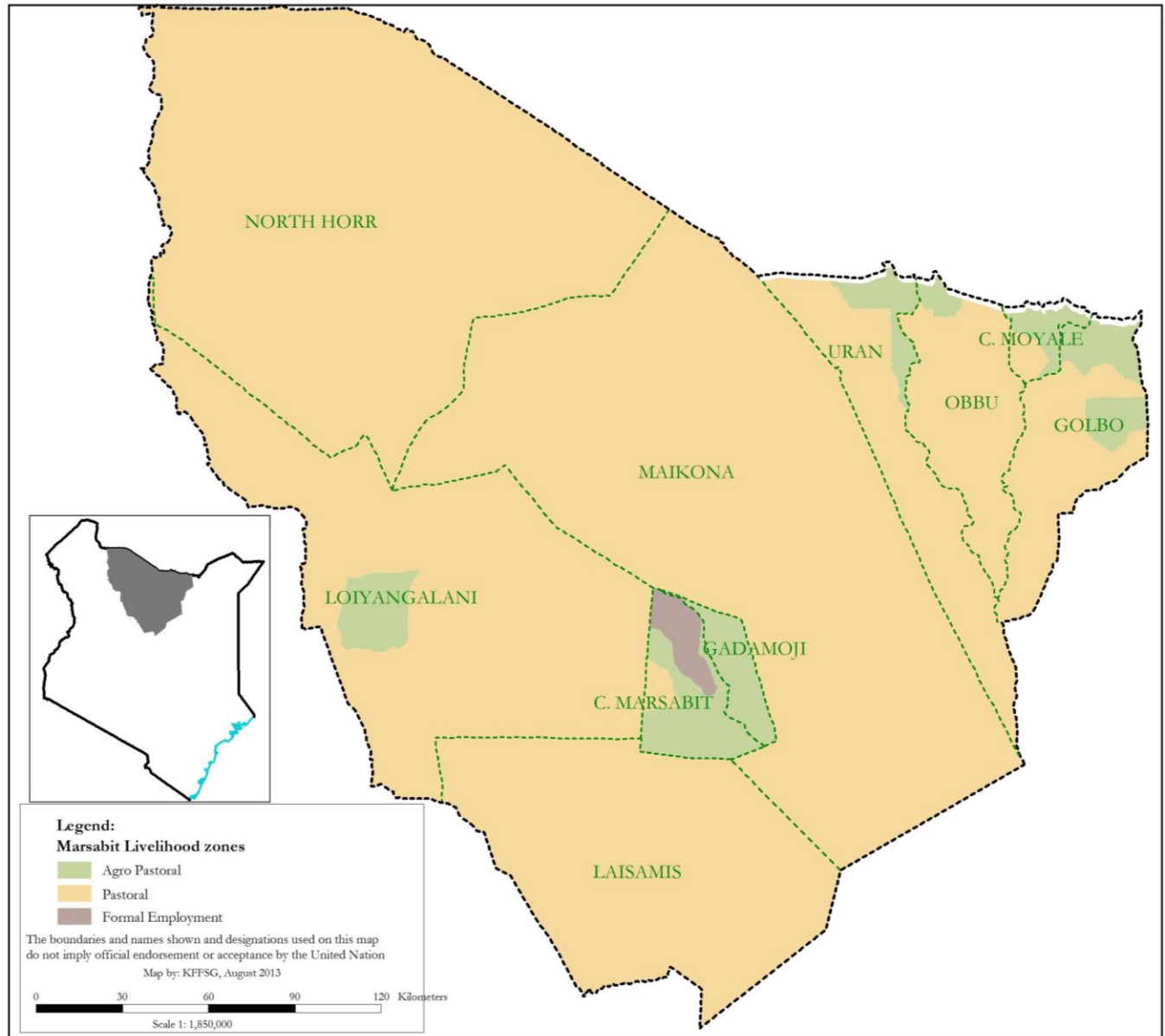


# MARSABIT COUNTY

## 2016 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



**A Joint Report by the Kenya Food Security Steering Group (KFSSG)<sup>1</sup> and Marsabit County Steering Group (CSG)**

**August 2016**

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## Table of Contents

<b>1.0 INTRODUCTION.....</b>	<b>3</b>
1.1 County Background.....	3
<b>2.0 COUNTY FOOD SECURITY SITUATION.....</b>	<b>3</b>
2.1 Current Food Security Situation.....	3
2.2 Food Security Trends .....	4
2.3 Rainfall Performance.....	4
<b>3.0 IMPACT OF RAINFALL PERFORMANCE, SHOCKS AND HAZARDS .....</b>	<b>5</b>
3.2 Livestock Production.....	6
3.3 Water and Sanitation .....	8
3.4 Markets and Trade.....	9
3.5 Health and Nutrition.....	11
Coping Mechanisms .....	13
3.6 Education.....	13
<b>4 FOOD SECURITY PROGNOSIS.....</b>	<b>14</b>
4.1 Prognosis Assumptions .....	14
4.2 Food Security Outcomes for the Next Three Months .....	14
<b>5 CONCLUSION AND RECOMMENDATIONS.....</b>	<b>14</b>
5.1 Conclusion.....	14
5.2 Summary of Recommendations .....	15
<b>6 ANNEXES .....</b>	<b>16</b>
6.1 On-going Interventions by Sector .....	16
6.2 Proposed Interventions.....	19
6.3 Non-food Interventions (by sector).....	19

## 1.0 INTRODUCTION

### 1.1 County Background

Marsabit County is located in the northern part of Kenya. It covers an area of about 75,750 square kilometres with a population of 291,179 persons (2009 census). The county has four sub-counties: Moyale, North Horr, Saku and Laisamis; and divided into three main livelihood zones - pastoral, agro-pastoral and others (formal employment and fisher folk) (Figure 1).

