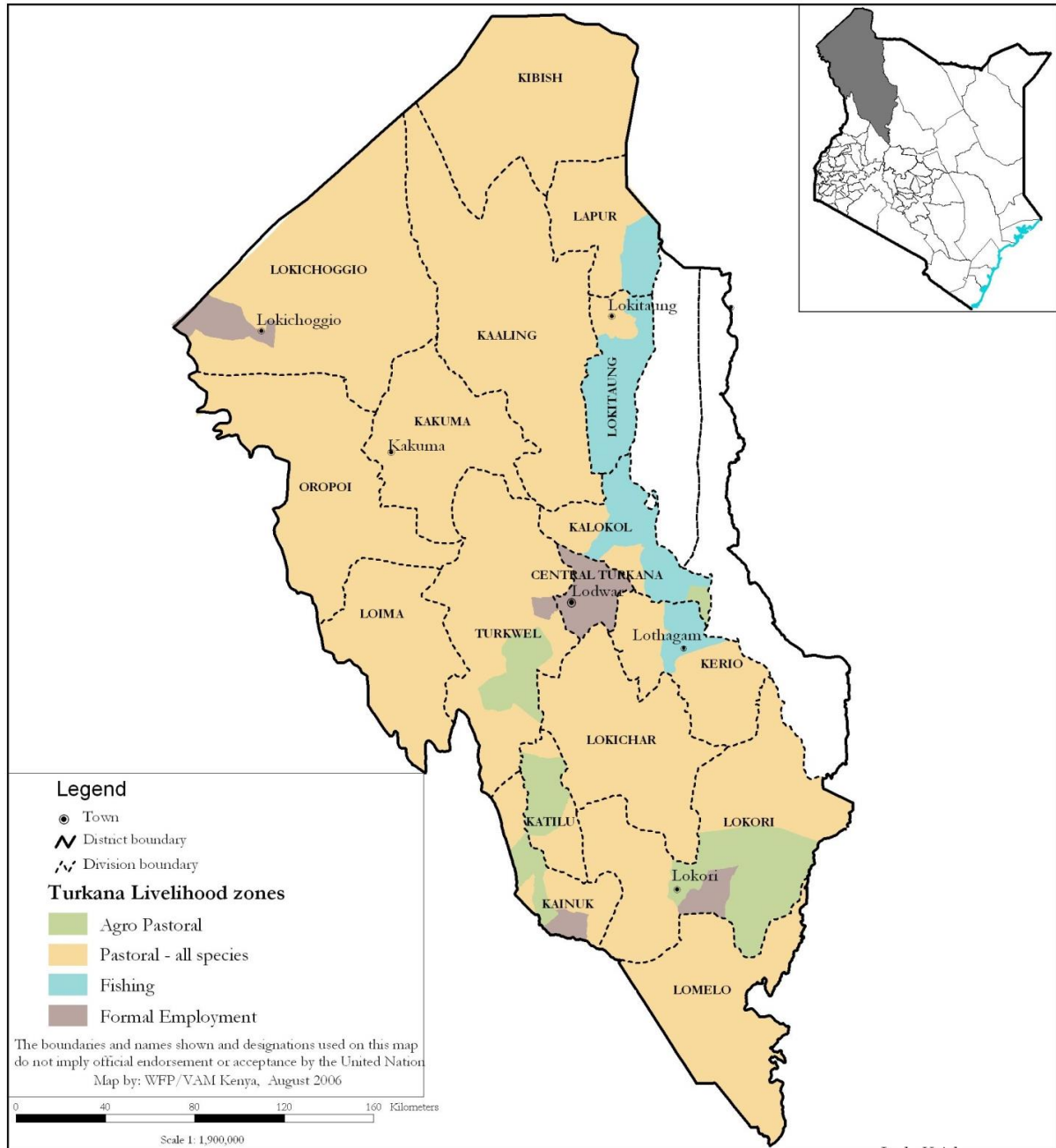


TURKANA COUNTY

2017 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



A joint report by the Kenya Food Security Steering Group (KFSSG)¹ and the Turkana County Steering Group

July 2017

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EXECUTIVE SUMMARY

The county is classified as ‘Crisis’ (IPC Phase 3) in the current assessment coming from ‘Stressed’ (IPC Phase 2) during the short rains assessment of February 2017. However, parts of Turkana Central are classified as “Stressed” (IPC Phase 2). The proportion of households with an adequate food consumption score (FCS) increased by 25 percent in June 2017 compared with same time 2016, implying improved food consumption at household level. The increase was attributed to the ongoing livestock slaughter off take where occasionally the households are able to include meat in their diet. However, the proportion of households with poor FCS stagnated at 26 for the last three seasons, pointing to an unresponsive household dietary diversity and food frequency. Similarly, the mean coping strategy score remained at 21 in the current season compared with previous three seasons, implying that households are engaging in consumption-related coping strategies more frequently and employing severe coping strategies more often. According to World Food Programme (WFP) June 2017 FSOM reports about 22 and 55 percent of the households in North-west Pastoral were crisis and employing emergency coping strategies. Most households reported taking one meal per day and in some cases would skip a full day without a meal. Household livestock ownership declined by 50 and 30 percent for poor and medium income households following the prolonged drought. The proportion of population employing emergency livelihood-based coping strategies to meet their food gaps increased by 34 percent compared with the previous season, indicating erosion of household assets and hence livelihoods. Consequently, the growing number of populations engaged in charcoal burning, street families, number of neglected children and IDP in the formal settlements was evidence of changing livelihoods following losses of their main livelihood-livestock. Results from the June 2017 Nutrition SMART Survey showed a deteriorating situation with Global Acute Malnutrition (GAM) rates increasing from 23 percent last year to 31 percent, indicating extremely critical nutrition situation. Households in the agro-pastoral livelihood zone held nine percent of their normal stocks which mainly constituted left-over stocks from the short rains season-under irrigated cropping. Stocks held by millers decreased by 33 percent of LTA which was attributed to poor own-production, decreased maize imports. Livestock body condition deteriorated from fair to poor compared with last season resulting in diminished household milk production and consumption due to water scarcity, long return trekking distances to water sources, forage depletion, early livestock migration and prolonged drought. The Terms of Trade declined by 32 percent in the current season compared with previous season and were unfavourable to livestock producers. The current household water consumption per person per day remained at 10-20 litres across all the livelihood zones indicating stability in household food utilization. Current factors affecting food security include: late onset and low amounts of rainfall which negatively affected water and forage situation thus triggering early livestock migration hence a decline in household milk production and consumption, prolonged drought, inter-community conflicts and insecurity across international borders with South Sudan and Ethiopia.

1. INTRODUCTION

1.1. County Background

Turkana County is located in the north-western part of the country and borders three countries; Uganda to the west, Sudan to the northwest, Ethiopia to the northeast. The county also borders West Pokot to the southwest, Samburu to the southeast and Marsabit to the east. The county covers an approximate area of 77,000 square kilometres with an estimated projected population of 1,083, 653 people (KNBS, 2017). Administratively, the County is divided into seven Sub-Counties namely: Loima, Kibish, Turkana East, Turkana West, Turkana Central, Turkana South and Turkana North. The four main livelihood zones in the County are; pastoral all species, agro-pastoral, fishing and formal employment (Figure 1).

