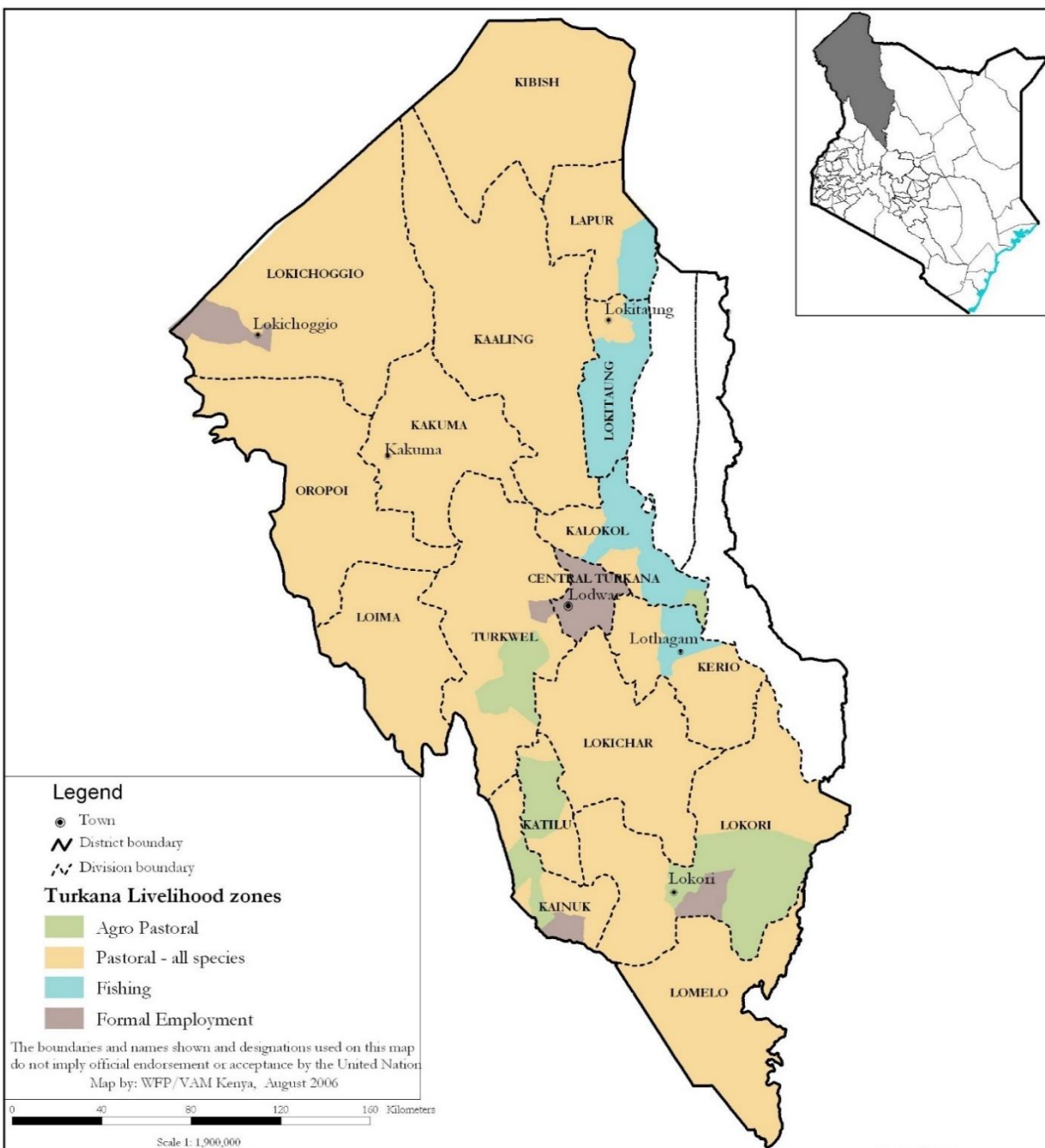


TURKANA COUNTY

2023 LONG RAINS FOOD AND NUTRITION SECURITY ASSESSMENT REPORT



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

July 2023

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EXECUTIVE SUMMARY

Food and nutrition security assessment is a multi-sector and multi-agency bi-annual exercise conducted by representatives from the Kenya Food Security Steering Group whose membership includes both government and non-state actors. The Long Rains 2023 food and nutrition security assessment in the county was carried out from 10th to 21st July 2023 and covered three main livelihood zones in the county including: Agro-pastoral, Fishing and Pastoral. The aim was to conduct an objective, evidence-based and transparent food security situation analysis following the performance of the Long Rains of 2023 while taking into consideration the cumulative effect of the previous two seasons and consequently providing recommendations for possible response options across the various livelihood sectors.

The onset of the 2023 Long Rains season was timely during the second dekad over the Northern and Western parts but late over the first dekad of April across the Southern, Eastern and Central areas of the county. Rainfall received was normal to above normal resulting to flooding, with the distribution in time being good while in space it was even. Concerningly, the area under maize production was below the corresponding long-term average and thus production is projected to be nil due to the crop failure witnessed occasioned by the early cessation. Additionally, Sorghum and maize stocks held by various actors including farmers, traders, millers and National and Cereals Produce Board (NCPB) were below average. Farmers held only 32 and 38 percent of the long-term average for maize and sorghum accordingly. With respect to livestock productivity, the body condition of all livestock species was generally good owing to availability of pasture and browse within shorter trekking distances and that resulted to increase in milk production compared to the previous season despite still being below average.

The price of milk was however above the long-term average over all the livelihood zones by about 66 percent while the return trekking distances to water points from grazing areas was slightly outside the seasonal norm by about 20 percent but had declined significantly. Average water consumption per person per day was 15-20 litres compared to 10-15 litres usually in the Pastoral Livelihood Zone while in the Agro-pastoral Livelihood Zone it was 15-25 compared to the normal 20-30 litres. The market price of a kilogram of maize was KSh. 122 representing a 53 percent margin above the long-term average price for the period while a mature medium size goat was trading at KSh 2,955, a price that was at par with the long-term average. Consequently, the recorded terms of trade were unfavourable in comparison to long-term average but improved slightly in relation to a similar period over the previous year when households acquired seven kilogrammes less from sale of a similar goat. Proportion of households classified as having a poor food consumption score declined albeit marginally to 41 percent compared to the proportion of 47 percent that was reported during the month of July 2022. However, the Pastoral Livelihood Zone reported a higher proportion within the same category of 45 percent.

Households continued having a minimally adequate diet as evidenced through the reduced coping strategy index (rCSI) that was recorded to be 15.8 with proportion applying crisis+ consumption based coping strategies being about 30 percent. Improvement in the nutrition status was reported based on the Global Acute Malnutrition (GAM) that declined from 34.8 percent to 26.4 percent; however, it still remained above the emergency threshold. Consequently, the overall integrated food security phase classification for the county is in 'Crisis' (IPC Phase III).

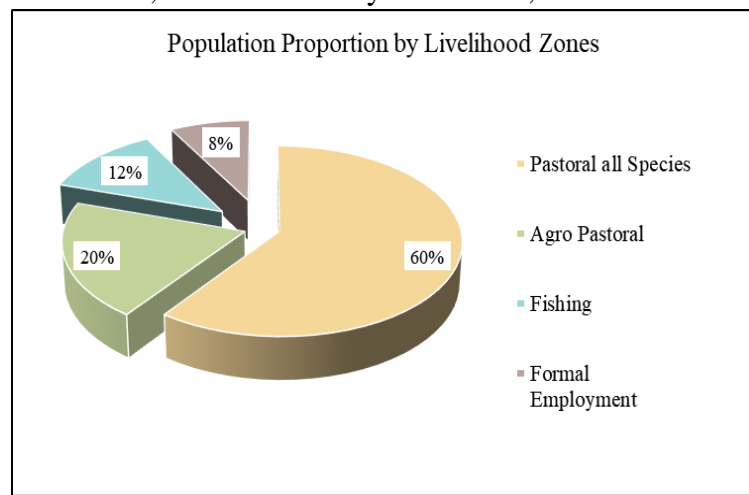
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1.0 INTRODUCTION

1.1 County Background

Turkana County is located in the north-western part of Kenya and borders Samburu County to the South East, Marsabit County to the East, and West Pokot County to the South West. The County



also borders three countries namely: - Uganda to the west, Ethiopia to the northeast, and Sudan to the northwest. The County covers an approximate area of 77,000 square kilometres (Km²) with a projected population of 1,022,773 (505,390 males, 517,384 females) people (KNBS, 2022). Administratively, the County is divided into eleven (11) sub-counties but only seven are operational and these include: Turkana North, Turkana East, Turkana Central, Turkana West, Turkana South, Kibish and Loima. The County has four main

Figure 1: Proportion of Population by Livelihood Zone

livelihood zones namely: Pastoral, Agro-pastoral, Fishing and Formal Employment with population proportions of 60, 20, 12 and eight percent respectively (Figure 1). Main sources of cash income in the Pastoral Livelihood Zone include: Livestock production that contributes 91 percent to cash income, while petty trade and hunting/gathering make a contribution of three percent and two percent respectively. Along the Agro-pastoral Livelihood Zone, the main sources of income include: Food crop production, livestock production and firewood collection/charcoal burning with a contribution of 40 percent, 25 percent and 10 percent to cash income. Lastly, in the Fishing Livelihood Zone, fishing makes a contribution of 54 percent to the total household cash income while livestock production and casual waged labour contribute by 18 percent and 10 percent in that sequence. Additionally, the overall poverty incidence for the county is 77.7 percent with the hardcore poverty incidence being 45.7 percent while the food poverty incidence stands at 63.4 percent (KNBS, 2021).