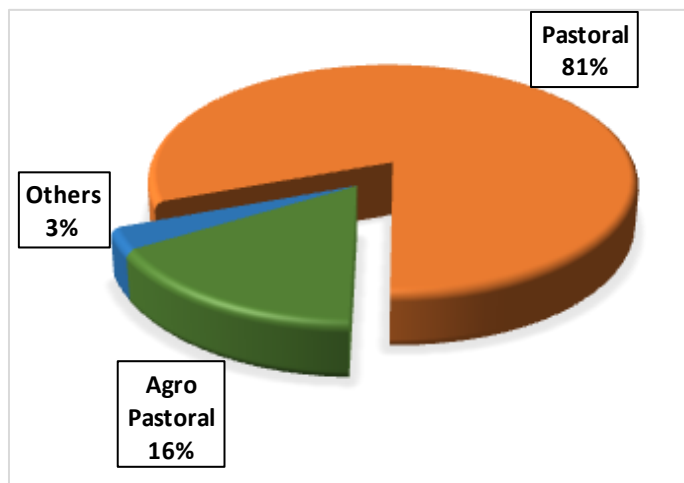


Figure 1: Proportion of population by livelihood

## 2.0 COUNTY FOOD SECURITY SITUATION

### 2.1 Current Food Security Situation

Most of the county is classified in the ‘stressed’ phase (IPC Phase 2) across all livelihood zones, with the exception of the agro-pastoral livelihood zone which is in the None/Minimal phase (IPC Phase 1). The current drivers of food insecurity include livestock pests and diseases, crop destruction from wild animals, flash floods and crop pests aggravated by poor temporal and uneven spatial distribution of the long rains.

The total maize stocks held in the county is approximately 78 percent of the normal. The meal frequency for under-five children and adults averages 2 – 3 meals a day across all the livelihood zones which is normal. Household milk production during the period was stable at 1-2 litres per day which is normal. Water consumption in both the pastoral and agro-pastoral livelihood zones ranged 15 – 20 litres per person per day which is normal. The terms of trade (TOT) were 36 percent above the long term average (LTA), indicating increased purchasing power for the pastoralists. The coping strategy index (CSI) in May 2016 was moreless stable at 21 compared to 18 during the same period in 2015, implying that households were not frequently engaging in consumption-based coping strategies. In May 2016, 61.8 percent of households had acceptable food consumption score, stable and comparable with the same time last year when 61.1 percent of households had acceptable food consumption score. Similarly, households with poor food consumption declined to a score of 13, compared to 25 in May 2015. The proportion of children at risk of malnutrition based on mid-upper arm circumference (MUAC <135mm) was stable at 17 percent in June 2016 compared with 18 percent in May 2015. The mortality rate for children under five years of age between January and June 2016 was 0.01 deaths per 10,000 live births per day, well below the alert levels of two deaths per 10,000 live births per day.

## 2.2 Food Security Trends

Indicator	Long rains assessment, July 2016	Short rains assessment, Feb 2016
Food security phase	None/minimal (agro-pastoral) Stressed (pastoral)	None/minimal (agro-pastoral) Stressed (pastoral)
Household food stocks	28 percent of LTA	45 percent of LTA
Livestock body condition	Good	Good
Household water consumption, pastoral zone and agro-pastoral zone	15-20 litres per person per day.	15-20 litres per person per day.
Meal Frequency	2 – 3 meals per day	2 – 3 meals per day
Household Milk Production	1-2 litres	1-2 litres
Terms of trade	76 kilograms	65 kilograms
Coping strategy index	21 in (May 2016)	18 in (December 2015)
Food consumption score (Acceptable)	Poor: 12.5 percent Borderline: 25.7 percent Acceptable: 61.8 percent	Poor: 7.4 percent Borderline: 31.5 percent Acceptable: 61.1 percent
Children at risk of malnutrition	16 percent	18 percent

## 2.3 Rainfall Performance

The onset of the 2016 long rains was late, occurring in the first dekad (10 day period) of April across the county instead of the normal second dekad of March. Rainfall performance was characterized by poor temporal as well as uneven spatial distribution. The county recorded a total of 184 mm for the season compared to the saesonal average of 204 mm. Most of the central parts of the county received 75-110 percent of the normal rains (as shown in Figure 2), however, Dukana, Forole, Hurri Hills and the Chalbi basin in the pastoral livelihood zone received 140- 200 percent of normal rainfall. Other areas of the county such as southern part of Laisamis, Illaut, South Horr, Korr, Koya and Loglogo within the pastoral livelihood zone received 50-75 percent of normal rainfall. Cessation was normal in the second dekad of May.

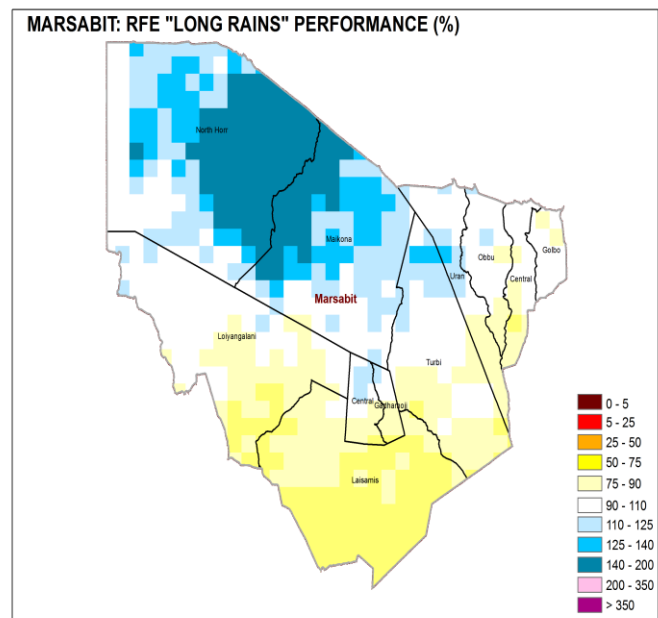


Figure 2: Rainfall Performance

### 3.0 IMPACT OF RAINFALL PERFORMANCE, SHOCKS AND HAZARDS

The county is mostly dependent on the short rains for crop production. Nonetheless, the main crops grown during the long rains are: maize, beans and green grams. In the agro-pastoral livelihood zone, maize contributes 30 percent to food and 22 percent to cash income, while beans contribute 20 percent to both food and income. Notably, the production of green grams is picking up as a source of both food and household income.