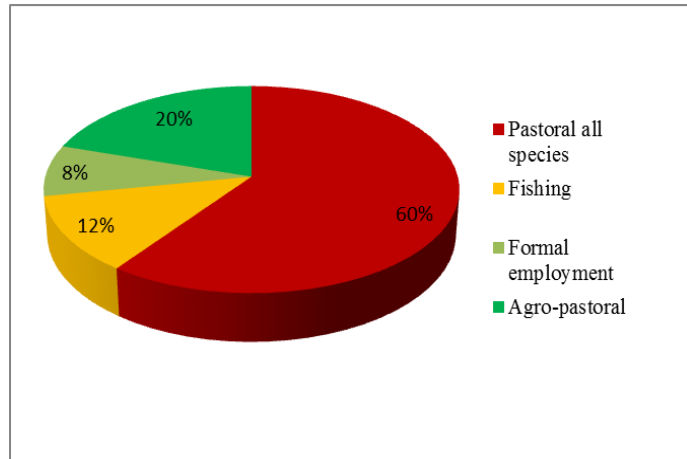


Figure 1: Population by Livelihood Zones

1.2. Objectives and Approach

The overall objective of the assessment was to develop an objective, evidence-based and transparent food security situation analysis following the long rains (March-April-May) season of 2017 taking into account the cumulative effect of the previous seasons; as well as provide recommendations for possible response options based on the situation analysis upon building consensus. The specific objective was to review existing data on the current situation analysis as provided by the sectors and determine the food security trends from previous seasons. The assessment methodology employed included an initial County status briefings which was conducted on Wednesday 5th of July 2017, presentation of sectoral checklists from agriculture, livestock, and water, education, health and nutrition sectors. In an attempt to have a quick assessment of field situation as well as ground truth the performance of the season, transect drives were organized and conducted for three days by three teams that were grouped thus: Team one (Turkana East and South); team 2 (Turkana West and Loima) and team 3 (Turkana North and Kibish), covering the pastoral, agro-pastoral and fishing livelihood zones. Specifically team one visited areas of Lokore and Kerio in Turkana East; and areas of Lokichar, Kalemorok and Kakong in Turkana South. Team two covered areas of Lokichogio, Lopurand Kalobeyei; and Loima, whereas team three toured (Kalokol, Lodekwi, Lokitaung, Sasame, Kurebur, Kolkrol, Koikar and Napak areas. During the transect drives, the teams collected sector-wide food security data using, community and household interviews, focus group discussions and key informant interviews. The review and analysis of primary and secondary data was analysed by Sub-County and livelihood zones. Further analysis was conducted using the integrated food security Phase Classification (IPC). A mission’s findings draft report on the current County food security situation was compiled on day six, seven and eight in readiness for dissemination during the final de-briefing in the County steering group (CSG) meeting on the Thursday of 13th July 2017. Deliberations during the final CSG informed the development of the County Food Security report for Long Rains of 2017.

2. DRIVERS OF FOOD AND NUTRITION SECURITY

2.1. Rainfall Performance

The county experiences bimodal rainfall patterns, characterized by two seasons of long and short rains. The long rains are the most significant to the county. Onset of the long rains was in the third dekad of March which was late by one week. According to the Meteorological department based at Lodwar town, Turkana County received 28 percent of total expected long rains precipitation. The County received between 25 and 75 percent of the normal rainfall. Temporal distribution was poor with much of the rains received in April only. Spatial distribution was even where areas of Turkana East and South received the least rainfall of between 25 and 50 percent of the normal and the rest of the county (Turkana North, Kibish, Turkana West, Loima, and Kerio) received between 50 and 70 percent of the normal (Figure 2). Cessation was normal in the third dekad of May.

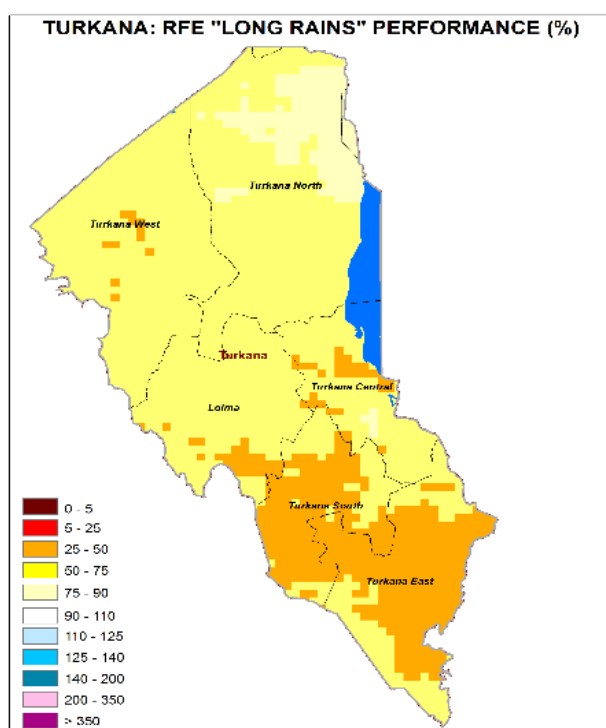


Figure 2: Rainfall Performance (% of Normal)

2.2. Peace and Security

Insecurity was reported in various parts of the county as a result of resource-based conflicts, raids, cattle rustling and also conflicts along the international borders with Ethiopia and South Sudan. Pasture, browse and water were inaccessible in areas such as Kainuk, Napak, Kibish and Todonyang' (Table 1). The livestock that had migrated towards the Ethiopian border in areas around Todonyang and Kibish could not access forage due to impending conflict with Merile and Toposa herders from Ethiopia and South Sudan respectively.

Table 1: Insecurity Hot Spots

Sub County	Insecurity	Livelihood zone
Kibish	International border	Pastoral
Turkana North	International border	Pastoral
Turkana West	Resource-based conflicts	Pastoral
Loima	Resource-based conflicts	Pastoral
Turkana Central	Resource-based conflicts	Pastoral
Turkana South	Resource-based conflicts/Cattle rustling	Agro-pastoral
Turkana East	Resource-based conflicts/ Cattle rustling	Agro-pastoral

2.3. High Market Prices

Most parts of the county experienced unprecedented high prices of food commodities especially maize which is a staple food. The situation was occasioned by unavailability of the commodities and where available, high cost of transport from Kitale and other sources. In some parts of Turkana North and Kibish areas the price of a kilo of maize and sugar was retailing at Kshs 150 and Ksh. 300 respectively. The high cost of food commodities further constrained household access to food.

2.4. Prolonged Drought

During the short rains of 2016 Turkana County received between 25 and 75 percent of the normal rainfall. The situation six months later remained the same with the County still received between 25 and 75 percent rainfall, although with slight improvement but still remains below normal.

3. IMPACTS OF DRIVERS ON ACUTE FOOD AND NUTRITION SECURITY

3.1. Availability

Food availability in Turkana County is related to livestock production in the pastoral-all species livelihood zone; crop production in the agro-pastoral livelihood zone as well fish products and cash income from the fishing livelihood zone. In livestock production, livestock ownership, milk availability, availability of forage and body condition are also considered. Key considerations under crop production include the number of hectares put under rain-fed or irrigated cropping as well as the total yield for the season. The pillar therefore takes in to account the available food stocks both at household level and supply of food commodities in the market.

3.2.1. Crop Production

Crop production contributes 60 and 40 percent to food and income respectively. The County is long-rains dependent accounting for approximately 70 percent of annual crop production. Maize, cowpeas and sorghum are the major crops grown where crop production is mainly practised in the agro-pastoral livelihood zone.

Rain-fed

The area under maize, sorghum and cow peas decreased by 67, 89 and 93 percent compared with the LTA respectively, due to delayed onset of rainfall which again had a false start and delayed distribution of planting seeds. Support from the County government with farm machinery and implements resulted in the opening of more hectares for planting but the poor rainfall performance presented a challenge. The crop yields declined by 98, 89 and 93 percents of LTA, for maize, sorghum and cowpeas respectively (Table 2) due to poor rainfall distribution in terms of space and time; which resulted in about 90 percent crop failure. Thus affecting household food availability and access and hence impacting negatively on food consumption for the agro-pastoral livelihood areas of Turkana East and Turkana South.