1.2 Methodology and Approach

The 2023 long rains assessment adopted a multi-sectoral and multi-agency approach constituting of the County Steering Group (CSG) and non-state actors such as World Food Programme (WFP), Kenya Redcross, USAID Nawiri, World Vision International, and International Rescue Committee. The assessment was conducted between 10th and 20th July 2023 covering three livelihood zones in eleven sub counties. The main objective of the assessment was to conduct an objective, evidence-based and transparent food and nutrition security situation analysis following the March to May (MAM 2023) rainfall season in Turkana County, while taking into consideration the cumulative effect of previous seasons and consequently providing appropriate sector specific recommendations for possible response options.

The assessment started with a briefing of the CSG on the objectives of the assessment followed by sector briefs and a review of the completed sector checklists (quantitative data) that had been administered a week earlier by the technical team that had been mandated to conduct the assessment. Sites to be visited for primary data collection were purposively selected with a special consideration of the factors driving vulnerability including rainfall performance, conflict hotspots, agricultural areas, human and livestock disease hotspots while also factoring representativeness in

terms of livelihood zones as a unit of analysis. Primary data was collected from the community through market interviews, key informant interviews, and semi-structured focus group discussions (comprising both gender) in the three main livelihood zones.

The Formal Employment Livelihood Zone was excluded in the assessment. Key informant and focus group discussions in the Pastoral Livelihood Zone were held at Kokusilei, Sasame, Kaalem, Naremeto, Lomil, Loperot, Napusimoru, Lopii, Lokorkor, and Nakoret while in the Agro-pastoral Livelihood Zone they were held in Tiya, Kalemunyang, Kanaodon, Kalemngorok, and Lokwii with Lomekwi, Kerio and Kangatotha being sampled along the Fishing Livelihood Zone. Visual inspection technique was also applied along the transect drive with a total of 13 market interviews being conducted across the three livelihood zones. Additional secondary data including satellite rainfall estimates, routine health and nutrition data from the Kenya Health Information Systems (KHIS), prices, Standardized Monitoring and Assessment of Relief and Transitions (SMART) and the National Drought Management Authority (NDMA) bulletins among others was availed to the assessment team. Based on livelihood zone as the unit of analysis, the primary data was then collated, analysed and triangulated with the secondary data. Further, integrated food security phase classification (IPC) protocols were followed in the identification of food insecurity causes and severity classification. Preliminary findings of the compiled county food and nutrition security report were later shared during the debriefing CSG held on 20th July, 2023 for adoption as a true reflection of the county food security situation.

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

Turkana County has a bi-modal rainfall pattern with the long rains being experienced from March to May (MAM) and short rains from October to December (OND). Noteworthy, some parts of Turkana West, South and Loima Sub counties do experience rainfall during the June to August period. Not only is the long rains a very important season for pastoralists as it promotes recovery of rangelands after the January to March dry period but also farmers who practise crop production along the Agro-pastoral Livelihood Zone. Rainfall onset was timely over the second dekad of March with the exception of Turkana South, East and Central that attained their onset during the first dekad of April. The performance of the rainfall was generally normal to above normal in some areas with majority of the sites recording 126-140 percent of the normal rainfall (Figure 2). Equally, the distribution in time and space was good and even accordingly. Among the wards that recorded normal rainfall and showed signs of slow recovery included: Letea, Nakalale, Kaeris, Lokiriama/ Lorengipi, Loma, Lokichar, Katilu, Lobokat, Kaputir and Kapedo/Napeitom.

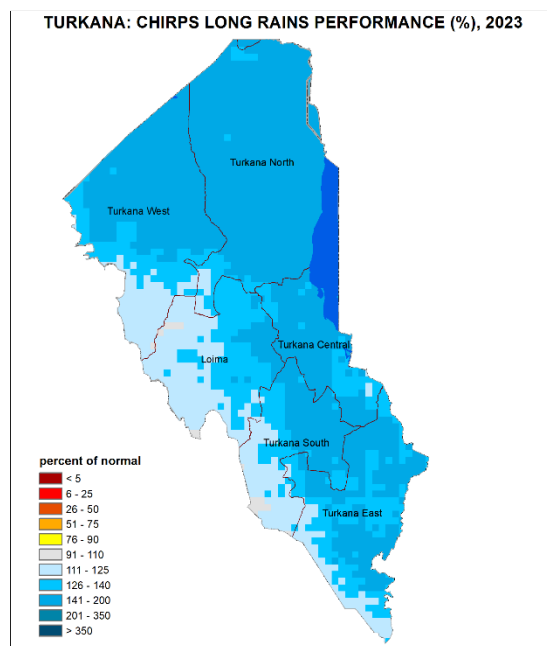


Figure 2: Rainfall Performance (% of Normal)

2.2 Insecurity/Conflict

Increased cases of insecurity entailing banditry attacks and livestock rustling were reported throughout the reference period with some lives being lost and significant proportion of livestock

exceeding 4,500 being stolen. The most affected areas included Lobokat, Kaputir, Katilu, Lokori/Kochodin, Kapedo/Napeitom, Lokichoggio, Kalobeyei, Letea, and Kibish wards. Displacement of human population was also witnessed especially in Turkana South as a consequence of the ongoing aggression.

2.3 Other Shocks and Hazards

Floods

Following the above normal rainfall received in some areas in the county, massive destruction of infrastructure was witnessed across the long rains period. In addition, flash floods resulted to about 2,196 livestock being lost and roughly 2,330 people being through destruction of farms, houses/ personal effects and food stuffs. The most affected wards included: Township, Kanamkemer, Kangatotha, Loima, Turkwel, Lobei/Kotaruk, Songot, Letea, and Kalobeyei. Livestock deaths attributed to the cold conditions at the onset of the MAM rainfall were witnessed in most parts of Kibish, Turkana North and West Sub counties.

High Food Commodity Prices

Extreme food commodity prices were recorded across the long rains season more so within the last mile markets. For instance, the price of maize per kilogram averaged KSh. 115 with some areas reporting KSh. 150 while a litre of cooking oil and kilogram of sugar was retailing at KSh. 400 and KSh. 300 respectively. Consequently, households were only able to access limited quantities of food from the market owing to the low purchasing power that was however on an ascending trend over the reference period.

Livestock Diseases and Mortalities

Increased prevalence of endemic diseases like Camel pox, Lumpy Skin Disease (LSD), Contagious Bovine Pleuropneumonia (CBPP), Sheep and goat pox among others was reported. The prevalence, mortality and case fatality rates averaged 11.8, 2.7 and 32 percent accordingly. The cumulative number of livestock lost across the drought period into the MAM 2023 season was roughly 360,000.

3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

3.1.1 Crop Production

The Long Rains season is the major season in the county since it accounts for 70 percent of the annual crop production. Approximately 25-30 percent of the farmers along the Agro-pastoral and some sections of both the Pastoral and Fishing Livelihood Zones rely on it for crop production activities. Crop production in the county encompasses two dimensions; irrigated agriculture mainly in the Agro-pastoral sites in Turkana South, East and Loima and rain-fed agriculture in all the livelihood zones with maize, sorghum and cowpeas being the major crops cultivated. Owing to its high-water requirements, maize is normally cultivated under irrigated agriculture while sorghum being highly resilient to drier conditions and having a shorter maturity period is cultivated under rain-fed agriculture. The fast-growing green leafy cowpeas is cultivated for both commercial and subsistence purposes while a significant proportion of maize and sorghum is for household consumption. Noteworthy, crop production in the Agro-pastoral Livelihood Zone makes a contribution of 60 percent and 40 percent to food and cash income respectively.