#### Rain fed crop production

There was a decrease in the area planted for maize and beans by 9 and 40 percent of the LTA respectively, attributed to uncertainty among agro-pastoralists in regard to the anticipated performance of the long rains, based on their experience. Farmers' delay in harvesting the previous season's crops, lack of proper grain storage facilities at household and community levels, as well as limited farm labour were some of the factors attributed to the decrease in area planted. Consequently, there is a decrease in projected maize production of 35 percent and a fall in the actual beans harvested of 75 percent compared with the LTA (Table 1). Late planting as well as poor temporal and spatial distribution of rainfall in the agro-pastoral zone contributed to the decrease in production. However, there was an increase of 13 percent in the production of green grams as a result of the county government prioritising cultivation of the crop in partnership with Farm Concern International.

**Table 1: Rain fed crop production**

Crop	Area planted during 2016 Long Rains season (Ha)	Long Term Average area planted during the Long Rains season (Ha)	2016 Long rains season production (90 kg bags) Actual	Long Term Average production during the Long Rains season (90 kg bags)
Maize	675	745	3,375 (Projected)	5,220
Beans	460	761	2,750	11,140
Green grams	53	42	239	210

#### Irrigated Crop

The irrigated maize acreage was 50 percent of the LTA (Table 2), attributed to constant breakdown of irrigation system water intake. Projected production declined by 62.5 percent of the LTA, attributed to breakdowns as well as high maintenance costs of the irrigation infrastructure, and generally inadequate water to sustain irrigated crop farming. In the agro-pastoral zone, the production of kale and tomatoes is practiced through drip irrigation covered in greenhouses and shade nets. These technologies have also been adopted in pastoral areas near water pans and boreholes.

**Table 2: Irrigated crop production**

Crop	Area planted during the 2016 Long Rains season (ha)	Long Term Average (3 years) area planted during Long Rains season (ha)	2016 Long Rains season production (90 kg bags) Projected	Long Term Average (3 years) production during Long Rains season (90 kg bags)
Maize	15	30	90	240
Kales	4	6	45 MT	110 MT
Tomatoes	6	5	64MT	140MT

### Maize stocks

The current estimated maize stocks held by households was 28 percent of the LTA (Table 3), attributed to the dwindling of stocks from the previous short rains season. However, improved household income from social protection initiatives such as the Hunger Safety Net Programme (HSNP), and periodic sale of livestock enabled households to purchase food from the markets. Estimated stocks held by traders were about 95 percent of the LTA, attributed to normal flow of cereal supplies from external markets in Meru, Nyahururu as well as the cross-border trade with Ethiopia. The stocks held by agro-pastoral households can last for 1-2 months, compared with three months normally. On the other hand, the pastoral livelihood zone is dependent on market supplies which currently has adequate supplies. However, there are no maize stocks at the Marsabit NCPB depot currently. Older Strategic Grain Reserve stocks were sold to traders last year, and new stocks are yet to be delivered by the Department of Special Programmes.

**Table 3: Maize stocks in the county**

Maize stocks held by	Quantities held currently (90-kg bags)	Long Term Average quantities held (90-kg bags) at similar time of the year
House Holds	3,700	13,000
Traders	14,400	15,200
Millers	0	0
NCPB	0	0
<b>Total</b>	<b>18,100</b>	<b>28,200</b>

### 3.2 Livestock Production

The major livestock are camels, cattle, goats and sheep. Livestock production including meat, milk, hides and skins and associated by-products generates significant income to the county. Livestock production contributes 82 percent and 60 percent to cash income in the pastoral and agro-pastoral livelihood zones respectively. Poultry production (meat and eggs) contributes five percent to cash income in the agro-pastoral livelihood zone.

#### Forage condition

Pasture and browse conditions are typically on a deteriorating trend across all livelihood zones. However, in Oltorot, Kurkum, Golbo, Barambate and Qorqa, all in the pastoral livelihood zone, the condition of pasture and browse was fair to poor due to high concentration of livestock in those areas. Crop residues, though available in minimal quantities, are being supplemented as livestock feed especially in the agro-pastoral areas of Odda, Mansile, Kinisa, Walda Golole and Uran. Reported Acute Camel Death Syndrome in Shurr, Hawaye, and Lalesa in the pastoral livelihood zone constrained access to pasture in those areas.

**Table 4: Forage condition by livelihood zone**

Livelihood zone	Pasture condition			Browse condition		
	Current	Situation at this time of year	Projected duration to last (Months)	Current	Situation at this time of year	Projected duration to last (Months)
Pastoral	Fair	Good to Fair	1-2 months	Fair	Fair	1-2 months
Agro-pastoral	Good to Fair	Good to Fair	1-2 months	Good	Good	2-3 months

**Livestock Productivity****Body condition**

The body condition of all livestock species was good across all livelihood zones which is normal, except in the areas around El-Hadi within the pastoral livelihood zone, where it was fair for cattle species owing to diminishing pasture and browse as well as increasing trekking distances to water sources. The body condition of cattle and sheep is likely to deteriorate to 'fair' in the next month (September) due to diminishing forage and longer return trekking distances.

**Milk production, consumption and prices**

Milk production averaged two litres per household per day in the pastoral all-species livelihood zone, mainly from cattle and camels, in comparison with the LTA of three litres (Table 5). Milk consumption in both the pastoral and agro-pastoral zones was normal. The cost of milk was about Ksh 15 higher than normal as a result of the declining trend in milk productivity in the pastoral livelihood zone.

**Table 5: Milk production, consumption and prices by livelihood zone**

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres)per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	2	3	1	2	75 - 90	60-80
agro-pastoral	2	2	1	2	90-100	90-100

**Tropical livestock units (Tropical Livestock Units) and birth rates**

The average household livestock size in the pastoral livelihood zone was 10 TLUs (2 camels, 4 cattle, 10 goats and 10 sheep) while in the agro-pastoral livelihood zone it was 7 TLUs (1 camel, 3 cattle, 9 goats, 8 sheep). The TLUs were normal for this time of the year. The birth rates are normal for cattle, but expected to decline for other livestock species as a result of livestock diseases, reduced availability of forage, and increasing distances to water sources.

**Migration, Livestock Diseases and Mortalities**

Livestock movement within the county was normal at this time of the year. Nonetheless, in-migration of livestock was reported from Merile, Laisamis, Logologo to Gudas, Sori Adi, Koya, Durusi, Barchuma, Dedertu and Sabarwawa areas. The reported diseases in the county were Foot and Mouth Disease (FMD), Contagious Caprine Pleuropneumonia (CCPP) Contagious Bovine Pleuropneumonia (CBPP), Acute Camel Death Syndrome (ACDS), Heart Water, Lumpy Skin

Disease (LSD) and Peste des Petits Ruminants (PPR). Approximately 1,500 small stock from different areas of the county were swept by flash floods, and about 200 camels died in the period under review from Acute Camel Death Syndrome.