Table 2: Rain-fed crop production

Crop	Area planted during Short rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	2016 Short rains season production (90 kg bags) Projected	Long Term Average production during the Short rains season (90 kg bags)
1.Maize	58.4	1,740	730	34,800
2.Sorghum	264	2,360	6,600	59,000
3.Cow-peas (green leaf)	4	60	80 MT	1,200 MT

Irrigated-Cropping

Turkana County supports about 44 irrigation schemes that are spread along rivers Turkwel and Kerio in the pastoral and agro-pastoral livelihood zones. Out of these irrigation schemes only

26 are the active. The acreage under maize, sorghum and cowpeas declined by 77, five and 13 percents of LTA respectively (Table 3). The reduction in crop acreage was attributed to drying up of River Kerio and low recharge of River Turkwel hence farmers limited planting. Morulem for instance, did not plant at all due to the drying up of River Kerio. Other reasons included inadequate provision of drought tolerant certified seeds and agro-chemicals to farmers and dilapidated infrastructure of the irrigation schemes. In addition, farmers prioritized the planting sorghum because they had been promised a ready market by the county government. The maize, sorghum and cowpeas yields declined by 40, five and 13 percents of LTA respectively, due to the use of uncertified seeds and the infestation of the fall army worm, coupled with the reduced planting acreage. On-going off-season rains are likely to improve water recharge levels for enhanced irrigated cropping.

Table 3: Irrigated crop production

Crop	Area planted during 2016 Short rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	2016 Short rains season production (90 kg bags) Projected	Long Term Average production during the Short rains season (90 kg bags)
1. Maize	1,687	2,200	33,715	84,000
2. Sorghum	131	2,800	3,275	70,000
3. Cowpeas (green leaf)	16	120	64 MT	480 MT

Maize Stocks

The current total stocks held by households, Traders, Millers and the NCPB were 20 percent of the LTA (Table 4); and are expected to last for less than a month, which is below normal. Households in the agro-pastoral livelihood zone held nine percent of their normal stocks which mainly constituted left-over stocks from the short rains season-under irrigated cropping. Stocks held by millers decreased by 33 percent of LTA which was attributed to poor own-production, decreased maize imports from Kitale and other counties and across the border of Uganda. Farmers in the irrigation schemes realized low acreages and hence poor yields due to the low river recharge levels resulting in poor crop harvest for the previous short rains season. However, households in the pastoral-all species and fishing livelihood zones held no stocks at household level and were mainly depending on markets.

Table 4: Maize stocks

Maize stocks held by	Quantities of maize held (90-kg bags)	Long Term Average quantities held (90-kg bags) at similar time of the year
House Holds	603	6,550
Traders	6,755	33,775
Millers	1,670	5,020
NCPB	0	0
Total	9,028	45,345

3.2.2. Livestock Production

The performance of long rains is of particular importance for livestock production since it influences the rate of pasture and browse regeneration as well as the recharge rate of open water sources which provide water for livestock. The level of precipitation determines the growth of annual and perennial pastures fields for sustainable range grass productivity and hence sustainable livestock production-especially during the long rains. Livestock production is a major livelihood in Turkana County as it provides milk and meat; and also a significant source of income (Table 5).

Table 5: Contribution of livestock production to income

Livelihood zone	Percent Contribution to Income
Pastoral	91
Agro-pastoral	25
Fishing	18

Forage Condition

Forage condition was fair to poor across all the livelihood zones as shown in Table 6 below. The pasture condition in the pastoral livelihood zones was poor but fair in the agro-pastoral and fishing areas. High land surface temperatures in the county accelerated the drying up of the pasture and open water sources. Available pasture is expected to last for 1-2 months until August across all livelihood zones which is below normal of up to September/October during the onset of the short rains. Early scarcity is likely to trigger earlier than normal migrations across the county. On-going off-season rains are likely to improve forage situation slightly.

The current browse condition was fair in the pastoral zone and good in the agro-pastoral and fishing zone which is below normal. Available browse was projected to last 2-3 month until end of September. Although browse conditions were near normal in the agro-pastoral livelihood zone, it is likely to be depleted earlier than normal because of intra-county migration. Crop residues were not available from the agro-pastoral and irrigated areas due to low river recharges following the below-normal rains experienced in the County. Access to forage was limited by inter-community conflicts (Turkana, Samburu and Pokots) and insecurity along the international borders of Ethiopia and South Sudan.

Table 6: 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	Poor	Good	1.5	4	Insecurity	Fair	Good	3	4	Insecurity
Agro-pastoral	Fair	Good	2	4	Insecurity	Good,	Good	3	4	Insecurity
Fishing	Fair	good	1	3	insecurity	good	good	2	4	insecurity

Livestock Productivity

Livestock Body Condition

Livestock body condition was good to fair across all the livelihood zones compared to good during normal seasons. However, the condition of cattle in the pastoral zone deteriorated due to increasing trekking distances to water points as well as decreasing watering frequency (Table 7). Forage and water situation is expected to deteriorate with progressing dry spell resulting in decreased livestock prices for the pastoralist households who rely on markets for food commodities. The long rains season is usually the season for peak lambing and kidding across all livelihood zones. Low birth rates were reported since most of the livestock were recovering from the prolonged drought in the previous season thus affecting household milk availability. Most of the livestock had conceived and high birth rates are expected in the next 1-2 months thus improving household milk availability.

Table 7: Livestock Body Condition

Livelihood zone	Cattle		Sheep		Goat		Camel	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	poor,	Good	Fair	Good	fair	Good	Fair,	Good
Agro-pastoral	Fair	Good	Fair	Good	Fair	Good	Fair	Good
Fishing	Fair	Good	Fair	Good	Good	Good	Good	Good

Tropical Livestock Units (TLUs)

Livestock ownership (TLUs) declined by 50 and 30 percent across all livelihood zones for the poor and middle-income households respectively compared with the normal (Table 8). The situation is projected to remain stable for the next 1-2 months as the delayed kidding and lambing season begins.

Table 8: Tropical Livestock Units (TLUs) by Households

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	5	10	30	50
Agro-pastoral	3	5	10	15
Fishing	2	4	7	10

Milk Production and Consumption

Households in the pastoral areas are mainly relying on milk from goats and camel. The average household milk production per day was 40 percent of LTA (Table 9). Households consumed all the milk that was produced. Milk consumption declined by 30 percent compared with LTA. Households continued to rely on powder milk from retail shops to supplement milk supply gaps. Powder milk was retailing at Kshs 20 per teaspoon and afforded by only a small proportion of households.

Table 9: Milk Production, Consumption and Prices

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	1	4	1	3	N/A	60
Agro-pastoral	2	3	2	2.5	N/A	60

Fishing	< 0.5	2	< 0.5	2	N/A	60
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Migration

Early intra-county livestock migration was reported where livestock moved to dry season grazing areas in search of forage and water from Turkana West to Loima sub-county and from Turkana North and the areas around the lake to Kibish sub-county. The migration was also triggered by prevailing insecurity along the borders with Baringo Samburu and West Pokot counties. Pastoralists moved towards Loriu hills, Lochakula and Kakong, Loima hills, Kotaruk, Kalapata plains and from Kibish to Liwan, and Lokamarinyang. Livestock were also migrating across the international borders to Uganda which was normal for this time of the year. Migration towards Southern Sudan and Ethiopia was limited due to impending conflicts along the international borders, which limited access to forage and water in Todonyang, Kibish and Napak. The major reasons for the migration included insecurity and the search for forage and water. An estimated 50 percent of livestock have out-migrated which is abnormal for the season. The migrations were abnormal in pattern, routes and in the timing since they started earlier (May/June) than normal (September/October).