Rain-fed Production

The shortened rainfall season within the agricultural crop production areas that are rainfall dependent significantly affected production activities with crop failure being witnessed over most

sites. Consequently, area under maize, sorghum, and cowpeas production during the 2023 Long Rains season was 14 percent, 25 percent and 61 percent of the long-term average (LTA) accordingly (Table 1). Among the drivers of the below average area under production for the three major crops included the delayed onset of the Long Rains in the agricultural areas, limited access to improved seed varieties, delayed land preparation, and encroachment of *prosopis Juliflora* in the rain-fed farms.

Table 1: Rain-fed Crop Production

Crop	Area planted during 2023 Long Rains season (Ha)	Long Term Average (LTA) area planted during the Long Rains season (Ha)	2023 Long Rains season production (90 kg bags) Projected/Actual	LTA production during the Long Rains season (90 kg bags)
Sorghum	1,028	4,060	4,934	32,480
Maize	135	931	175	12,103
Cowpeas	23.5	38	84	228

Maize, sorghum and cowpeas yield is projected to be nil, 15 percent and 36 percent in that order. Notable factors contributing towards the low production ranged from destruction of crops by pests (Fall Army Worms and Blister Weevils) whose outbreak was witnessed coupled with crop failure due to insufficient moisture out of the shortened season to reduced acreage under cultivation. Additionally, poor crop management practices with regards to broadcasting, pest management and late planting contributed towards the projected low yield.

Irrigated agriculture areas include sites adjacent to both river Kerio and Turkwel in Turkana East, South, Central and Loima sub counties. Area under maize, and sorghum production was remarkably below the long-term average by about 64 percent and 46 percent accordingly while that under cowpeas cultivation was 276 percent of the respective long-term average (Table 2). Reduced acreage under cultivation for both maize and sorghum could be attributed to issues of irrigation scheme infrastructure maintenance and repair, fluctuation of irrigation scheme water levels, high market price for farm inputs, inefficient irrigation methods, crop selection and rotation of leguminous crops like cowpeas and groundnuts and labour in availability during critical periods of main canal desilting.

Table 2: Irrigated Crop Production

Crop	Area planted during 2023 Long Rains season (Ha)	Long Term Average (LTA) area planted during the Long Rains season (Ha)	2023 Long Rains season production (90 kg bags) Projected	LTA production during the Long Rains season (90 kg bags)
Sorghum	2,072	3,788	20,720	45,456
Maize	744	2,058	23,808	72,030
Cowpeas	196	71	1,568	710

On the other hand, crop rotation and diversification practices to improve soil health and break the cycle of pests, favorable market conditions and ease of access to cowpeas seeds coupled with its early maturity were the factors driving the recorded above average area under cowpeas production. Maize and sorghum production is projected to be 33 percent and 45 percent of the long-term average while cowpeas yield represents 220 percent of the corresponding long-term average. Reduced area under production, limited access to quality seeds, insecurity in Turkana South: Kaputir ward that resulted to crop destruction and water stress in some irrigation schemes were the major drivers of the projected low production.

With respect to the challenges facing various aspects of crop production, establishment and maintenance of reliable supply chains for essential inputs like seeds, high cost of farm inputs occasioned by higher transportation expenses and the scarcity of certain products in the region ranked at the top. Insufficient water for irrigation limits the potential for cultivating high-yielding crops and sustaining productivity while outdated or malfunctioning irrigation infrastructure,

canals, and storage facilities hampered efficient water distribution leading to sub optimal irrigation practices. In addition, insecurity in some parts of the county hindered investment in agricultural activities, lack of labour that migrate in search of alternative livelihood and underutilization of existing irrigation schemes. Fall Army Worms, stalk borers and blister beetle for maize and sorghum will most likely result to estimated losses of 10 percent in irrigated areas and 25 percent in rain-fed areas. Additionally, the drier conditions will drive a significant reduction in crop yields with approximated losses totaling to 85 percent for maize and eight percent for sorghum in rain - fed areas and 12 percent and five percent respectively within irrigated areas.

Cereals Stocks

Cereal stocks held by the different actors such as farmers, traders, millers and NCPB over the season were generally below their corresponding long-term average. Maize stock held by farmers, traders and millers accounted for 32,73, and 25 percent of the long-term average while that of sorghum held by farmers and traders represented 38 and 35 percent of their respective LTA in that sequence (Table 3). With respect to green grams, farmers and traders' stocks accounted for 34 and 27 percent of the LTA with rice held by traders representing 62 percent of the corresponding LTA.

Table 3: Commodity Stocks in the County

Actor/Agency	Maize		Rice		Sorghum		Green gram	
	Current	LTA	Current	LTA	Current	LTA	Current	LTA
Farmers	550	1,714	0	0	967	2,533	361	1,039
Traders	21,700	29,750	6,645	10,775	1,400	4,025	630	2,275
Millers	400	1,581	0	0	0	0	0	0
NCPB	0	9,200	0	0	0	0	0	0
Total	22,650	31,864	6,645	10,775	2,367	6,558	991	3,314

Farmers practicing irrigated agriculture had not harvested hence the low stocks while those who rely on rain-fed agriculture had started consuming the freshly harvested crops. Low stocks held by traders were influenced by a combination of factors including harvest time that had not reached even within the external sources, low market demand driven by recovery of the rangelands hence slightly improved livestock productivity coupled with reduced supply, transportation challenges occasioned by insecurity and the high fuel prices and specific crop production dynamics within production areas. In availability of maize and sorghum internally impacted negatively on the stocks held by millers who usually relied on them while the stock outs at National Cereals and Produce Board (NCPB) could be attributed to financial constraints and seasonality of crop production hence availability.

3.1.2 Livestock Production

The main livestock species kept in the county include; goats, cattle, sheep, donkeys and camels. Livestock production is a major source of household food and income in the county contributing 91 percent, 25 percent and 18 percent to household income for residents of the Pastoral, Agro-pastoral and Fishing Livelihood Zones accordingly. Majority of households derive their income from the sale of these livestock and benefit from the consumption of meat, milk and blood meal. Donkeys are beneficial in the provision of transport services besides being a source of direct food.

Pasture and Browse Condition

The normal to above normal rainfall received over the March to May 2023 season resulted to varied impacts on forage throughout the three livelihood zones. Significant pasture and browse regeneration was witnessed in the Pastoral sites of Turkana West, North and Kibish sub counties, Agro-pastoral areas of Turkana South and Loima sub counties while in the Pastoral areas of Turkana South, East, Central and Loima, the recovery was fair. Consequently, the available pasture across all the livelihood zones is anticipated to last for at least one month compared to three months

normally with that of browse more so in the Fishing Livelihood Zones expected to last for only month compared to three months usually. (Table 4).

Table 4: Pasture and Browse Condition

Livelihood zone	Pasture				Browse			
	Condition		How long to last (Months)		Condition		How long to last (Months)	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	Fair	Good	1	3	Good	Good	2	3
Agro-pastoral	Fair	Good	1	3	Good	Good	2	3
Fishing	Fair	Good	1	3	Fair	Fair	1	3

Available browse in the Pastoral and Agro-pastoral Livelihood Zones is projected to last for two months compared to a normal of three months. Limited access to water within grazing areas, proliferation of *Prosopis Juliflora*, and insecurity in Loima, Turkana West, East and South were some of the notable constraints to forage access. In Loima, the struggle for resources has forced pastoralists to inwards to areas of Urum, Lokiriama, Lorengipi and Kotaruk while in Turkana West, pastoralists have been pushed from their traditional grazing areas of Nalapatui and Nakitongo inwards to areas of Loreng, Letea and Naperobei. However, out of the bumper harvest realized as a result of the normal to above normal rainfall in some Agro-pastoral areas, crop residues was being utilized as livestock feed.

Baled Hay Status

Baled and deferred grazing were the form of pasture conservation practised in the county. There were 13 hay stores in the county with Turkana West having the highest number while the total storage capacity was 300,200 bales while the average price of one bale was KSh.250 (Table 5).

Table 5: Baled Hay Status

Sub County	No. of Hay Stores	Storage Capacity (No. of bales)	No. of Bales currently being held	How long is expected to last (months)	Sub County demand	Average Weight per bale (in Kgs)	Average price per bale (Kshs.)
Turkana West	3	50,000	100	3	800,000	15	200
Loima	2	60,000	10,000	2	600,000	15	200
Kibish	2	30,000	10,000	2	200,000	15	200
Turkana North	2	40,000	20,000	2	700,000	20	300
Turkana Central	3	150,000	100	<1	1,000,000	15	400
Turkana East.	1	200	0	<1	400,000	10-15	250

In Turkana West, the Oropoi store is new and groups are yet to harvest and store bales of hay while Naremeto is the most active group undertaking pasture production while in Loima 20 percent is produced farmers while 80 percent is by ATC.