## Water for Livestock

**Table 6: Water for livestock by livelihood zone**

Livelihood zone	Return trekking distances in Km		Expected duration to last in months		Watering frequency			
	Current	Normal	Current	Normal	Species	Days	Normal	Days
Pastoral	20- 30	20-30	1-2	1-2	Camel	8	Camel	6
					Cattle	2	Cattle	1
					Shoats	3	Shoats	3
agro-pastoral	15-20	15-20	1-2	1-2	Camel	5	Camel	5
					Cattle	1	Cattle	1
					Shoats	2	Shoats	2

The major water sources for livestock are boreholes, water pans, ponds and shallow wells. The current return trekking distances from grazing to watering points are normal in the pastoral livelihood zone (Table 6), exception being El-hadi area, where the return trekking distances are 30-40 kilometres. With diminishing pasture and browse conditions, the distances in both the pastoral and agro-pastoral livelihood zones are expected to increase by September. The expected duration of water sources is also normal at this time of the year (Table 6).

### 3.3 Water and Sanitation

The main water sources in the county are boreholes, pans, springs, shallow wells and dams. Most open water sources had approximately 90-100 percent recharge level in the northern parts of North Horr sub-county and the whole of Saku and Moyale sub-counties. In Laisamis sub-county, water recharge levels was between 50 and 60 percent due to the below average rainfall received.

#### Distance to water sources and waiting time

The current return distances to water sources are normal in both the pastoral and agro-pastoral livelihood zones (Table 7). However, in the pastoral area of south-eastern Moyale, especially in Golla and Guyo Timo, the distance was 8-15 kilometres as a result of drying and siltage of pans. The waiting time at water sources was normal (Table 7), although there are exceptional areas such as Shurra in the pastoral livelihood zone where it is three hours due to congestion at the only water kiosk.



**Table 7: Distance, cost, waiting time and average household use by livelihood zone**

Sub county / livelihood zone	Distance to Water for Domestic Use (Km)		Cost of Water (Kshs./20litres)		Waiting Time at Water Source (Minutes)		Average HH Use (Litres/person/day)		Projected duration of water in (months)
	Normal <sup>2</sup>	Current	Normal	Current	Normal	Current	Normal	Current	
Pastoral	2-4	2-4	5	5	20-30	20-30	15 -20	15-20	1-2
Agro-pastoral	2-4	2-4	5	5	15-20	15-20	15 -20	15-20	1-2

**Cost of water and consumption**

The cost of water is normal (Table 7). However, in urban areas of Moyale and Marsabit, the cost of a 20-litre jerrican from the vendors is Ksh. 25-50. Water consumption is also normal (Table 7), with the exception of Elle Borr, Korr and Toricha where rationing is in place because the pan is likely to dry in 2-3 weeks, and water consumption is 10 litres per person per day.

**3.4 Markets and Trade****Market operations**

The main livestock markets are Moyale, Marsabit, Turbi and Merille. The terminal markets for livestock are Nairobi and Ethiopia. The main markets for food commodities are Moyale and Marsabit in the agro-pastoral livelihood zone and Laisamis and North Horr in the pastoral livelihood zone. The markets were operating normally, with food supplies flowing in from the traditional source markets of Meru (through Isiolo), Nyahururu, Nairobi and Ethiopia (through Moyale). The tarmacking of the Merille-Marsabit-Moyale road has significantly improved trade flows through Isiolo as well as from Moyale. Food supplies to remote markets off the main highway are hampered by the poor condition of the secondary and tertiary roads. This in turn has led to high transaction costs, mainly during the rains, thus increasing commodity prices in the remote markets. There were no major food market disruptions reported in both the main and remote markets during the period. However, traders reported a decline in traded volumes for camels, due to low demand and reduced supply influenced by the re-emergence of acute camel death syndrome disease

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<sup>2</sup> Normal refers to what usually happens around same period in absence of a shock

## Maize prices

Maize prices were 10 percent below the long term average (LTA) in July 2016 and 18 percent below July 2015. Prices did not follow the seasonal trend between March and April 2016, but picked the normal trend from April and have been below the LTA since then (Figure 3). Lower maize prices are noted in Saku (agro-pastoral livelihood zone) and the border towns of Moyale, El-hadi and Dukana. Maize prices were highest in El-Molo and Sarima. The reduction in maize prices is attributed to the bumper harvest from the short rains, as well as increased inflows from Ethiopia (through Moyale) and from other counties. The tarmacking of the Isiolo-Marsabit road has facilitated an increase in supplies, thus lower prices.

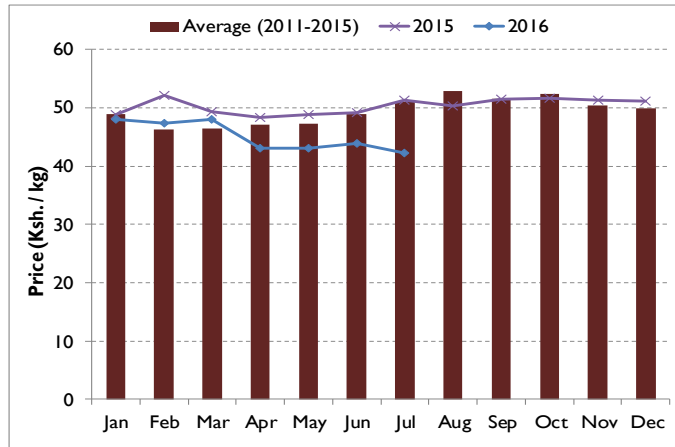


Figure 3: Maize prices

## Goat price

Goat prices were 18 percent above the LTA in July 2016, and eight percent above July 2015 price. Prices have been on an upward trend since February 2016, which is atypical, since goat prices normally fall between January and April before rising again up to June (figure 4). The highest goat prices were recorded in Moyale and the lowest in North Horr sub-county. The increase in goat prices is attributed to the good body condition. It was reported that the volumes traded by households were declining attributed to adequate browse and withholding sale of goats.