Livestock Diseases and Mortalities

The main livestock diseases reported were, Foot and Mouth Disease (FMD), lumpy skin disease (LSD), Sheep and Goat Pox and Contagious Caprine Pleuro-Pneumonia (CCPP), Contagious Bovine Pleuro-Pneumonia (CBPP), and Trypanosomiasis.

An advance county-wide livestock vaccination against FMD, PPR, and sheep/goat pox was conducted before the onset of the migrations. The reported mortality rates for the season were low and within the normal ranges.

Water for Livestock

The main water sources for domestic and livestock are rivers, springs, pans, dams and boreholes. The quantity and quality of water declined in all the livelihood zones as a result of decreasing water levels. Most of the open water sources dried up during the season thus reducing the availability of water for livestock across all the livelihood zones (Table 10). The water levels in the major rivers (Turkwell and Kerio) were quite low and could not flow downstream which affected water availability in the agro-pastoral livelihood zone. Water availability is projected to last for up to 3 months across all the livelihood zones (Table 10). Return trekking distances increased by 50 percent of normal, thus reducing watering frequency by one day across all the livelihood zones. Areas of Kakong in Kainuk Ward recorded the highest return trekking distances. Some off-season precipitation experienced for 2 days in the 1st dekad of July improved significantly (> 50 %) water situation.

Table 10: Water for Livestock

Livelihood zone	Return trekking distances (Km)		Expected duration to last (Months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
Pastoral	15	6	2	3	Once/2 days	Daily
Agro pastoral	10	4	3	4	Once/2 days	Daily
Fishing	5-15	1-3	Throughout	Throughout	Once/2 days	Daily

3.2. Access

Access to food is dependent on household purchasing power. The access pillar is built around household income sources from productive assets, fluctuation of market prices of livestock and

food commodities, domestic water supply and food security outcomes namely food consumption score and coping strategy index-consumption related.

3.2.1. Markets

Market Operations

Most trading activities are concentrated in the main livestock and foodstuff markets in the county which include Lokitaung, Kakuma, Turkwel, Lokichoggio, Lorugumu, Lokichar and Lodwar town. Others include Kerio and Kalokol situated in the fishing livelihood zone. All markets were functioning with free access and flow of commodities into and out of the county. Insecurity in Turkana East and Turkana South limited access to food commodities. The main source of food was Kitale town, although some commodities were brought in from neighbouring Ethiopia and Uganda particularly in Kakuma. Markets were well provisioned with staples which included maize, beans, sorghum and meat. Although the markets were well provisioned with maize, the supplies were low and the demand was high increasing the price. Traded volumes were normal for the season. Market purchases are an important source of food. The declining livestock prices which reduced income from livestock production, eroded the purchasing ability for food, thus limiting food access among the pastoral and agro-pastoralists households.

Maize prices

The pastoral livelihood zone recorded highest prices whilst the fishing and agro-pastoral livelihood zone reported the lowest. Average maize prices per kilogram (kg) were 33 percent higher than the LTA and 18 percent higher than same period in 2016 (Figure 3). The lowest maize prices (Kshs 60) were recorded Loima sub-county due to importation from Uganda, whereas Turkana North and Kibish registered the highest prices of Kshs 150 per kg. The higher-than-average prices were attributed to the fact that maize stocks were low in the county, local availability from Kitale was low and high transportation cost. The prices were expected to decrease significantly in the next 2-3 months (by September) following harvest from the main source in Kitale.

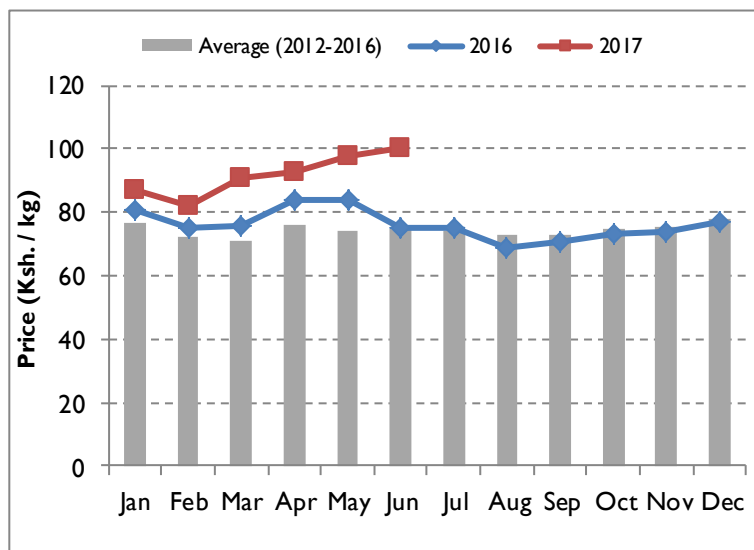


Figure 3: Maize Price Trends in the County

Goat prices

Goat prices remained similar to the County LTA (Kshs 2370) but decreased by 22 percent compared with similar period in 2016 (Figure 4). The situation was attributed to the poor livestock body condition following the prolonged drought. Few livestock were available for sale due to massive migration and emaciation; and as such traders placed limited demand. The prices were highest (Kshs 3,000) in the fishing and agro-pastoral livelihood zones and lowest (Kshs 1,500) in the pastoral livelihood zone. Goat prices were likely to increase as their body condition is projected to increase due to the improving availability of browse across all the livelihood zones. The situation is attributed to the on-going off-season precipitation across the County.

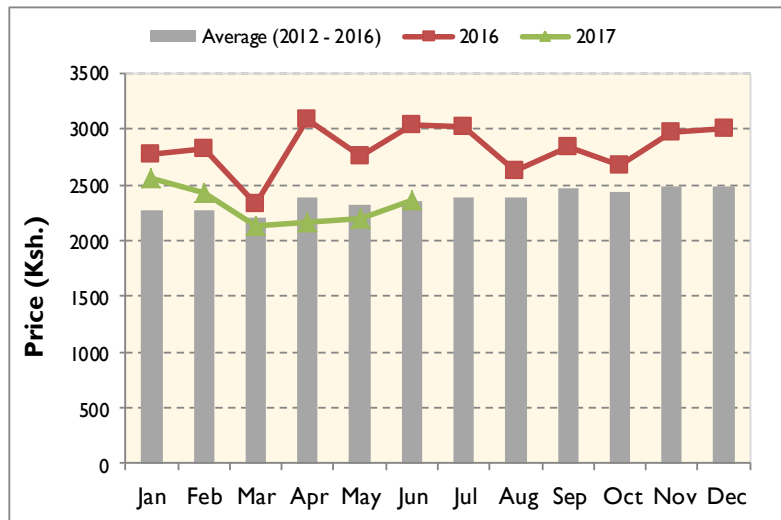


Figure 4: Maize Price Trend in the County

Terms of trade

The terms of trade (ToT) declined by 23 percent compared with the LTA (Figure 5). The observed decrease was due to significant increase in maize prices and sharp decrease in goat prices in January to June 2017. The Terms of Trade (ToT) were not favourable to livestock producers since the sale of a goat could purchase 21kg of maize compared with LTA of 31kg. Following the on-going off-season rains and recovery of livestock body conditions which promises good livestock prices, as well as the anticipated maize harvests from Kitale and imports from Uganda, the ToT are expected to improve marginally.

