many cases of endemic livestock diseases, asylum seekers interfering with markets, insecurity especially at Gorumesa market in May and June			
Saku	8	Disrupted by quarantine due to RVF, low harvests			

6.1.4 On-going Non Food Interventions

- Hunger Safety Net Programme through National Drought Management Authority targeting 55,000 beneficiaries
- Integrated Management of Acute Malnutrition for the Under-fives, Pregnant and Lactating Mothers (Supplementary Feeding Program (SFP), Out Patient Therapeutic Program by MOH supported by UNICEF, WFP, World Vision, CONCERN Worldwide and FHK.
- NHPPLUS supported the department of health across all the four sub-counties to scale up vitamin A supplementation and deworming for children under the age five during this month of Malezi bora. NHP PLUS supported the training of 62 Health care workers on child growth assessment to strengthen their skills and knowledge to measure weight and Height of

children; assess growth in relation to WHO child growth standards; and counsel mothers about growth and feeding activities at the facility and community levels.

Table 16: On-going Non Food Interventions by Sector

Health and Nutrition

Sub County	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (KSH)	Time Frame
All sub counties	Vitamin A Supplementation	51,236 children between 6 to 59 months	MoH, UNICEF, WFP Concern WW, WVK, FHK, GAIN, APHIA IMARISHA, GIZ, NHP plus	Improve the Micronutrient status of the community-hence food security.	3,989,747	continuous
All sub counties	Zinc Supplementation	All children with diarrhoea	“	Improve the Micronutrient status of the community-hence food security		continuous
All sub counties	Management of Acute Malnutrition (IMAM)	2,488 SAM & 7,963 MAM	“	Scale up treatment, coverage and cure rates of IMAM	72,473,896	continuous
All sub counties	IYCN Interventions (EBF and Timely Intro of complementary Foods)	11,992 children < the age of 1 yr	“	Reduced morbidity and mortality rates.	5,741,889	continuous
All sub counties	Iron Folate Supplementation among Pregnant Women	14,784 Pregnant women	“	Improve the Micronutrient status	6,059,792	continuous
All sub counties	Deworming	45,240 children between 1 & 5 yrs	“	Improved nutrition status	2,753,758	continuous
All sub counties	Food Fortification (MNPS-micronutrient powder supplementation).	51,236 children between 6 to 59 months	“	Improve the Micronutrient status of the community-hence food security	8,945,805	

Agriculture Sector

Sub County	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (KSH)	Time Frame
All	Provision of assorted early maturing seeds 11.4MT distributed	3000	County Government	About 1500 farm families reached	2.5M	2 Months

All	Subsidized tractor ploughing services @1500 /acre	240 vulnerable HH	County Government	Increased area under cultivation	4.5M	Continuous
All	Continued provision of agriculture extension services	3500 farming household reached	County Government & other stakeholders	Continued adoption of agriculture as an alternative livelihood.	===	Continuous
All	Provision of assorted farm inputs, farm tools, pumps, agro chemicals herbicides	300 HH	County Government	Reduced crop loss	1.1M	3 months
Saku (- Sagante - Jirime -Songa)	Farmers Field School	280	CARITAS, KFS & DoALF	Availability of vegetable for home consumption	0.6M	Continuous
Saku & North Horr (Central, Sagante, Turbi)	Construction of Shade Net structures to groups	300 HH	CIFA, Caritas & DoALF	Availability of vegetable for home consumption	3.5M	Continuous
Moyale - Sololo	Rehabilitation of Walda Irrigation Farm	100 HH	KRC & CGM	Availability of vegetable and other food crops for home consumption	===	6 months
All	Kales value chain up scaling	62 farmer groups	ASDSP DoAL&F	Adoption of most suitable varieties	1.2M	Continuous
Moyale	FFA	4067HH	WFP & WVK			
Laisamis & North Horr - Kurungu, Elgade	Feasibility studies and development of designs for establishment of spate irrigation	1200 HH	County Government	Flood water harvesting for crop production	21M	2 Months

Livestock Sector

Sub County	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (KSH)	Time Frame
countywide	Training of CDRs on RVF recognition and reporting	60 trained	Concern,RPLRP Worldwide	Fair		1month
Laisamis & North Horr	Restocking	430HH	RPLRP& PACIDA	Improved food security at house hold level		3months
Countywide	Mass vaccination of sheep and goats, cattle and camels	total of 107,327 animals	RPLRP	Disease control and prevention		3months
Countywide	Enhanced livestock disease surveillance	-	NDMA&RPLRP	Good		6months