Livestock Productivity

Livestock Body Condition

The body condition for all livestock species was generally good compared to fair normally (Table 6). The loin of the camel was fairly well developed up to the shoulder region whereas the fat deposit on the tail head was evident in sheep. Cattle on the other hand were fairly covered in flesh with most ribs not visible. Livestock body condition is expected to maintain at a fairly desirable level over the next 2-3 months owing to forage availability over most parts of the county. However, in some pockets of the county including most areas along the Fishing Livelihood Zone like Lokitoe-Angabeur, Kataboi, Narengewoi, Lomekwi, Nachukui, the body condition of small stock

and camels was fair with a similar scenario depicted in Loperot, Locher Emoito, Kimabur, Kasuroi and Kaesamalit.

Table 6: Livestock Body Condition

Livelihood Zone	Cattle		Sheep		Goat		Camel	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	Good	Fair	Good	Fair	Good	Fair	Good	Fair
Agro-pastoral	Good	Fair	Good	Fair	Good	Fair	Good	Fair
Fishing	Good	Fair	Good	Fair	Good	Good	Good	Good

Birth Rates

The birth rates still remained low across all the livelihood zones but was anticipated to rise from August to September as the pregnant livestock start calving/lambing and kidding. Following, the prolonged drought, livestock were still on recovery especially in the areas that witnessed a late onset over the first dekad of April. Other drivers likely to promote increase in birth rates over the next 2-3 months included good nutrition occasioned by availability of forage, and reduced trekking distance to water sources.

Tropical Livestock Units (TLUs)

The TLUs for the poor and medium-income households along the Pastoral, Agro-pastoral and Fishing Livelihood Zones were below normal (Table 7). Reduced birth rates over the prolonged historic drought, mortalities attributed to multiple factors such as drought, diseases, and floods coupled with livestock rustling were some of the drives of the below normal TLUs throughout all the livelihood zones over the Long Rains 2023 season. Some of the areas that lost significant livestock due to insecurity included: Kainuk, Loyapat, Nakwamoru, Juluk, Kapelbok, Lokwamosing, Nakukulas and Lochakula.

Table 7: Tropical Livestock Units

Livelihood Zone	Poor Income Households		Medium Income Households	
	Current	Normal	Current	Normal
Pastoral	2	5	8	10
Agro-pastoral	1	3	4	8
Fishing	1	2	3	4

Milk Production, Consumption, and Price

Camels and goats are the main milk producers for both household consumption and sale of surplus over the three livelihood zones. Milk produced was generally below average across most parts of the county over the Long Rains 2023 season. Milk produced and consumed across all the areas averaged 25 percent of the long-term average with the price of milk also being 66 percent of the LTA within the peripheries of the county (Table 8). Increase in milk production could be attributed to improved livestock body condition due to the significant reduction in the trekking distances in search of water and forage. Across the markets, it was evident that the preference of selling packed fresh milk and other alternative milk products was high with the decision on milk proceeds being vested on women at the community level. Majority of households especially in the urban centres were using powdered milk that was retailing at Ksh.1,500 per kilogram compared to the normal price of Ksh.700. The prevailing average price per litre of packaged milk was KSh.140 compared to the normal price of Ksh. 100.

Table 8: Milk Production, Consumption and Pricing

Livelihood Zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Agro-pastoral	0.5	2.0	0.5	2.5	100	60
Pastoral	1	2.5	1	2.5	100	60
Fishing	0.5	2.0	0.5	2.5	100	60

Migration

Internal livestock migration towards sites that had experienced considerable regeneration of forage was taking place throughout the season. Large Livestock movement was witnessed from Uganda to Kenya as a result of the tension in Uganda between the pastoralists and the Ugandan authorities. In Kibish, movement of livestock was observed from Kaitede, Liwan, Kokuro, Napak towards Lokamarinyang, Koyasa, Natodomeri and Kibish Centre. Livestock in Turkana West moved within the Namorukirionok-Nakitong'o-Pire hills-Lopokok-Kalopeto-Eteere-Logum-Namoru Arengan-Nawountos-Loreng-Oropoi belt while others moved from Nanaam, Lorus, Nasinyeno, Kobuin, Naperobei, Lotitan, Lomothiring Kaal, Loro, Lomur Etae to Namoru Arengan, Loreng and Namorukirionok. The movement corridor for livestock in Loima sub county was from Uganda and the areas of Kawalase, Lomil, Naipelilim to Lorengippi/Lokiriyama ward border. In Turkana Central, there was livestock movement from Kerio, Kangirisae to Loru ranges while others moved to Kanamkemer, Naotin, and Napeikar route to Loima hills.

Livestock Diseases and Mortalities

Increased prevalence of endemic livestock diseases like camel pox, lumpy skin disease (LSD), contagious bovine pleuropneumonia (CBPP), sheep and goat pox among others was noted over the reference period with the prevalence ranging from 10 percent to 53 percent (Table 9). The recorded average prevalence of 11.8 percent and mortality rate of 2.7 percent was significant and slightly higher than the previous quarter and could be attributed to increased influx of livestock from Uganda and minimal interventions taking place over the Long Rains 2023 period. Equally, livestock had been heavily infested with tsetse and ticks that caused Trypanosomiasis affecting their production since its mortality rate was above average.

Table 9: Livestock Disease Prevalence Trends in the County as at June 2023

Disease	Percent Prevalence	Percent Mortality	Case Fatality Rate percentage
Camel Pox	53	0	0
Enterotoxaemia	9	4	50
Poisoning	17	0	0
Rabies	1	0	60
Anaplasmosis	6	2	33
Babesiosis	9	4	40
CBPP	19	11	59
CCPP	6	3	48
Foot Rot	7	2	33
Haemorrhagic Septicaemia	7	2	35
Heartwater	7	2	35
LSD	25	5	20
Mange	8	2	25
ORF	6	3	43
PPR	7	1	20
Sheep & Goat Pox	10	1	15
Trypanosomiasis	8	3	38

Worms	8	2	24
Average	11.8	2.7	32

Water for Livestock

The main sources of water for livestock in the Pastoral Livelihood Zone were traditional river wells along the seasonal rivers, boreholes and water pans while in the Agro-pastoral, livestock were watered at boreholes, the permanent river Turkwel and Kerio and water pans with those in the Fishing Livelihood Zone accessing water mainly from the lake and boreholes; these are the normal livestock watering points. Despite declining significantly relative to the previous season, return trekking distance from grazing zones to sources of water was marginally outside the normal range for the period by roughly 20 percent (one kilometer) across all the livelihood zones (Table 10). Available water in the Pastoral and Fishing Livelihood Zones is projected to last for a period of two months compared to three months normally while in the Agro-pastoral Livelihood Zone, it is anticipated to last for three months compared to the usual four months. Notable factors limiting access to water entailed poor pasture recovery in select sites and longer waiting time at water points as a consequence of reduced water yield.

Table 10: Water for livestock in Turkana County

Livelihood zone	Sources		Return average distances (km)		The expected duration to last (months)	
	Current	Normal	Current	Normal	Current	Normal
Pastoral	Traditional hand-dug well, Boreholes, Water pans	Traditional hand-dug well, boreholes, Water pans	6	5	2	3
Agro Pastoral	River, Boreholes Water pans	River, Boreholes Water pans	4	3	3	4
Fishing	Lake, boreholes	Lake, boreholes	5	4	2	3

Watering Frequency

The watering frequency for all livestock species in the Agro-pastoral and Fishing Livelihood Zones was seven times just like the usual watering frequency except for camels. All livestock species along the Pastoral Livelihood Zone accessed water 3-4 times compared to the normal 4-7 times per week. Improved livestock watering frequency was as a consequence of the significant recharge that took place following the normal to above normal rainfall recorded over the Long Rains 2023 season.

Table 11: Watering Frequency (Number of Days Per Week)

Livelihood zone	Cattle		Camels		Goats		Sheep	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	4	7	3	3	3	4	3	4
Agro Pastoral	7	7	7	4	7	7	7	7
Fishing	7	7	7	4	7	7	7	7

3.1.3 Impact on Availability

The performance of the 2023 Long Rains season was characterized with a timely onset over the Northern and Western parts of the county with the onset being attained late over the Southern, Central and Eastern parts of the county. Equally, the distribution in time and space resulted to varied impacts across most sectors. Generally, low household stocks are anticipated within the rain-fed areas as a result of the crop failure witnessed due to the early cessation of the long rains

whereas within the irrigated areas, stocks will most likely be average over the next two months. Improved livestock productivity witnessed attributed to considerable recovery of the rangelands shall imply that pastoral households will most likely be fairly provisioned to meet basic needs albeit with some little level of stress. However, the risk posed by crop pests and the high prevalence of livestock diseases might result to more households experiencing stock outs and reduced incomes as the effects of the dry season intensify in severity.