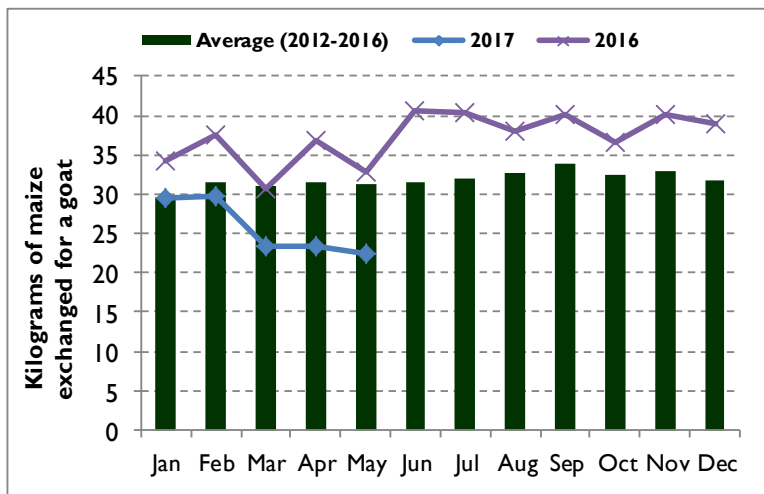


Figure 5: Terms of Trade in the County

3.2.2. Income Sources

The main sources of income in the county include livestock and food crop production, fishing and casual waged labor (Table 11).

Table 11: Main Sources of Income

Livelihood zone	Percent contribution to income			
	Livestock production	Food crop production	Casual labour	waged Fishing
Agro-pastoral	25	40	3	1
Pastoral	91	-	-	-
Fishing	18	-	10	54

However, households resorted to other sources of income at the time of the assessment which included the increased sale of charcoal, basketry, petty trade and the sale of firewood. Livestock production, the main source of income for the majority of the population, had significantly reduced making households to resort to other sources of income.

3.2.2. Water access and availability

The major sources of water for domestic and livestock uses within the county were boreholes, shallow wells, hand dug wells, earth pans and rivers. Meanwhile the poor performance of the long rains impacted on the water sources negatively. Surface water facilities like pans and dams were less than 50 percent recharged and the yield of ground water facilities was poor. Nevertheless, due to July showers most earth pans harvesting water from the lagas experienced between 70 and 80 percent re-charge and are expected to last up to end of August 2017. However, River Kerio did not gain much from the July showers and hence remained dry. Recharge levels of River Turkwel remained lower than normal and hence abstraction for irrigation hampered downstream water flow.

Table 12: Water Availability

Ward / livelihood zone	Return Distance to Water for Domestic Use (Km)		Cost of Water at Source (Ksh. Per 20litres)		Waiting Time at Water Source (Minutes)		Average Water Consumption (Litres/person/day)	
	Normal	Current	Normal	Current	Normal	Current	Normal	Current
Pastoral	12	18	5	5	50 mins	60 Mins	20	10
Agro Pastoral	6	10	5	5	30mins	60 mins	40	20
Fisher-folk/Lake zone	10	14	10	20	40Mins	60mins	20	10
Urban	2	4	5	5	30mins	60 mins	40	20

Distance to water sources

The current average return distances to domestic water points are 18, 10 and 14 kilometres compared to 12, 6 and 10 kilometres normally in pastoral all species, agro pastoral and Fisher-folk livelihood zones respectively. The average returns trekking distance for the county is 15 kilometres. Waiting time is 60 minutes in all the livelihood zones compared to the normal 40 and 30 minutes Fisher-folk and Agro pastoral zones respectively. For the pastoral zone, waiting time remained the same.

Cost of water and Consumption

The current cost of water (20 litre jerrycan) is the normal Ksh 5 in all the livelihood zones except Fisher-folk livelihood zone where the cost of water is at Ksh. 20 instead of the normal Ksh. 10. The average consumption in the county is 10 litres per person per day in the pastoral

and fisher-folk livelihood zones and 20 liters per person per day in agro pastoral and urban zones.

3.2.4. Food Consumption

The county faces food consumption gaps with increased number of households falling under poor food consumption score. In Kibish, about 51.3 percent of the households were at poor food consumption. Other regions in the county with more than 30 percent of the household scoring poor food consumption during the month of June were Loima, Turkana North and West. According to NDMA data Pastoral Livelihood Zone was most affected in the month of June having more than 70 percent of the households falling under poor food consumption, while the percentage of households falling under acceptable food consumption was below 30 percent across all livelihood zones. The current situation implies that most of the households were taking only staples and vegetables.

3.2.4. Coping strategy

The mean coping strategy score in June, 2017 was at 21.21 as compared to 21.88 same period 2016 according to 2017 SMART survey. According to World Food Programme (WFP) June 2017 FSOM reports about 55 percent of the households in Northwest Pastoral were employing emergency coping strategies while 22 percent employing crisis coping strategies. Most households reported taking one meal per day and in some cases would skip a full day without a meal. It is reported that more than 30 percent of the children living with other households do so because of lack of access to food in the county, with Turkana West and North leading with 68 and 45 percent respectively. Turkana South and North reported 18 and 22 percent respectively of the hosted children is because father and mother left.

3.2.5. Dietary Diversity

The diet for most of the households was predominantly composed of cereals, pulses, oils and sugar. Households in Turkana East especially around Lokore area reported depending on boiled maize most part of March due to heightened insecurity during that month. Consumption of meat and meat products and vegetables has reduced due to sustained drought in most part of the county. Meanwhile the county government, NDMA and FAO have responded with livestock slaughter off-take programme that occasionally provides households with meat.

3.3. Utilization

3.3.1. Health and Nutrition

Morbidity and mortality patterns

According to Kenya Health information system (DHIS) report, the top five common diseases for under-fives and the general population across all livelihood zones were: Upper respiratory tract infections (URTI), diarrhoea, malaria, eye infection and diseases of the skin. From the Turkana County Standardized Monitoring Assessment of Relief and Transition (SMART) survey conducted in June 2017, respiratory tract infections were reported to be the leading cause of children illness two weeks prior to the survey followed by fever with malaria and then diarrhoea across the entire county as shown in (Fig 6).