Water Sector

Sub County	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (KSH)	Time Frame	
Saku (Karare, sangate, central)	Purchase of plastic water tanks, Development of water structures, Disinfection of water sources(Parkishon and Karare Earth pans)	2000	County gvnt of marsabit	Increased safe water supply		July-sept 2018	
Moyale - Uran	Water trucking to Elle Dimtu	2,000	County Govt of Marsabit	''		July-Sept,2018	
Moyale	50 various water projects e.g Dislting an piping of rock catchment for irrigation in Waye Godha, Construction of 100m ³ and 50m ³ Masonary tanks, Drilling of Sololo Makutano Borehole, Construction of water Kiosk and supply of 10,000L tanks.	60,000	County Govt of Marsabit	''	191.5M	July,2018-June,2019	
North Horr	Implementation of 58 various water projects e.g Construction of 100M ³ underground tanks, Drillinf of borehole at Balchoki and Gamura Complete with Solar Installatiion , Piping and construction of storage tank, pipeline extension at several boreholes	93,807	County Govt of Marsabit Fh-Kenya	''	158.566M	Ongoing	
	Installation of elevated steel tanks in 27m ³ at Elgade, Elhadi and Marime			''		Completed	
	Solarization of Pumping systems at Elboji, Elgade, Elhadi,Marime, Elbeso and Balesa		Fh-Kenya	Reduced cost of water		Completed	
	Purchase of 40 plastic tanks esch 5000L to encourage rain water harvesting and Storage in Hurri-Hills.		County Govt of Marsabit	Increased safe water supply		Ongoing	
Saku	Implementation of 32 various water projects e.g construction of 100m ³ Masonry Tanks, Extension of Pipelines to selected schools and Manyattas, Purchase of 330NO. 3000L Plastic tanks	58,100	County Govt of Marsabit	''	88.5M	Ongoing	
	Installation of 48m ³ elevated Steel tanks in Dirib Gombo.		FH-Kenya	''		Completed	
	Installation of 2NO. 10000 PVC Tanks in 14 Schools.		CIFA	''		4M	Completed
	Construction of 2 Pre-paid Meters (Ajaa Tisa and Majengo) to decongest Saku and Shauri yako Water Kiosk.		K-RAPID	''			Ongoing
Laisamis	Implementation of 58 various water projects e.g	81,922	County Govt	''	173.6M	On-going	

	Extension of pilines to schools and Manyatta, Distliting of Water Pans, drilling of Boreholes, Construction of Masonry Tanks, and Rehabilitation of Water Supplies. -Solarization of pumping system in Kamboe, Furmisan and Kargi		of Marsabit Fh-Kenya			On-going
MARWASCO	-Development of 3 medium sized dams and a borehole e.g 1 in Saku, 1 in Moyale, Drilling Borehole in Kargi, 150M3 underground tank at Mude in Saku, 15000m3 Water pan at Uran and 18000m3 Water pan at Uran (Funded by Water Services Trust Fund), Construction of Marsabit Urban Water Supply funded by African Development bank	40,000	MARWASCO funded by Water Services Trust Fund	''	Kshs.1.4 Billion	On-going

6.3 Recommended Interventions

6.3.1 Recommended Food Interventions

Table 17: Proposed population in need of food assistance

Sub-County	Population in the Sub-County (Projected 2016)	Pop in need (percent range min – max)	Proposed mode of intervention
North Horr	75,196	20-25	Cash Transfers / Asset Creation Program
Laisamis	65,669	15-20	Cash Transfers / Asset Creation Program
Moyale	103,799	10-15	Cash Transfers / Asset Creation Program
Saku	46,502	5-10	Cash Transfers / Asset Creation Program

6.3.2 Recommended Non-Food Interventions

Table 18: Proposed non-food interventions

Sub County	Intervention	wards	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Agriculture Sector							
All	Early mobilization of farmers for land preparation	All	2000 HHs	DoALF	0.75M	-	August - October
All	Support vulnerable farmers with certified seeds	All	2000HHs	DoALF	3.5M	-	August - October
All	Expansion of land under cultivation through subsidized tractor services	All	1500 HHs	DoALF	2 M	-	August - October
All	Continued support to water harvesting for crop production	All	20 community groups	KFS, NGO's & CGM	16M	-	Continuous
All	Continued support to capacity building of farmers	All	300HHs	DoALF	1.2M	-	Continuous
Livestock Sector							
All	Trainings	countywide	10,000 persons	DoALF and Partners	20m	Human resource Training facilities, transport means	6 months
All	Restocking	Countywide	10,000 Livestock	DoALF & partners	100m	Human resource	3 months
All	Commercial offtake	Countywide	2000HH	DoALF & partners	100m	Human resource	Continuos