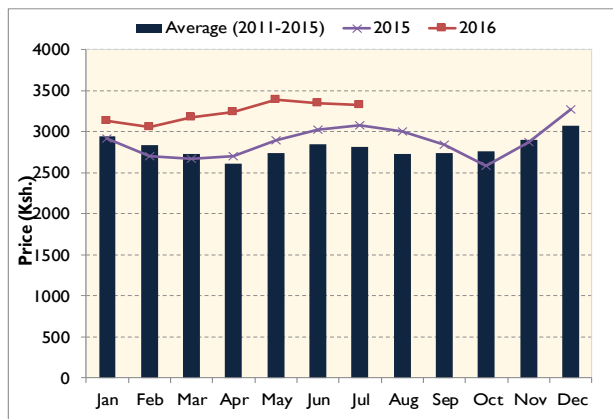


Figure 4: Goat prices

## Terms of trade

The terms of trade (TOT) were 43 percent above the LTA in July 2016 and 32 percent above the July 2015 level, indicating increased purchasing power for pastoralists over the last two years. TOT values normally drop from February to April before they rise through June. However, the trend in 2016 has been unusual as the TOT started increasing in March. This is attributed to the increase in goat prices and the atypical fall in maize prices which favours pastoralists. TOT was highest in Moyale and lowest in Olturot, Sarima and parts of North Horr.

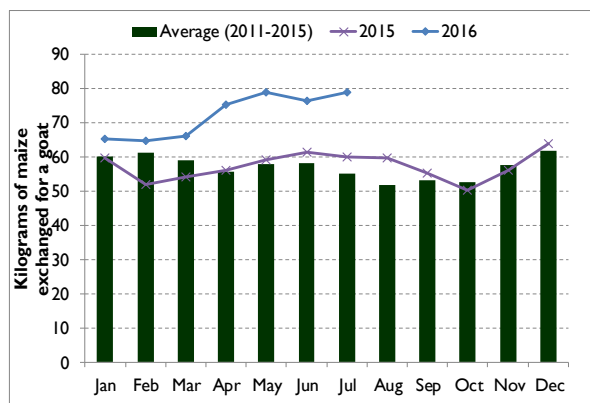


Figure 5: Terms of Trade

## 3.5 Health and Nutrition

### Morbidity patterns

Table 8: Morbidity cases for children under five and general population

Reported morbidity cases for children under five				Reported morbidity cases for General Population			
Disease	Jan-June 2015	Jan-June 2016	Percentage Change (decrease)	Disease	Jan-June 2015	Jan-June 2016	Percentage Change (decrease)
Other respiratory tract infections	25,655	11,544	55	Other respiratory tract infections	35,880	15,416	57
Diarhoea	14,414	11,653	19	Skin Disease	9,049	7,117	21
Pneumonia	7,030	4,703	33	Pneumonia	8,982	6,146	36
Skin Disease	3,055	2,742	10	Diarhoea	11,846	10,960	32
Eye infection	2,206	204	91	UTI	7,363	5,812	21

There was a decrease in the morbidity trends – for all diseases - in both the under-five and general population compared with the same period in 2015. This was attributed to the opening up of more and better equipped health facilities, with uninterrupted supply of drugs.

### Epidemic prone diseases

Table 9: Epidemic cases in the County

Epidemic	January –June 2015	January –June 2016
	No of cases	No of cases
Measles	28	132
Cholera	0	23
Dysentery	1704	6385
Diarrhea	26313	2338
Malaria	2983	2475
Typhoid	3686	1890

The number of cases for measles for the period January – June 2016 was 132 in comparison to 28 cases for the previous year attributed to cross border infections at Badan Rero, while dysentery cases were 6,385 for the period January – June 2016 compared to 1,704 cases in the same period last year attributed to shortage of water purifiers (aqua tabs and purr). Diarrhea, malaria and typhoid recorded a reduction at 23, 17 and 49 percent respectively attributed to opening of additional and well equipped health facilities.

**Table 9: 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 district Source DHIS
January to June 2016	35	OPV 1 ____45 OPV 3 ____37 Measles ____34
January to June 2015	38	OPV 1 ____51 OPV 3 ____43 Measles ____41

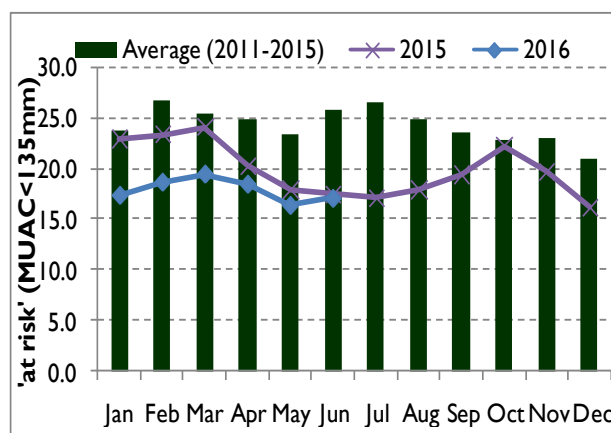
Immunization coverage in Marsabit county has dropped from the previous year (Table 9), attributed to hard-to-reach areas and inadequate data. However, Vitamin A supplementation has increased (Table 10), attributed to national health campaigns in 2016.

**Table 10: Percentage of Vitamin A supplementation**

Percentage of Children < 12 months who received Vit A (DHIS 710)		Percentage of Children 1 to 5 years old who received Vit A (DHIS 710)	
Jan –June 2015	Jan –June 2016	Jan –June 2015	Jan –June 2016
46	71	80	86

### Nutrition Status and Dietary Diversity

The proportion of children at risk of malnutrition was 35 percent below the LTA for June 2016. The percentages followed the seasonal trend and have been below both the LTA and the 2015 values. (Figure 6). Lower proportions of children at risk of malnutrition were recorded in the agro-pastoral livelihood zone, the proportions were highest in Loyangalani, Olturot and Dabel. The stable trend is attributed to accelerated screening for malnutrition by health and nutrition partners.