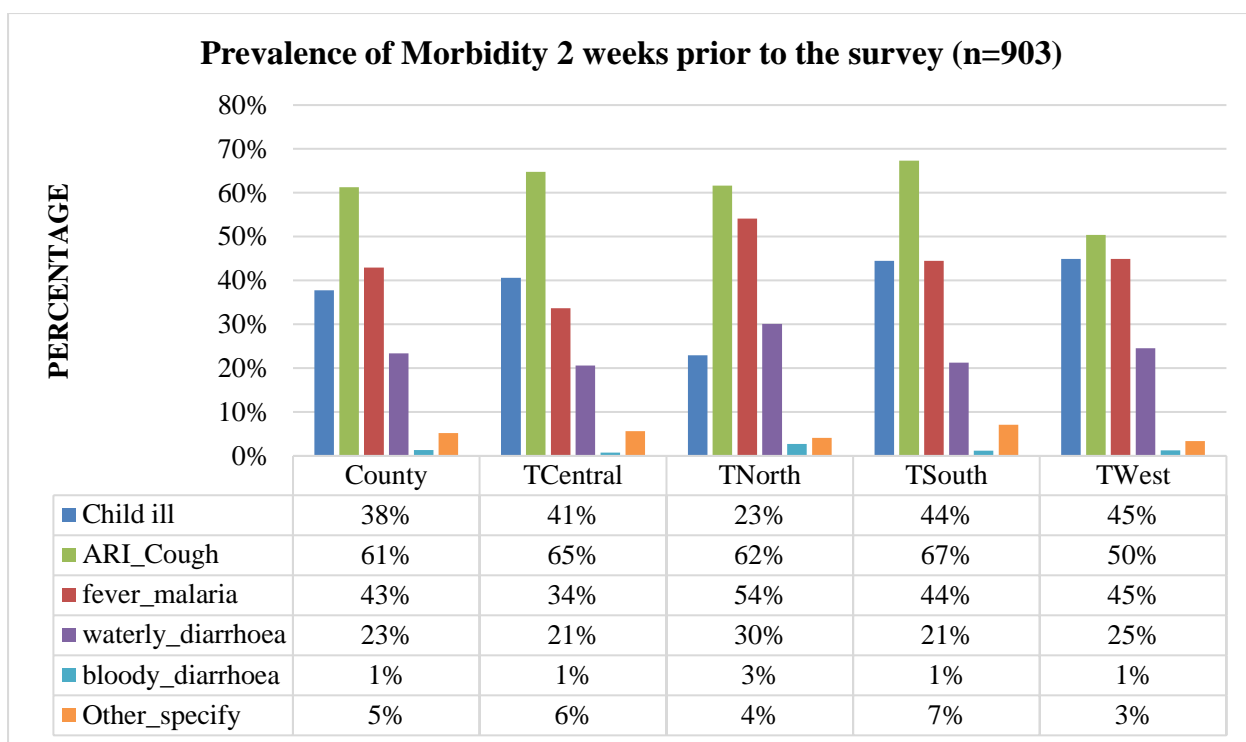


Figure 6: Prevalence of Morbidity in the County

Table 13 details the crude mortality rate (CMR) and under-five mortality rates (U5MR) which were within the normal threshold except for Turkana North where CMR was reported to be at alert as shown in the table below. Most of the deaths reported in Turkana North were for adults and majorly caused by injuries due to attacks

Immunization and Vitamin A supplementation

According to Turkana June 2017 SMART survey the coverage of BCG in Turkana County is performing well with more than 95% of children having received the vaccine as confirmed by scar across all Sub Counties except Turkana West which had 89%. Oral Polio Vaccination (OPV) coverage for OPV1 and OPV3 is 94% and 87% respectively for the County (Figure 7) which is above the national target of 80 percent. Measles vaccination at 9 and 18 months is 84.8 percent and 8.8 percent respectively indicating a low uptake of measles at 18 months. The high coverage is attributed to various immunization campaigns including polio and measles campaign carried out by the ministry of health in collaboration with partners.

Vitamin A supplementation for children aged 6 to 59 months is 52% percent which is below the national target of 80 percent. The low Vitamin A supplementation is attributed to non-attendance of child welfare clinic after the measles vaccine at 9 months and poor data management on vitamin A logistics.

Table 13: Mortality Rates

Sub county	CMR	U5DR
Turkana North	1.18 (0.72-1.92)	0.42 (.10-1.79)
T. Central	0.48 (0.28-0.84)	0.6 (0.18-1.95)
T. South	0.45 (0.24-0.85)	0.17 (0.02-1.23)
T. West	0.73 (0.38-1.41)	0.39 (0.10-1.55)
Alert	Alert ; 1/10,000/day	1/10,000/day
Emergency	Emergency; 2/10,000/day	4/10,000/day

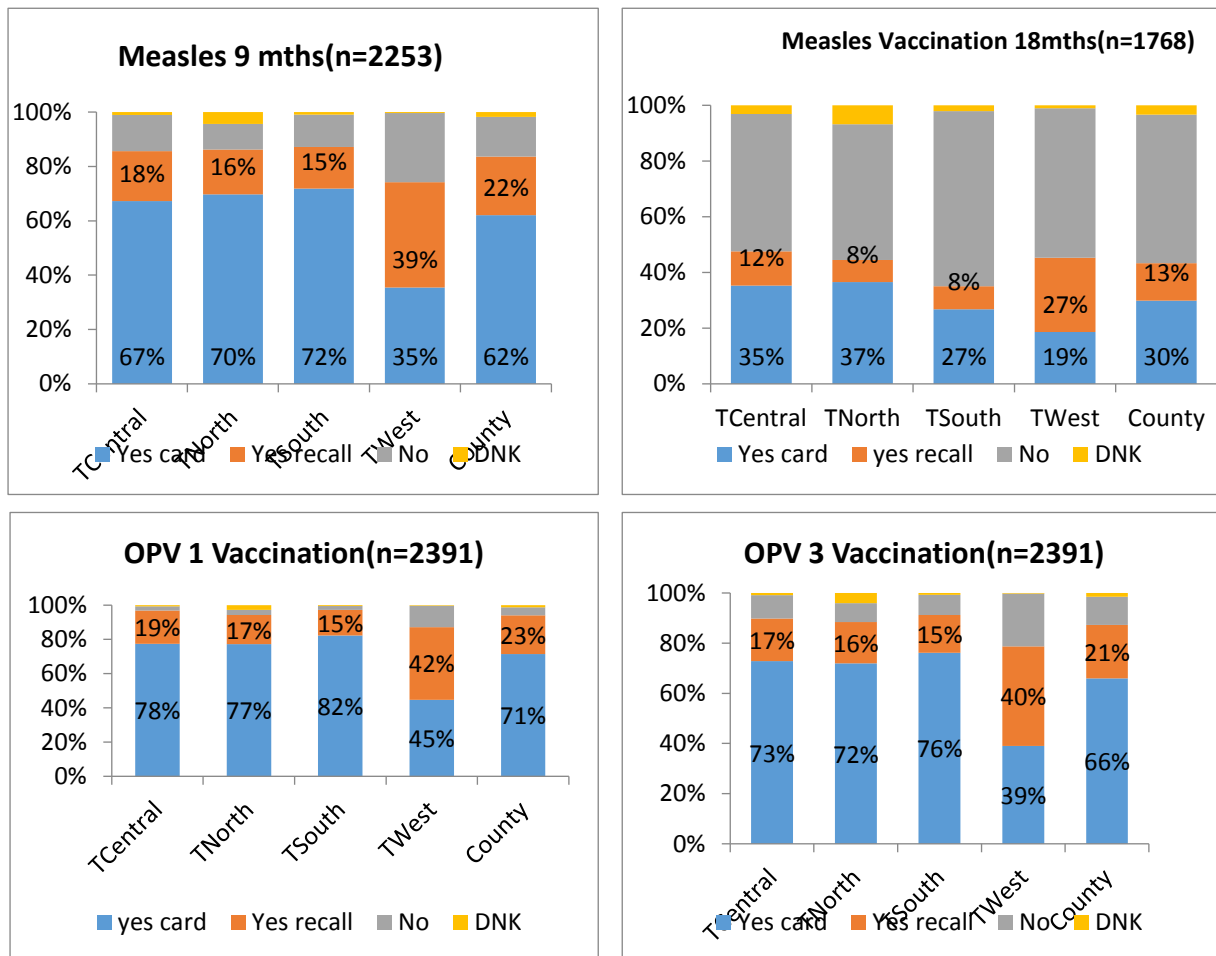


Figure 7: Immunization Coverage

Nutrition Status

The proportion of children under five years at risk of malnutrition, based on mid upper arm circumference (MUAC) of < 135 mm, was at 15 percent in June 2017 almost the same as it was last year the same time but below the LTA as illustrated in Figure 8. However, there was increased admissions trend for severe acute malnutrition (SAM) and Moderate acute malnutrition (MAM) children into outpatient therapeutic program (OTP) and supplementary feeding program (SFP) compared with same period in the last two years. The increase in the number of admissions is attributed to the scaling up of nutrition interventions in the county such as increasing the coverage of outreach sites and conducting