Saku, Moyale	Fodder conservation and storage	Countywide	20,000HH	DoALF & partners	50m	Storage facilities, Human resource machineries	3months
All	Vaccination	Countywide	20,000 Livestock	DoALF & partners	80m	Human resource	6months
All	Natural seed harvesting and storage	countywide	1000HH	DoALF & partners	10m	Human resource	1month
All	Disease surveillance	Hotspots	Livestock keepers	DoALF & partners	2m	Human resource	Continuous
Education							
Marsabit	Roofcatchment/Water Trucking	34 Schools	13,355	MOE/PARTNERS	2.7M	None	1 Year
	Support To Low Cost Boarding	4 Low Cost Boarding	300	MOE/PARTNERS	1.5M	None	1 Year
	Food For Fees	11 Secondary Schools	3000	MOE/PARTNERS	4.0M	None	1 Year
Laisamis	Roof Harvesting/Water Trucking	15 Schools	5000	MOE/PARTNERS	2.7M	None	1 Year
	Support To Low Cost Boarding	10 Low Cost Boarding	300	MOE/PARTNERS	3.0M	None	1 Year
	Food For Fees	7 Secondary Schools	500	MOE/PARTNERS	4M	None	1 Year
North Horr	Roof Catchment/Water Trucking	15 Schools	5000	MOE/PARTNERS	2.7M	None	1 Year
	Support To Low Cost Boarding	15 Low Cost Boarding	300	MOE/PARTNERS	4.5 M	None	1 Year

	Food For Fees	8 Secondary Schools	500	MOE/PARTNERS	4M	None	1 Year
Moyale	Roof Catchment/Water Trucking	15 Schools	5000	MOE/PARTNERS	2.7M	None	1 Year
	Support To Low Cost Boarding	15 Low Cost Boarding	300	MOE/PARTNERS	4.5 M	None	1 Year
	Food For Fees	10 Secondary Schools	1000	MOE/PARTNERS	6 .0M	None	1 Year

Water Sector

Immediate recommended Interventions							
Sub County	Intervention	Wards	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Saku	De-silting of Gadamoji Dam	Sagante/ Jaldesa	1,500	NDMA/ENNDA, Fh-Kenya (Kenya Rapid)	3M	-	1-3months
	Borehole Services	Sagante/ Jaldesa	1,400	County Govt of Marsabit, Fh-Kenya(Kenya Rapid)	0.4M	Nil	7 days
	Desilting of dams	Karare	1,000	County Govt of Marsabit, NDMA	3M	3M	1-3 months
	Desilting of Dams	Mountain	2,800	County Govt of Marsabit NDMA	3M	3M	1-3 Months
	Water Trucking in Parkishon, Karare and Sagante	Karare/ Jaldesa-Sagante		County Govt of Marsabit			1-3 Months
Laisamis	Rehabilitation of water supplies-Extension of pipelines	Korr, Laisamis Township, Loglogo, Lonyangalani	10,000	County Govt of Marsabit, NDMA, Fh-Kenya			1-6 Months

	Rehabilitation of shallow wells	Korr,Laisamis, Kargi, Loiyangalani	17000	County Govt of Marsabit			1-3 Months
	Desilting of earth pans	Loglogo,Laisamis,Korr,Kargi,Loiyangalani	30,000	County Govt of Marsabit			3-6 Months
	Borehole maintenance support	Loglogo,Kargi, Korr	17000	County Govt of Marsabit, Fh-Kenya, PACIDA			
North Horr	Capacity building for communities on water and financial resource management	All		County Govt of Marsabit, Fh-Kenya, PACIDA			
	Water trucking	Kubi Adhi,,Forole	2000				
	Shallow wells rehabilitation	North Horr, Dukana, Maikona, Balesa and Illeret		County Govt of Marsabit, Fh-Kenya			
	Desilting and protection of earth pans	Dukana,North Horr,Maikona		County Govt of Marsabit			
	Boreholes maintenance support	Maikona,North Horr,Dukana, Turbi-Bubisa		County Govt of Marsabit, Fh-Kenya, PACIDA			
Moyale	Pipeline Extension	Elhadi, Balesa, North Horr		County Govt of Marsabit			
	Water trucking	Elle Dimtu	2000	County Govt of Marsabit			
	Shallow wells rehabilitation			County Govt of Marsabit			
	Borehole Maintenance Support	All		County Govt of Marsabit			

	Desilting and protection of earth pans			County Govt of Marsabit			
	Capacity building for water management committee on water resource and financial management			County Govt of Marsabit, Fh-Kenya, PACIDA			

Medium and Long Term recommended Interventions

All	-Investment into rain water harvesting infrastructures in the form of medium/large size dams -Developing Capacity of communities in Water Resource Governance -Development of policies and legislative framework to enhance institutional capacities of community water management institutions			County Govt of Marsabit, Fh-Kenya, PACIDA			
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Health and Nutrition Sector

Sub-county	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
All	Invest in value addition technology and fisheries products	All sub-counties		County Govrt	-Human resource with expertise, -Equipment	A few HR	Continuous
All	Establish consistency in provision of safe water in households and schools	All sub-counties		County Govrt	-Human resource with expertise, -Equipment	Few HR	End of 2019
All	Govt, partners planning and coordination from a common point	All sub-counties		County Govrt	-Human resource with expertise		
All	Scale up nutrition education	All sub-counties		COUNTY GOVRT, Partners	-Human resource with expertise IEC /BCC materials		

All	Promote production of vegetables and fruits and or imports	All sub-counties		COUNTY GOVRT, Partners	Human resource with expertise		
All	Women empowerment in decision making at household and policy level participation	All sub-counties					