**Figure 6: Proportion of children at risk of malnutrition**

## Food Consumption Score

The proportion of households with an acceptable food consumption score has been steadily rising (Figure 7). This is an indication of improvement in dietary diversity, meal frequency and nutritional content. The meal frequency for both under-fives and the general population was 2 – 3 meals in a day compared with the required 3 – 4 meals per day, which is normal. The main meals consumed were posho, milk and beans.

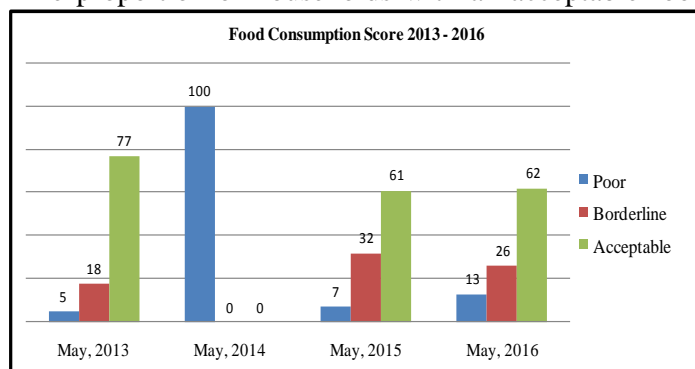


Figure 7: Food Consumption Score

## Coping Mechanisms

The coping strategy index (CSI) in May 2016 was higher than in the same period in 2015 (Table 11).

Table 11: Percentages of households using different coping mechanisms

Coping strategy Index May 2014	Coping strategy Index May 2015	Coping strategy Index May 2016	Most utilized coping strategy (May 2016)	Percentage of Households
5	18	21	Relied on less preferred and/or less expensive food	73
			Borrowed food, or relied on help from a friend or relative	68
			Reduced the number of meals eaten per day	74
			Reduced the portion size of meals	73
			Reduced the quantity of food consumed by adults to ensure that children had enough to eat	65

## Sanitation and Hygiene

Latrine coverage in the county was stable at 52 percent in 2016 compared with 49 percent in 2015. Latrine utilization is approximately 20-30 percent in the pastoral livelihood zone and 40 - 50 percent in the agro-pastoral livelihood zone, and open defecation was common.

## 3.6 Education

### School Meals Programme

A total of 170 public primary schools and 48,205 pupils are under the regular school meals programme (RSMP) supported by the World Food Programme (WFP) (Table 14). Approximately 3,000 ECD children are supported by the County Government's pilot feeding programme. The remaining 15,826 ECD learners were reportedly sharing food supplied by WFP with primary pupils. The food basket includes maize, beans, vegetable oil and salt. Water shortages and lack of firewood have constrained the provision of meals to pupils.

## **4 FOOD SECURITY PROGNOSIS**

### **4.1 Prognosis Assumptions**

The food security situation is based on the following assumptions:

- The onset of the short rains in October is expected to be normal to below normal (La-Nina phenomenon, currently likelihood of occurrence 50-60%)
- Rangeland conditions are likely to deteriorate in both the pastoral and agro-pastoral livelihood zones owing to the on-going dry spell, which will in turn compromise livestock productivity.
- Water pans are likely to dry up in the next 1-2 months given the increase in the concentration of livestock at water sources. This will lead to a decline in water consumption as well as frequency of watering.
- Maize prices are expected to marginally stabilize by August, followed by a marginal increase for the remainder of the year.
- Goat prices are expected to begin declining from August as supply increases due to the peak of dry season.

### **4.2 Food Security Outcomes for the Next Three Months**

#### **Food Security outcomes from August to October**

Although food crop production during the long rains season has been below average, imports from neighbouring counties are likely to keep food prices stable. Livestock body condition is likely to worsen through to October, as pasture deteriorates and distances to water sources increase. Livestock production is likely to worsen, which will compromise dietary diversity, food consumption and nutrition status. As a result, the proportion of children at risk of malnutrition is projected to increase. Most households in the county are expected to remain in the stressed phase (IPC Phase 2) through to October. The onset of the short rains is expected in the second dekad of October which will likely rejuvenate rangeland conditions and reverse the negative trend. The current food security situation is anticipated to remain the same in all the livelihood zones. However, poor households in pastoral livelihood zone in Laisamis sub-county are likely to drift to crisis, IPC phase 3.

#### **Food Security Outcomes for November to January**

Based on current La nina likely occurrence prediction of 50-60%, the 2016 short rains are expected to be normal to below-normal. As a result, pasture and browse are projected to rejuvenate partially. Water sources will be fairly replenished, in turn reducing trekking distances. This will positively influence milk production, in turn reduce the proportion of children at risk of malnutrition. The county being largely dependence on short rains, agro-pastoralist households are likely to increase the acreage under crop production.

## **5 CONCLUSION AND RECOMMENDATIONS**

### **5.1 Conclusion**

The pastoral livelihood zone is largely in the Stressed Phase (IPC Phase 2) while the agro-pastoral zone is in the Minimal Phase (IPC Phase 1). The food security situation is expected to remain stable for the next month across all the livelihood zones followed by a declining trend through to October, with more households employing stressed coping strategies. Key factors to monitor include livestock diseases and water consumption at the household level, pasture and browse conditions, water availability and access, livestock body condition, as well as food

prices. Potential hot-spot areas likely to impact on food security if active conflict erupts include the border between North Horr and Wajir, the border between Moyale and Wajir, Cheri Ashe, Buluk and Darade.