3.2 Access

3.2.1 Markets Operations

The major livestock and commodity markets in the county include Kalokol, Lokitaung, Lodwar, Lokichar, Kakuma, Lokichoggio, Lokori, Kainuk, Katilu, Turkwel, Lorugum, Kalemngorok, Katilia and Kerio. All the markets across the three livelihood zones were operational over the long rains 2023 season and as the time of the assessment in July 2023.

Market Supplies and Traded Volumes

Majority of the internal markets source their supplies from Lodwar market whose most of its supplies are obtained from the neighbouring Trans Nzoia and West Pokot counties. Some of the other markets like Kakuma, Lorugum and Turkwel also benefit from cross border trade with Uganda. Reduced trade volumes were evident across most markets advanced by the high commodity prices, high fuel prices and inflation. Traded livestock is entirely sourced internally with the prevailing good rangeland conditions acting as a major limiting factor for increased livestock volumes in the markets as pastoralists held to their assets. Despite, the aforementioned scenario, the markets fairly provisioned with essential food commodities albeit in small quantities. Market commodity supplies out of internal sources were very minimal due to the reduced to none harvests from the previous season. The reduced herd sizes as a result of mortalities over the drought period also was a major factor influencing the reduced livestock trade volumes across the MAM 2023 season.

Market Prices

Maize Price

The county average maize price for July was Ksh. 122 per kilogram of maize which is 53 percent above the long-term average and seven percent above 2022 prices (Figure 3). Among the major drivers of the above average prices were high production and transportation costs occasioned by high fuel prices coupled with below average local maize supplies driven by below average local and regional production and high demand. During the transect drive across the major markets, price of maize in the Pastoral, Fishing and Agro-pastoral markets averaged Ksh. 130, Ksh. 130 and KSh. 122 in that order.

The highest price of Ksh. 140 in the Agro-pastoral Livelihood Zone was recorded in Turkwel, while Kaaleng market in the Pastoral Livelihood Zone reported a price of Ksh. 180 with Kalokol market in the Fishing Livelihood Zone recording the

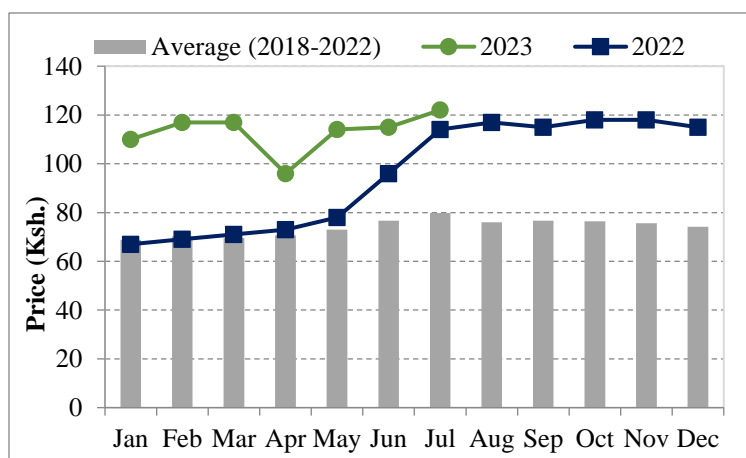


Figure 3: Average Price of a Kilogram of Maize

highest price of Ksh. 160. In the Formal/Skilled Employment Livelihood Zone, a kilogram of maize traded at Ksh. 120 in Lodwar market.

Goat Prices

According to NDMA sentinel site data, there has been a consistent increase since the onset of the long rains in March 2023 due to the improved body condition driven by availability of browse across most sites. The price of a two-year old medium size goat was Ksh. 2,955 in July (Figure 4) which was at par with the long-term average and 52 percent above the 2022 prices. Over the three livelihood zones, market prices of a two-year old medium size goat (usually referred to as “Grade 3” by livestock traders) ranged from Ksh. 3000 – 3,500 in the markets. Notably, majority of the poor households conduct their trading at the farmgate with middlemen being the buyers at relatively lower prices ranging from Ksh. 1,500-2,000.

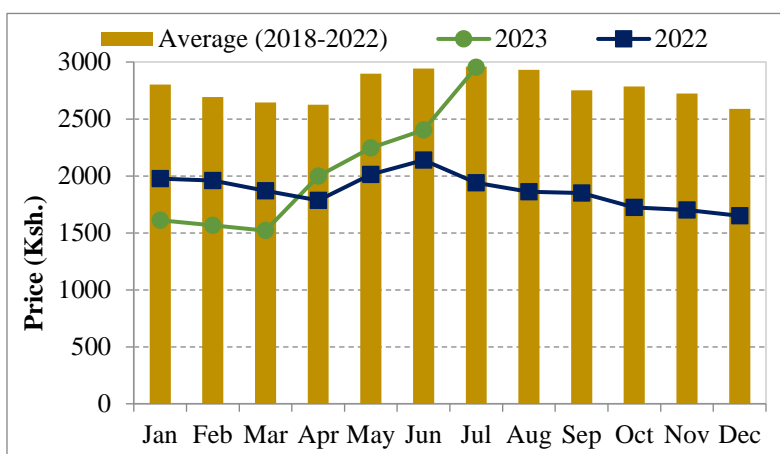


Figure 4: Average Price of a Medium Size Goat

3.2.2 Terms of Trade

The terms of trade (ToT) represent the quantity of maize in terms of kilograms that can be acquired from proceeds of a mature goat and normally is a proxy for household food access. The current ToT for July 2023 is 24 kilograms of maize from the sale of a goat which is higher than the one posted for the same period the previous year by about 41 percent but below the long-term average by 35 percent (Figure 5). High maize price was the major factor driving the low ToT; however, some improvement was recorded since the onset of the long rains indicating a declining degree of household food stress albeit on a slow recovery. Noteworthy, majority of households continue relying on other sources of income with charcoal burning and firewood collection being the dominant activity as opposed to the usual reliance on income out of livestock related trading activities. Humanitarian assistance in form of relief food and cash transfers has also played a critical role in cushioning households experiencing pronounced food gaps.

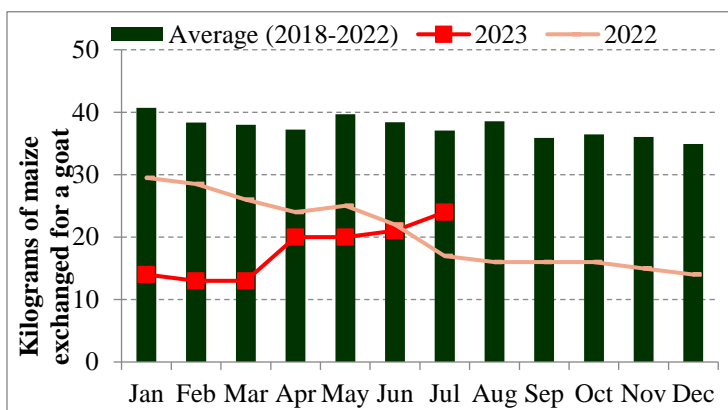


Figure 5: Comparative Terms of Trade the County

However, some improvement was recorded since the onset of the long rains indicating a declining degree of household food stress albeit on a slow recovery. Noteworthy, majority of households continue relying on other sources of income with charcoal burning and firewood collection being the dominant activity as opposed to the usual reliance on income out of livestock related trading activities. Humanitarian assistance in form of relief food and cash transfers has also played a critical role in cushioning households experiencing pronounced food gaps.

3.2.3 Income Sources

Majority of the households across the three livelihood zones depend on livestock production, food crop production and fishing as their main income sources. Other sources of income include: charcoal burning, formal/casual waged labour and petty trading (Table 12).

Table 52: Main Sources of Cash Income

Sources of Income	Contribution to Cash Income per Livelihood Zone (Percent)		
	Pastoral LZ	Agro-pastoral LZ	Fisheries LZ
Livestock Production	91	25	18
Food Crop Production	1	40	2
Fishing (Marine or inland)	-	1	54
Charcoal Burning	1	10	2
Small Business	1	6	2
Casual Waged Labour	-	3	10
Formal Waged Labour	-	5	8
Petty Trading	3	3	2

3.2.4 Water Access and Availability (Including Cost and Consumption)

Major Water Sources

Boreholes, traditional river wells and rivers were the major sources of water throughout the reference period with approximately 31 percent of the population meeting their water needs through boreholes while another 24 percent apiece drew their water from traditional river wells and rivers (Figure 6). Majority of the households in the Fishing Livelihood Zone relied on Lake Turkana while some especially in the Pastoral Livelihood Zone fetched water from water pans and shallow wells that had a pumping mechanism.