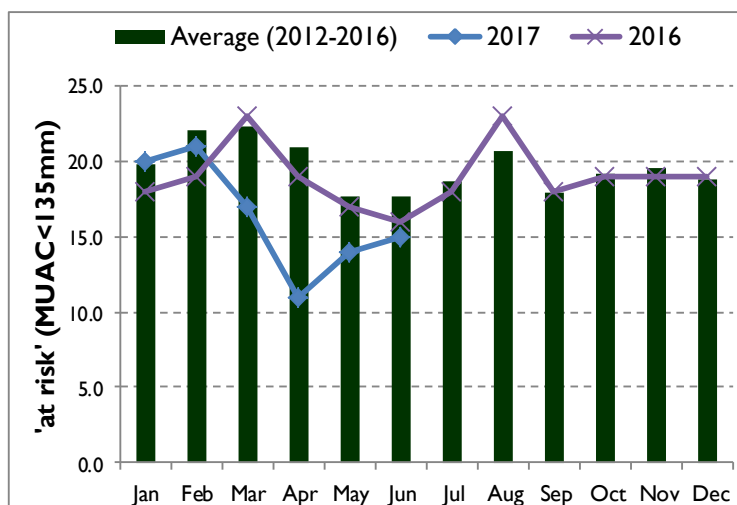


Figure 8: Proportion of Children at Risk of Malnutrition

mass screening. More so the prolonged drought has affected the livelihood of the community resulting to food insecurity at household level.

According to the SMART survey done in June 2017, the nutrition situation of children U5 is extremely critical (GAM>30 percent) with Turkana South recording the highest Global Acute Malnutrition (GAM) rates at 37 percent with severe acute malnutrition (SAM) rates of 12%. Turkana West recorded significant deterioration from 14 percent reported in SMART June 2016 to 24 percent in June 2017. The trend of GAM levels as from 2010 is as shown in Figure 9.

3.4 Trends of key food security indicators

Table 14: Food Security Trends

Indicator	LRA, August 2016	SRA, Feb 2017	LRA, July 2017
% of maize stocks held by households (agro-pastoral)	47	68.3	9
Livestock body condition	Good	Poor	Fair to poor
Water consumption (litres per person per day)	30-40	10-20	10-20
Price of maize (per kg)	69	100.4	100
Distance to grazing (km) by livelihood zone	5-9	5-15	Pastoral: = 15 Agro-pastoral = 10 Fishing = 3-15
Terms of trade	38	28	21
CSI-FCS-based	25 (Dec 2015) – 21.06	19 (Dec 2016) – 21.88	21.21
CSI-livelihood-based		41	55
Food consumption score (percent)	(Nov 2016)-SMART Survey Poor = 3 Borderline = 27 Acceptable = 70	(Jan 2017)-SMART Survey Poor = 22 Borderline = 32 Acceptable = 47	(June 2017)-SMART Survey Poor = 26 Borderline = 24 Acceptable = 50
GAM rates (%)	23	24	31

3.4. Education

Enrolment

According to the June 2017, SMART survey, the enrolment of the children of school going age stands at 71.5 percent in the county. Turkana West had the least percentage of school going age children enrolled in school at 60.2 percent while Turkana South had the highest at 82.8 percent (Table 15). Enrolment in primary schools has been affected by migration. While other schools have reduced enrolment others are overcrowded. Turkana West has experienced migration from Lopur area to Oropoi, while in Turkana East and South where households have migrated towards the hills where there are no nearby schools; the children accompanying their parents have stopped learning for a while. The migration has affected more the boy child than the girl child. Further, the enrolment for girls has always been below 50 percent generally across the county due to cultural practices of dowry weighting. However, the effect of drought has complicated the matter for the girl child. During community interview at Kakong in

Turkana South, some girls confided that they are out of school after they were stopped by the parents to attend to household chores (that include fetching water, selling charcoal and taking care of their younger siblings)

Table 15: Enrolment and School Meals Programmes

Name of Sub counties	No. of Schools	RSMP	
		Boys	Girls
Turkana Central	84	18,109	15,839
Turkana South	98	22,811	18,416
Turkana North	43	6,402	5,457
Turkana West	59	10,575	8,425
Turkana East	37	8,773	8,094
Loima	64	9,174	8,150
Kibish	11	2,204	1,458
Totals	396	78,048	65,839

Transition and Dropout Rates

Transition rate from ECD to primary is almost 100 percent, at this age parents are still not very keen on their children taking active role in household chores, however, transition rate from primary to secondary school drops to about 70 percent. Transition rate for boys and girls from primary to secondary schools is about 60 and 40 percent respectively. Pastoral livelihood zone is the most affected by low transition rate. Low transition rate is largely attributed to lack of school fees due to low livestock prices and crop production failure (for households which depend on food supplies to schools for fees). Transition from primary to secondary has also been affected by cultural practices where older boys and girls are withdrawn from school to take care of the livestock and house chores respectively.

School Meals Programme

All schools in Turkana County are beneficiaries of School feeding programme either through Cash Transfers to Schools (Turkana West, North and Kibish) or regular School Feeding Programme (Turkana South, East, Central and Loima). The school feeding however is affected by water shortage in schools, where children walk long distances to the river beds and dig shallow wells to get water for their school feeding.

4. FOOD SECURITY PROGNOSIS

4.1. Assumptions

- Rainfall performance-the 2017 short rains are likely to be below normal
- Peace and security-resource based conflicts are expected to scarlet as the dry spell progresses
- Market prices-livestock prices expected to decline while food prices increase
- Drought-the ongoing drought is expected to worsen

4.2. Food security outcomes for August, September and October

Food security situation across all livelihood zones is expected to deteriorate further given that there is very little harvest expected. Pasture and browse conditions are likely to deteriorate as the dry spell progresses. The off season precipitations are expected to stabilize water situation for the next 1-2 months up to end of September. Food prices are likely to remain high but stable following maize harvests in Kitale, while livestock prices likely to deteriorate further with

expected increased trekking distances to water sources. Terms of trade likely to decline further with further deterioration of livestock body condition due to long trekking distances and deteriorating pasture and browse. Food consumption gaps are likely to continue with more households expected to fall under poor and border line food consumption. The proportion of households employing emergency coping strategies is likely to increase.

4.3. Food security outcomes for November, December and January (2018)

With short rains projected to be below normal, food security outcomes are likely to get worse. The effect of the onset is likely to be seen in regeneration of pasture and browse if the onset is timely and with good temporal distribution. However, this may not last long since the amounts expected will not be enough. Livestock body condition is not likely to improve significantly and this shall also impact on milk production and consumption as well. Livestock market prices are expected to improve slightly thus leading to an improvement in the terms of trade and thus improve access to food. Some slight improvement in water availability and access is expected across the livelihoods following the onset of the short rains. Milk production is expected to increase slightly thus, improving the nutrition status of the under-fives. Crop production is not likely to improve, the county is likely to experience further reduction in acreage covered under agriculture both for rain fed and irrigated agriculture. The projected scenario is likely to stabilize food consumption gaps and consequently result in fewer households employing emergency coping strategies, and hence a slight decline in GAM rates. Nevertheless, the slight improvement in food security is not likely to last long and hence more households likely to go back to food consumption gaps. Resource based conflicts are likely to continue due to the prolonged drought.

5. CONCLUSION AND INTERVENTIONS

5.1. Conclusion

Food security situation in Turkana County has been affected by prolonged drought occasioned by below normal performance of rainfall in two successive seasons, food consumption gaps with more than 30 percent of the households falling under poor food consumption category, insecurity that occasionally restricts movements hence limiting access to food commodities and high food prices.

5.1.1. Phase Classification

Turkana County is classified as ‘Crisis’ (IPC Phase 3) with parts of Turkana Central Sub-Counties classified as “Stressed” (IPC Phase 2). Factors to monitor include; Price of food commodities, Insecurity, Access to forage and water, food consumption patterns, and Child nutrition status.