## 5.2 Summary of Recommendations

**Table 12. Sub-county food security ranking (worst to best)**

Sub County	Food security rank (1-10)	Main food security threat (if any)
Laisamis	1	<ul style="list-style-type: none"> <li>▪ Rainfall deficit, 50-75percent of the normal rainfall</li> <li>▪ High malnutrition cases (22 percent)</li> <li>▪ 80 percent out-migration</li> <li>▪ Livestock diseases: LSD, CCPP and PPR</li> <li>▪ Flash floods resulted in livestock deaths (approximately 1200 sheep and goats)</li> <li>▪ GAM of 21.8, very critical level</li> <li>▪ High food prices (Ksh 56 maize per kilogram, goat prices Ksh. 3200)</li> </ul>
Moyale	2	<ul style="list-style-type: none"> <li>▪ 70-110 percent of the normal rainfall</li> <li>▪ High malnutrition rate at 16 percent</li> <li>▪ 70 percent out-migration, 20 percent in-migration</li> <li>▪ Livestock diseases: FMD, ACDS, CCPP, PPR</li> <li>▪ GAM of 7.5,</li> <li>▪ Flash floods that resulted in livestock deaths (27 goats)</li> <li>▪ Food prices at Ksh 35 for maize per kilogramme and Ksh 3600 for goat.</li> </ul>
North Horr	3	<ul style="list-style-type: none"> <li>▪ 140-200 percent of the normal rainfall</li> <li>▪ Malnutrition rate at 17 percent</li> <li>▪ 70 percent out-migration (30 percent camel in-migration) (20 percent cattle)</li> <li>▪ GAM of 22.8, very critical level</li> <li>▪ Livestock diseases: CBPP, FMD, LSD, CCPP, PPR</li> <li>▪ Flash floods that resulted in approximately 500 livestock deaths</li> <li>▪ Prices at 40 shillings per kilogramme for maize and Ksh 2,900 for goat.</li> </ul>
Saku	4	<ul style="list-style-type: none"> <li>▪ Malnutrition at 9 percent</li> <li>▪ GAM of 7.4</li> <li>▪ Livestock diseases: heart water, CCPP FMD and CBPP</li> <li>▪ Prices at Ksh 30 for maize per kilogramme and Ksh. 3700 for goat</li> </ul>

## 6 ANNEXES

### 6.1 On-going Interventions by Sector

**Table 13: Ongoing Interventions**

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
<b>Agriculture</b>							
Procurement and distribution of seeds	To increase the area under food crops	All sub Counties	1200 Ha of Maize 900 Ha pulses	3.5 M	2000	By Oct 2016	County Government/solidarites/CARITAS
Mechanizing land preparation	To increase efficiency of land preparation	Moyale Saku Huri Hills	800 Ha	11.0 M	1500	By Oct 2016	County Government/solidarites/CARITAS
Procurement and distribution of pesticides, and small equipments	Enhancing productivity	Kurungu, Songa, Badassa, Sagante, Kinisa, Anona, Mansile	140 MT horticultural produce	2.5 M	400	By November 2016	National Government/County Government/CARITAS
Training groups and stakeholders on food handling and utilization	To sensitize community members on food and nutrition security	Saku	Train 120 farmers	150,000	120	By August 2016	DoALF, Dept of Health and Nutrition/GIZ/UNICEF
Rehabilitation of Kurungu irrigation scheme	Renovation of water intake and irrigation system	Kurungu, South Horr	One intake and storage tank	1.2 M	540	By December 2016	DoALF/GIZ-CAADP
Expansion of Food For Asset (FFA)	Increase food production	All Sub County	FFA expansion	10M	Across the County	By December 2016	CGM, NDMA and WFP
<b>Livestock</b>							
Vaccination, deworming and treatment	To decrease incidence of disease outbreaks	All county	All livestock species	30M	2 M small stocks .200,000 camels and cattle	2016/2017	PACIDA, GIZ, VSF, FAO, CGM



Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Breeding improvement	Enhance productivity	Lontolio, Ndikir and Nairibi	Goats	1M	100	2016	VSF-G,CGM
Pasture development	Increase animal productivity	Elgade, Boji and Gamura	Livestock, Range rehabilitation	200,000	200HH	2016	CONCERN,PISP,KALRO,DAL&F
Capacity building on range management	Enhance range management and productivity	Karare, Kituruni, Leyai	Increase productivity	300,000	120	2016	CARITAS,DAL&F
Poultry production	Improve food security at household level	Kituruni, Leyai, Jirime, Hulahula	Increase household income	2M	200	2016	VSF-G,CARITAS,DAL&F,KALRO,ADESO
Bee production	Alternative livelihood	Funanqumbi, Hurri-Hills	Alternative livelihood		150	2016	PACIDA and DAL&F,ADS
Promotion of livestock value chain	Income generation and value addition	county	Improve market value chain	7M	900	Ongoing	ASDSP,DAL&F,KCA,KALRO,CLMC,WVK,GIZ,PACIDA
Livestock market infrastructural development	Improve livestock market price and market structures	Logologo, Moyale, Dukana, Bubisa, Segel, Illeret, Tesgai and Tigo	Market accessibility and better pricing Disease control measures	113M	100,000	Others ongoing and others completed	CGM,REGAL-AG,REGAL-IR,FH-K,GIZ,VSF-G,ADS,SOLIDARITES,PACIDA and others
<b>Water</b>							
Drilling, rehabilitation and equipping of Boreholes	Improved water availability and access	All sub counties	All sub counties	63.4M		2016/2017	County Gov. of Marsabit
Construction of water pans and dams	Improved water availability and access	All sub counties	All sub counties	78.6M		2016/2017	County Gov. of Marsabit
Construction and rehabilitation of pipeline i	Improved water availability and access	All sub counties	All sub counties	126.3M		2016/2017	County Gov. of Marsabit
<b>Health and Nutrition</b>							

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Zinc ,Micronutrient powder , Vitamin A supplements	Improve the micronutrient status of the community	All sub counties	All sub counties		Under five years	Continuous	MOH with CWW UNICEF,FHK, World vision
Integrated management of acute malnutrition	Improve the Nutrient status of the affected community.	All sub counties	All sub counties	4M	Under five years	Continuous	MOH with CWW UNICEF,FHK, World vision
IYCN Interventions	To reduce Morbidity and Mortality rates		All sub counties	1M	Under five years		MOH with CWW UNICEF,FHK, World vision
Iron Folate Supplementation among Pregnant Women	Improve the Micronutrient status of the community	All sub counties	All sub counties	2M	Pregnant and lactating women	Continuous	MOH with CWW UNICEF,FHK, World vision
Education							
School meals program for public primary schools	Improve retention and nutritional status of pupils	All sub counties	170 schools		48,205	2016	WFP
ECD centers pilot feeding program	Improve retention and nutrition status	All sub-counties	30 ECD centres	3.5M	3,000 children		CGM
Construction of toilets	Improve hygiene	All sub-counties	All sub-counties	2.5 M	10,000	2015-2016	CGM