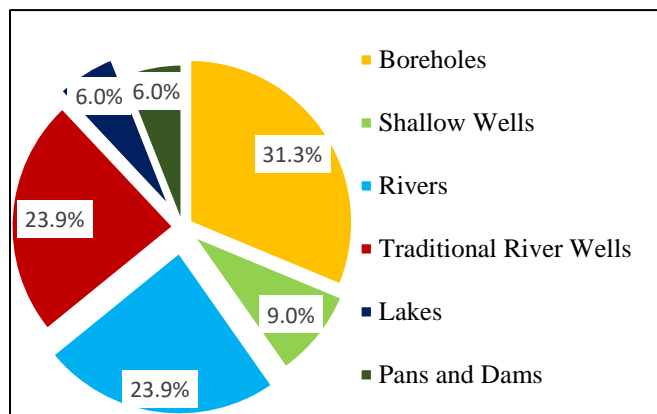


Figure 6: Water Sources in the County as at July 2023

Following the normal to above normal rainfall received over the Long Rains 2023 season, the operational capacity of the boreholes improved and averaged 80 percent with the functionality of other water harvesting structures such as water pans, sand dams and rock catchments being at about 60 percent (Table 13). However, the recharge in Turkana South, East, Loima and some parts of Turkana Central like Chokchok was generally poor and below 30 percent resulting to some of the structures remaining completely dry over the season.

Table 63: Status of water Sources in Turkana County

Livelihood zone	Water Source (Three major sources)	No. of Normal Operational	No. of Current Operational Sources	Projected Duration (Operational Sources)	Normal Duration that Water Last in Months	Current Water Level as % of Full Capacity after Recharge by the Rains	Locality of Non-operational Water Sources
Pastoral	Boreholes	360	245	10	Permanent	60	Lomelo, Napeitom, Kakitetei, Kamuge, Kangirisae, Lomeleku, Katioko, Nalamaru, Naaguro, Natorubei Lochoredome, Lokaburu, Kakalel, Nakaalei, Kakong'u 3, Lochwaakwan
	Shallow Wells	30	13	6	6-12	10	Kaechipaluk, Lochoredome
	Water Pans	47	26	1	3-6	30	Loperot 1&2, Kakalel 1&2, Lomeleku, Napusimoru, Kagate

							Natorubei, Katiir, Dapar 1&2
Agro-pastoral	Boreholes	250	178	10	Permanent	50	Kanaodon, Lokapel, Kagete, Kalowasa, Nakabosan, Kalomwae Lorogon, Kapelibok1&2, Kaputir, Apa Etuko, Ngikengoi, Kidewa, Lomunyenakwan, Kanakipe, Ngimeyana, Lopii, Nakotongwa, Nakukulas, Ngikengoi, Namorutunga, Kangitit, Lokwamosing, Nabwelnyang, Katilia, Elelea, Lotuba, Nakorinyang
	Shallow wells	55	40	3	6	60	Katilia, Elelea, Lopeduru, Lokapel, Kalemung'orok1&2, Nabeye, Namakat, Kagitankori
	River	3	2	12	Permanent	50	Tarach
Fishing	Boreholes	25	16	10	12	50	Kalokol and Kerio
	Shallow Wells	13	8	5	6	60	Lochor-Aikeny and Kapua
	River	1	1	Permanent	Permanent	60	

The available water in majority of the open water sources is projected to last for a maximum period of 2-3 months. Variation in the usage of water sources was observed across the three livelihood zones. The usage of water by households in the Pastoral Livelihood Zone was high since the young ones of livestock were watered at the household as the rest of the livestock were taken to grazing areas. With respect to the shallow wells along river Kerio, Malmalte and Turkwel, the recharge was at less than 60 percent compared to 90 percent normally with those in the Pastoral Livelihood Zone areas of Turkana South, East, Central and Loima being at less than 20 percent while along the Fishing Livelihood Zone, they were estimated to be at 60 percent capacity. Approximately 233 boreholes and shallow wells were noted to be non-functional due to breakdowns with majority concentrated in the Pastoral Livelihood Zone while the available water in shallow wells was projected to last for 1-2 months. Additionally, roughly 90 percent of boreholes are permanent hence they are expected not to dry up unless there is a significant drop in the water table like in Iriir and Naoyatiira in Lokichar.

Distance to Water Sources

The average return trekking distance to water points in the Pastoral Livelihood Zone averaged five kilometres compared to the usual distance of four kilometres while in the Agro-pastoral and Fishing Livelihood Zones it averaged 1.5 kilometres and two kilometres compared to one kilometre and two kilometres normally respectively (Table 14). The decline in trekking distance across most sites could be attributed to increased functionality of multiple water sources in close proximity to households as a consequence of the recharge that took place. However, the out of normal range trekking distance in some sites could be attributed to design issues for a number of water structures that could not permit considerable recharge. Notably, exceptionally longer trekking distances ranging from 15-20 kilometres for households were reported in Nariamao where

households accessed water from Kakong’u while livestock in the same area and others like Loriu and Kalomwae had to trek for distances exceeding 30 kilometres to access water.

Table 74: Distances to Water Sources, Cost, Waiting Time and Consumption

Livelihood zone	Return Distance to water for domestic use (km)		Cost of water at source (Ksh per 20 litres)		Waiting time at water source (minutes)		Average Consumption (litres/person/day)	
	Normal	Current	Normal	Current	Normal	Current	Normal	Current
Pastoral	3-5	4-6	5	5	20-30	15-25	15-25	15-20
Agro-pastoral	0.5-1	1-2	5	5	10-20	10-20	20-30	15-25
Fishing	1-3	1-3	5	5	15-25	10-20	20-30	20-25

Waiting time at the Source

Decline in waiting time was recorded over most sites in the county especially in Turkana North, Kibish and West sub counties where above normal rainfall was experienced. Households in the Pastoral, Agro-pastoral and Fishing Livelihood Zones spent an average of 20, 15 and 15 minutes at the water sources compared to the usual waiting time of 25, 20 and 20 minutes accordingly (Table 14). Areas reporting longer than normal waiting time included: Kakong’u in Lobokat ward where households had to wait even for even 12 hours before fetching water as a result of congestion occasioned by external population from Nariamao who depended on the same water points, Lolupe and Ata Erika in Nakalale ward where long queues were witnessed, Lochoedome, Kaechipaluk and Kaaripun in Lokichar ward whose water table is very low and thus households are compelled to queue for approximately 2-3 hours before the well is recharged, Lotubae in Lokori ward, Lomookamar in Lokichar ward who collect water from Kapese due to prioritization of residents and Kerio Centre in Kerio Delta ward where most households access water from the seasonal Katapakin river by excavating traditional hand dug wells.

Cost of Water

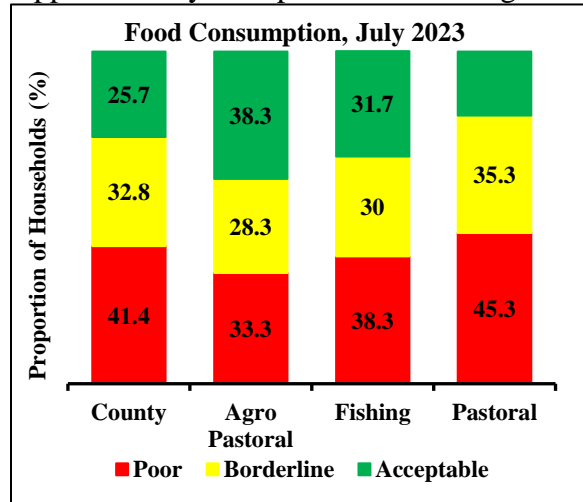
The cost of water across all livelihood zones has remained unchanged and at par with the normal charges of five shillings per 20 litre jerrican except for areas with water scarcity and have been dominated by water vendors (Table 14). Some of the areas where the cost of water is above the usual price include: Kalokol, Kangatotha and Namukuse in Turkana Central, Naurenregae in Turkana West, Kalomwae in Turkana South, Makutano and Lolupe in Turkana North.