5.1.2. Summary of Findings

Two major drivers of food insecurity in the county are poor rainfall performance and insecurity. The county received between 25 and 75 percent of the normal rainfall with late onset and poor temporal distribution. This followed equally poor performance of rainfall during short rains (in October, November and December 2016). This resulted to poor yields of major water sources including some drying up. Insecurity in some parts of Turkana North and South restricted both human and livestock movements limiting accessibility to pasture, water and food commodities, thus high prices of food commodities where and when accessibility was possible

There are very low productions expected for both the rain-fed and irrigated agriculture across the livelihood zones. The county is also characterized by low stocks held at households and by

traders. Turkana as a county does not have any stocks in the national grain reserve (NCPB). There was a decline in food consumption score and coping strategies leading to high GAM rate. There was an increase in admission of under-fives in the supplementary feeding programmes.

Key factors to monitor include; resource based conflicts, high food prices, pasture and browse condition, water availability and accessibility and malnutrition rate. Areas to monitor closely include; Kibish, Turkana North (Nadapal) and Turkana East (Lokore area) for insecurity, areas around Kerio for lack of pasture and water and Turkana West and Loima for fast declining nutrition status.

Table 16: Sub-County Ranking

Sub-counties	Rank	Comments
Turkana East	1	Low rainfalls, Long distances to water source, Insecurity, Higher food prices, Kerio river dry, No crop production, Low livestock prices, GAM Rate 37%
Turkan South	2	Low rainfalls, Long distances to water source, Insecurity, Low crop production, Low livestock prices, GAM Rate 37%
Kibish	3	Insecurity, Long distances to water sources, Higher food prices, GAM rate 32.6%
Turkana North	4	Insecurity, Long distances to water sources, Higher food prices, GAM rate 32.6%
Turkana Central	5	Nearness to urban center, access to casual jobs, access to water trucking, food availability, low rainfalls, GAM rate 31.4%
Turkana West	6	Lower food prices, food availability, access to casual jobs in the camp, good infrastructure, GAM rate 24.9%
Loima	7	Lower food prices, food availability, access to casual jobs in the camp, good infrastructure, GAM rate 24.9%

5.2. On-Going Interventions

Table 17: Food Interventions

Sub county	Intervention	Number of beneficiaries	Implementers
All the Sub counties/primary schools	School feeding programme	143,887	WFP
Turkana West, North, Loima, Central and South	Food for Asset	12166 households	WFP
All the sub counties	Hunger Safety Net Programme (Cash transfers)	Emergency: 98,170 households	NDMA
		Regular:39,918 households	NDMA

Table 18: Non-Food Interventions

Intervention	Objective	Specific Location	Activity target	No. of beneficiaries	Implementation stakeholders
Health					

Intervention	Objective	Specific Location	Activity target	No. of beneficiaries	Implementation stakeholders
Vitamin A Supplementation	Improve the micronutrient status of the community-hence food security	All Locations	All Locations	148,338	MoH, SCI, UNICEF, GAIN, Aphia Plus, GIZ, AMREF
Management of Acute Malnutrition (IMAM)-U5	The OTP and the SFP products – food supplements improve/adjust the nutrient status of the affected community.	All Locations	All Locations	31,448	MoH, SCI, UNICEF, GAIN, Aphia Plus, GIZ, AMREF
IYCN Interventions (EBF and Timely Introduction of complementary Foods)	A community with good or high rates of MIYCN status means that the morbidity and mortality rates will be low hence they will be more productive on their day to day activities hence improved food security.	All Locations	All Locations	148,338	MoH, SCI, UNICEF, GAIN, Aphia Plus, GIZ, AMREF
Iron-Folate and Zinc Supplementation among Pregnant Women	Improve the Micronutrient status of the community-hence food security	All Locations	All Locations	22,348	MoH, SCI, UNICEF, GAIN, Aphia Plus, GIZ, AMREF
Deworming		All Locations	All Locations	133,200	MoH, SCI, UNICEF, GAIN, Aphia Plus, GIZ, AMREF
Water					

Intervention	Objective	Specific Location	Activity target	No. of beneficiaries	Implementation stakeholders
Routine Repair, maintenance and rehabilitation of broken down water points/systems/sources	Improve availability of water	All wards/water points with Breakdowns issues	All wards	Over 500,000	Turkana County Government
Water trucking	Improve availability of water	Areas without permanent source and water stress issues are high	All wards	Over 150,000	Turkana County Government
Distribution, supply and installation of plastic water tanks.	Improve availability of water	Areas facing water problems and without storage facilities.	All wards	Over 150,000	Turkana County Government
Purchasing of water supply maintenance tools	Improve availability of water	All wards/water points with Breakdowns issues	All wards	Over 100,000	Turkana County Government
Livestock					
Supplementary feed distribution	Increase milk production	TURKANA EAST, Kibish	Turkana North	2000 households	National government (NDMA) County government
Emergency livestock feeds	To improve body condition	Turkana Central, Turkana South	Turkana South and Central	13718 households	National government (NDMA) County government
Agriculture					

Intervention	Objective	Specific Location	Activity target	No. of beneficiaries	Implementation stakeholders
Crop surveillance and control (FAW)	Improved food security	County-wide	County-wide	All farming sites	Farmers, Dept of Agriculture, TCG
Land preparation	Improved food security	T/South, T/East, T/Central & Loima	T/South, T/East, T/Central & Loima	Irrigation schemes (2000)	Farmers, Dept of Agriculture, TCG
Seed procurement and distribution	Improved food security	County-wide	County-wide		Farmers, Dept of Agriculture, TCG
Provision of extension services	Improved food security	County-wide	County-wide	All farming sites	Farmers, Dept of Agriculture, TCG

5.3. Recommended Interventions

Table 19: Sectoral Immediate Recommended Interventions

Immediate recommended Interventions							
Sub County/ Ward	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Water							
All wards	Upgrading of water facilities run by diesel engine with solar powered system.	All water facilities run by Generators	Over 50,000	TCG, NGOS	Funds	TCG	Ongoing
All wards	Purchasing of water supply maintenance tools	RRT	OVER 20,000	TCG, NGOS	Funds	TCG	Ongoing

All wards	Construction of more water pans	1/ward	50,000 livestock	TCG	54M	TCG	Planned
All wards	Drilling and equipping of boreholes	2 per every ward	Over 500,000	Turkana County Government	Funds	TCG	Planned
All wards	Formation and conducting capacity building of WUAs and WRUAs	Every ward	Over 100, 000	TCG			Planned
Livestock							
TURKANA EAST	Pasture reseeding	All the affected areas	1000	Dept. of livestock production TCG			
	Destocking	All the affected areas	5000	Dept livestock production			
Turkana Central	Livestock off take	All the affected areas		TCG(M oPEF)			
Turkana South	Livestock off take	All the affected areas		TCG(M oPEF)			
Kibish	Pasture reseeding	All the affected areas	1000	TCG/ Dept.Livestock production			
All Sub counties	Destocking	All the affected areas	5000	TCG/ Dept.Livestock production			
All sub counties	Accelerated offtake	All the affected areas	1000	TCG/M oPEF Community			
Agriculture							

County-wide	Crop surveillance and Pest control (FAW)	All farming sites	All farming sites				
County-wide	Assist farmers with land preparation & farm inputs	All farming sites	All farming sites				
T/East, T/Central, T/South, Loima	Desilting & Rehabilitation of dilapidated irrigation infrastructure						
	Kakwanyang, turkwel, morulem, Irrigation Schemes						
Education							
County wide	Feeding programme for the ECD	All the wards		County Government			
County wide	Enrolment drive	All the wards					