## School Meals Programme

**Table 14: School Meals Programme Coverage**

Sub-County	No. of Schools	Primary		
		Boys	Girls	Total
<b>Moyale</b>	54	9,229	7,935	17,164
<b>North Horr</b>	35	3,783	4,034	7,817
<b>Saku</b>	35	6,762	7,125	13,887
<b>Laisamis</b>	46	4,674	4,663	9,337
<b>Total</b>	<b>170</b>	<b>24,448</b>	<b>23,757</b>	<b>48,205</b>

## 6.2 Proposed Intervention

**Table 15. Proposed population in need of food assistance**

Division/Ward name	Population in the division	Pop in need (percent range min – max)	Proposed mode of intervention
Laisamis	65,669	25-30	CFA/FFA
Moyale	103,799	20-25	CFA/FFA
North Horr	75,196	15-20	CFA/FFA
Saku	46,502	10-15	CFA/FFA

## 6.3 Non-food Interventions (by sector)

**Table 16. Non-food Interventions**

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
<b>Agriculture</b>							
Moyale Saku Laisamis North Horr	Early mobilization of farmers for land preparation	Moyale Saku Gatab/Kurungu Hurri Hills	2000 HH	County Government	750,000	500,000	SEPT 2016
Moyale Saku Laisamis North Horr	Resource poor farmers with fast maturing seeds	Moyale Saku Gatab/Kurungu Hurri Hills	750	County Government/ Partners(CARITAS,DORCAS)	5.3M	3.5 M	OCT 2016
Moyale Saku Laisamis North Horr	Expansion of land under cultivation through subsidized tractor service	Moyale Saku Gatab/Kurungu Hurri Hills	750	County Government/ Partners(CARITAS,DORCAS)	3.5M	2.0M	SEPT 2016
Moyale Saku Laisamis North Horr	Support resource poor farmers groups with water harvesting infrastructure and inputs	Moyale Saku Gatab/Kurungu Hurri Hills	450	County Government/ Partners (CARITAS,DORCAS)	35M	15M	JUNE 2017
Moyale Saku Laisamis North Horr	Continued support to capacity building of farmers	All sub counties	3500 farming HHs	County Government Partners	5M	3M	JAN 2017

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
<b>Livestock</b>							
All	Mass vaccination, treatment and deworming	All	10,000 Liv.3estock	CGM, FAO,VSF-G.PACIDA,SO LIDARITES,REGAL-AG,REGAL-IR	100M	Human resource	2016-2017
All	Provision of supplementary feeds	All	3,000 Milking herd	CGM,GIZ,VSF - G,SOLIDAITE S and others	12M	Human resource	2016-2017
	construction drug stores	El-Hadi,shurra, Lependera	700HH	CGM,NDMA, and other stakeholders	10M	Human resource	2016-2017
All	Fuel subsidy and Solar panel installation for borehole	All	150,000	CGM,NDMA, PACIDA,WRU Asand other stakeholders	60M		2016-2018
<b>Water</b>							
Support emergency borehole rapid response team	20 strategic boreholes county wide	County wide	County wide	County Gov. of Marsabit NDMA, Stakeholder	3.0M	Human resources	By start of August to end of October, 2016
Procurement of major spare parts	20 strategic boreholes county wide.	County wide	County wide	County Gov. of Marsabit NDMA, Stakeholder	20.0M	Human resources	August to end of October, 2016
Procurement of fast moving parts	All boreholes county wide	County wide	County wide	County Gov. of Marsabit NDMA, Stakeholder	5.0M	Human resources	August to end of October, 2016
Procurement of 4No standby gen-sets	20 strategic boreholes county wide.	County wide	County wide	County, NDMA, Stakeholder	10.0M		August to end of October, 2016

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Procurement of 6 submersible pumps	20 strategic boreholes county wide.	County wide	County wide	County, NDMA, Stakeholder	3.6M		County Government of Marsabit, NDMA.
Provide fuel subsidy to boreholes	All boreholes county wide	County wide	County wide	County. NDMA, Stakeholder	5.0M		September, October, 2016
Support water trucking to worst affected areas	All sub - counties	County wide	County wide	County ,NDMA, Stakeholder	5.0M		August to November 2016
<b>HEALTH</b>							
All the 4 sub counties	Food Fortification	All the 84 facilities	Children <5 years especially 6-23 months.	MOH/Implementing partners	Health workers community 4 M	Health workers/CHVs	Continuous(yearly )
All the 4 sub counties	Integrated outreaches	84 health facilities	Children <5 years, and the general population.	MOH/Implementing partners	Health workers 16 M	Health workers/CHVs	Continuous(yearly )
All the 4 sub counties	County Co-ordination and sub county co-ordination	In all the 4 sub county	MOH/Partners	MOH/Partners	2 M	MOH/Partners	Quarterly per year
All the 4 sub counties	Procurement for hard copy and soft copy for report writing M/E.	For the 4 sub county nutrition officers	All the 4 sub counties	MOH/PARTNERS	1 million		March to June 2016.
All the 4 sub counties	Social behaviour change communication capacity building	Community units which are in the 4 sub counties.	Health workers. CHVs and mothers in the targeted facilities in the CUs.	MOH/GAIN	6 millions	Health workers. CHVs and mothers in the targeted facilities in the CUs.	Continuous for the next 2 years
All the 4 sub counties	Mass Screening of the children < 5 years and the mothers.	In the Hot spots areas of the 4 sub counties	Children < 5 years and their mothers.	MOH/PARTNERS.	2.2 millions	Health workers and CHVs.	Feb to March 2016

<b>Sub County</b>	<b>Intervention</b>	<b>Location</b>	<b>No. of beneficiaries</b>	<b>Proposed Implementers</b>	<b>Required Resources</b>	<b>Available Resources</b>	<b>Time Frame</b>
All the 4 sub counties	Support the SURGE Model in the county	In all the facilities	330,000 People	MOH/Concern worldwide and implementing partners.	12.2 millions	Health workers and CHVs	Continuous-open sites in next 2 years
All the 4 sub counties	Support the national Nutrition days	All the 4 sub counties	330,000 People	MOH/implementing partners.	1.8 millions	Health workers and CHVs	May, August each year.
<b>EDUCATION SECTOR</b>							
North Horr	Construction of kitchen and stores	15 ECD Centers	4,000	County Government of Marsabit (CGM)	12 M	12 M	2016-2017
All	ECD centres RSMP	All	18,826	CGM	34M	34M	2016-2017