Water Consumption

The average water consumption per person per day improved during the Long Rains 2023 season in majority of the sites in the county more so those that experienced a timely onset over the second dekad of March. For instance, residents of the Pastoral Livelihood Zone consumed about 15 litres per person per day while those residing in the Agro-pastoral and Fishing Livelihood Zone consumed about 20 litres and 25 litres accordingly compared to the normal consumption of 15, 25 and 30 litres (Table 14). However, in areas like Nariamao, Loriu, Natapar-Angiloi, Kaarikosi, Kodrin, Napesek in the Pastoral Livelihood Zone where the young livestock were watered within the households, the consumption was relatively higher.

3.2.5 Food Consumption

The Food Consumption Score based on NDMA surveillance data for the county was 26. Approximately 41.4 percent were categorized as having a poor food consumption score while the



proportion of households classified as having a borderline food consumption score was 32.8 percent (Figure 7). Consequently, a significant percentage of households were consuming only staples supplemented with vegetables including the green leafy wild ones. The main cereal varieties consumed by most households was maize and sorghum, cowpeas leave with beans being the major pulse consumed.

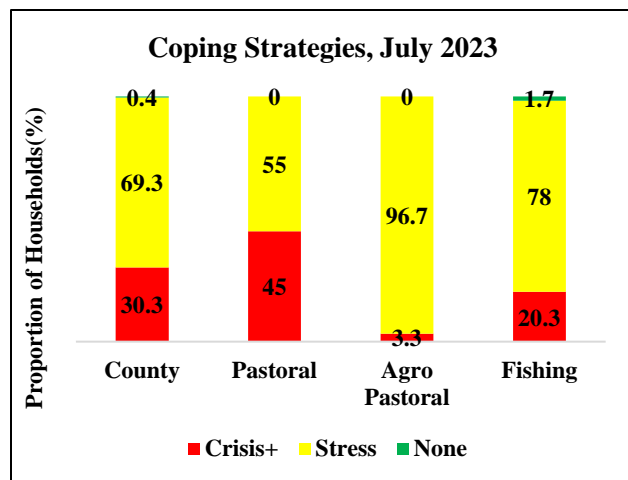
Notably, the Pastoral Livelihood Zone presented the highest proportion of households (45.6 percent) that fell within the poor food consumption score category based on their consumption patterns with the Fishing Livelihood Zone equally reporting a remarkable proportion of 38.3 percent. The

Figure 7: Food Consumption Patterns

recorded decline albeit marginal in the proportions within the respective FCS categories in relation to a similar period the previous year and since the onset of the Long Rains could be attributed to availability of some small quantity of food out of own production, market or through the aid provided by different agencies. Households in the Fishing Livelihood Zone were able to integrate fish into their meals following the improved availability hence the positive results.

3.2.6 Coping Strategy

According to the NDMA sentinel site surveillance data, the coping strategy index (CSI) for the county was 15.8 implying households were having a minimally adequate diet. The recorded CSI compared favourably with the one of 15.3 reported for a similar period during the previous year. Therefore, households have basically been applying relatively similar consumption based coping strategies over the reference period in order to bridge the food gaps. The proportion of households applying crisis and above consumption based coping strategies was 30.3 percent with majority being residents of the Pastoral Livelihood Zone as exhibited by the significant proportion of 45



percent recorded in the zone (Figure 8). Majority of the residents of the Agro-pastoral Livelihood Zone were applying stress consumption based coping strategies while about 20 percent of the fisher folks resorted to application of more severe strategies in order to meet their minimum daily energy needs. The sustained high food commodity prices occasioned by the skyrocketing fuel prices coupled with high inflation limited the food commodity quantities households could access through their disposable income and thus resorted to applying diverse coping mechanisms so as to stay afloat over the Long Rains 2023 duration.

Figure 8: Coping Strategy Trends

3.3 Utilization

3.3.1 Morbidity and Mortality Patterns

Cases of Upper Respiratory Tract Infections (URTI) increased over the Long Rains season and peaked in May 2023 before assuming a downward trend and were generally above those recorded over the similar period during the previous two years (Figure 9). Comparatively, URTI cases were higher than the other two leading causes of morbidity including diarrhoea and malaria with the trend being similar for both under-fives and the

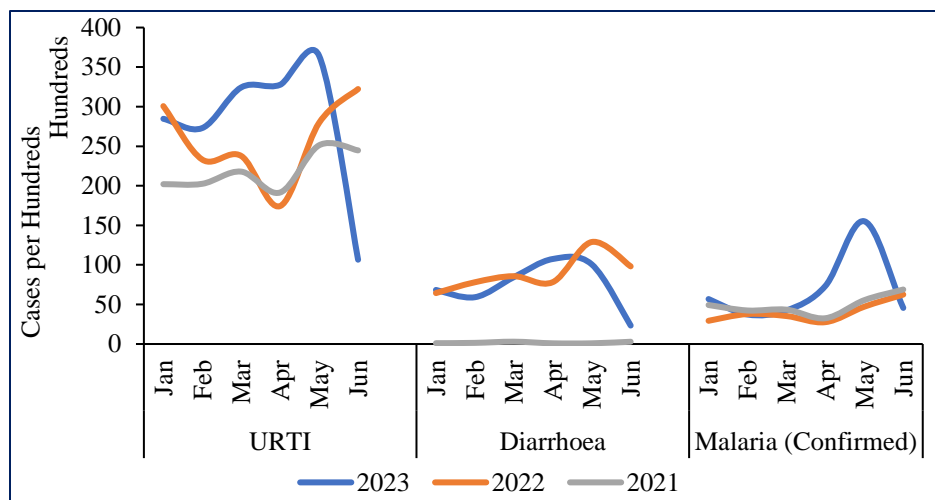


Figure 9: Morbidity Trends Among the Under Fives

general population. Equally, there was a significant increase in diarrhoea and malaria cases from the period between January to May 2023 before a sharp decline over the month of June 2023 compared to the same period last year. The increase could be attributed to continuous consumption of untreated water from the run-off coupled with the prevailing conducive environment for mosquito breeding that resulted to increased infections. With respect to mortality, compared to last year the same period January to June, the reported outbreak of measles resulted to fatalities being recorded in Turkana West especially within the refugee population, about 338 people were affected and seven deaths recorded. Cholera cases were also reported over the subject reference period. According to the SMART survey June 2023, crude mortality rate was pronounced in Turkana Central and North sub counties at 3.19 (2.27- 4.46) and 2.54 (1.49 - 4.32). With respect to under five mortality rate, it ranged from 0.21 (0.03 –1.51) in Turkana South to 0.58 (0.19 - 1.76) in Turkana West sub county. Among the notable drivers of mortality included illnesses at 45, 55,73 and 74 percent in Turkana South, North, Central and West respectively. Majority of the deaths were recorded within the areas of residence.

3.3.2 Immunization and Vitamin A supplementation

The fully immunized child coverage for the period between January to June 2023 was below the national target at 64 percent and thus stagnated with respect to a similar period the previous year when it was reported to be 63.5 percent. According to the June 2023 SMART Survey, there was a slight increase in OPV 1 and

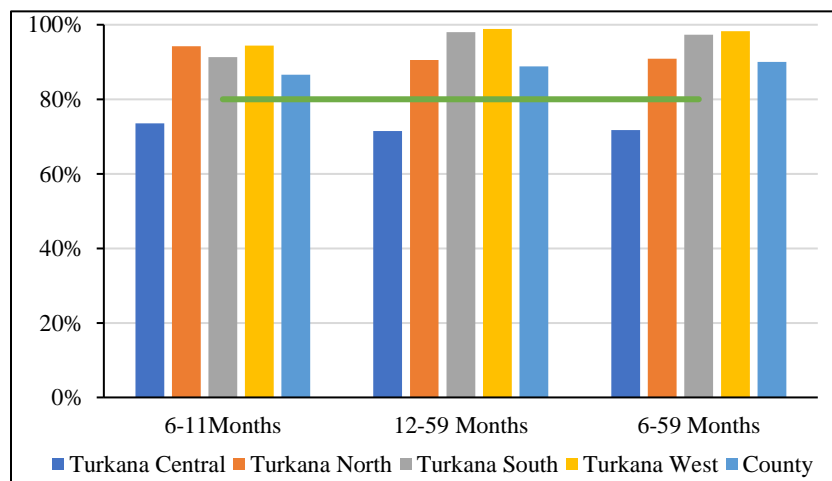


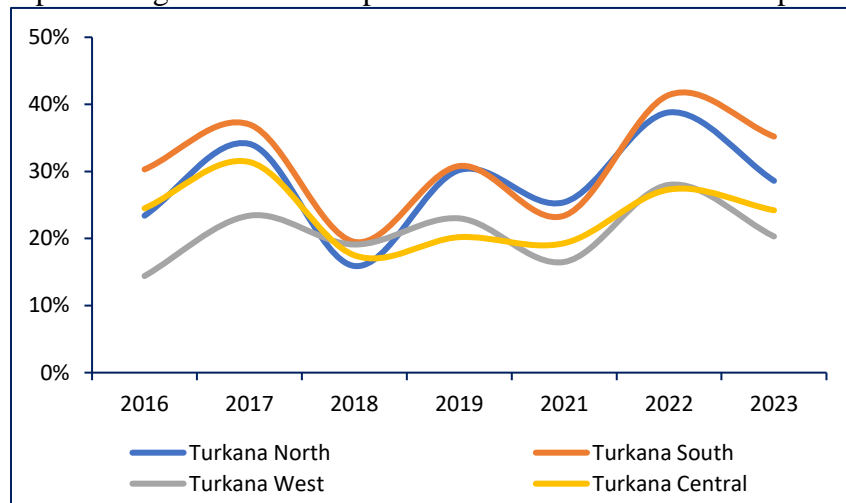
Figure 10: Trends in Vitamin A Supplementation

measles coverage from the previously recorded 97.3 and 96.2 percent to 98.7 and 98 percent respectively. However, the coverage for OPV 3 declined marginally from 96.9 percent to 92.2 percent; with all falling above the national target of 80 percent. Regarding Vitamin A supplementation, the proportion of children aged (6 -11) months who received Vitamin A from January to June 2023 was 90 percent and equally stagnated in relation to the previous year when it was recorded as 91.6 percent for the same period (Figure 10).

Notably, a significant increase was recorded among the 12-59 months cohort with the proportion receiving vitamin A supplementation increasing from 49.1 percent to 88.8 percent for the same period hence above the national target. Vitamin A supplementation coverage for the 6-59 months cohort generally increased across all sub counties with the exception of Turkana Central that recorded a coverage of 71.7 percent. The increase in coverage could be attributed to the intensified integrated outreaches, mass screening and enhanced defaulter tracing mechanisms.

3.3.3 Nutritional Status and Dietary Diversity

The prevalence of Global Acute Malnutrition (GAM) as at June 2023 was 26.4 percent representing a decline compared to the GAM rate of 34.8 percent recorded during the previous year (Figure 11). However, it remains above the critical (phase 4) threshold of above 15 percent, (SMART Survey, June 2023).



Turkana South/East survey zone recorded the highest GAM rate of 32.7 percent in relation to other survey zones, notably, that was a decline from the GAM rate of 41.4 percent recorded during the year 2022. Among the drivers of the high malnutrition rates included: lack of adequate

Figure 11: GAM Rates Trend in the County

and diverse diet within households, poor hygiene and sanitation practices, loss of livelihood through rampant insecurity over the Long Rains 2023 period, water challenges that affected production activities that enhance food availability and poor child care practices brought about by alcoholism from caregivers and increased food prices due to the high cost of transportation.

According to SMART Survey of June 2023, dietary diversity has worsened across the county with 55.3 percent of the households admitting to have consumed less than three food groups in June 2023 representing an increase from 48.1 percent over the same period during the previous year. Women’s diet consisted mainly of starch staples such as grains, roots, tubers, pulses and legumes at an average of 70 percent consumption with low consumption of eggs, nuts and seeds, fruits and vegetables at an average of 10 percent. Poor diet is associated with household shocks such as increase in food prices, slow recovery from the historic prolonged drought and socio-cultural norms related to use of vegetables.

3.3.4 Sanitation and Hygiene

More than average (58 percent) of households in Turkana use water from protected water sources such as boreholes, piped water and springs. Turkana West was leading at 67 percent in the number of households using piped water system, boreholes and springs with Turkana North trailing at 44

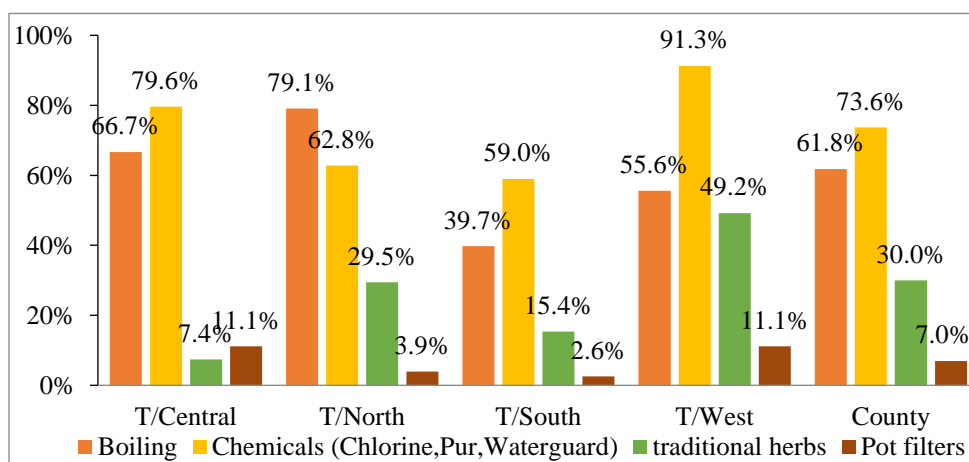


Figure 12: Water Treatment Methods

percent. Boiling, use of chemicals such as chlorine, water guard and traditional herbs were the most common water treatment methods among majority of the households. Use of chemicals such as chlorine, purr and water guard were the

most used methods of water treatment in the county at 73.6 percent and pot filters was the least used method at seven percent.

Latrine coverage in the county was at 23.5 percent as at June 2023 representing an improvement from 18 percent recorded in June 2022. Turkana North presented the highest proportion of households that were practising open defecation at 85.8 percent above the county average of 70.8 percent. The latrine coverage for all the survey zones was below the recommended minimum threshold of 50 percent. According to SMART Survey conducted in June 2023, the proportion of households washing hands at the four critical times including after visiting toilet, before cooking, before eating and after taking child to the toilet was at 86.8, 69.3, 94.5 and 53.6 percent respectively. Proportion of households using soap and water during handwashing times declined from 51.1 percent reported in June 2022 to 49.3 percent in June 2023.

3.4 Trends of Key Food Security Indicators

Table 15 shows trends of food security indicators from the short rains' assessment in January 2023 to the long rains' assessment in July 2023.

Table 15: Food Security Trends in Turkana County

Indicator	Short Rains Assessment, January 2023	Long Rains Assessment, July 2023
% of maize stocks held by households (Agro-pastoral)	0% of the LTA	32% of the LTA
Livestock body condition	Pastoral: Poor Agro-pastoral: Poor Fishing: Poor for all species	Pastoral: Good Agro-pastoral: Good Fishing: Good
Water consumption (litres per person per day)	Pastoral: 5 litres Agro-pastoral: 10-15 litres Fishing: 10-15 litres	Pastoral: 15 litres Agro-pastoral: 15-25 litres Fisher folk: 20-25 litres
Price of maize (per kg)	109	122
Distance to grazing (km)	Pastoral: 20 kilometres Agro-pastoral: 6 kilometres Fishing: 10 kilometres	Pastoral: 6 kilometres Agro-pastoral: 4 kilometres Fishing: 5 kilometres
Terms of Trade	15 kg	24 kg
Coping strategy index	rCSI: 14.5	rCSI: 15.8
Food Consumption Score	Pastoral Poor: 66.2% Borderline: 23.0% Acceptable: 10.8%	Pastoral Poor: 45.3% Borderline: 35.3% Acceptable: 19.4%

Indicator	Short Rains Assessment, January 2023	Long Rains Assessment, July 2023
	Agro-pastoral Poor: 56.7% Borderline: 25.0% Acceptable: 18.3% Fishing Poor: 58.3% Borderline: 33.3% Acceptable: 8.4%	Agro-pastoral Poor: 33.3% Borderline: 28.3% Acceptable: 38.3% Fishing Poor: 38.3% Borderline: 30.0% Acceptable: 31.7%

3.5 Education

3.5.1 Access- (Enrolment)

Enrolment increased across all the three levels with that of Early Childhood Development (ECD) increasing by 3.5 percent (3,226 learners) while that of Primary and Secondary levels increased by 1.1 percent (1,960 learners) and 4.1 percent (959 learners) respectively (Table 16). The increase in enrolment at ECD level was due to availability of school meals offered by Turkana County Government (TCG) and supported by Mary's Meals Organization. Equally, availability of the school meals programme (SMP) at primary level implemented by the ministry of Education (MoE) through the National Council for Nomadic Education (NACONEK) was a major driver of the recorded enrolment increase. Among the other factors driving increase in enrolment across primary and secondary levels included: out of school enrolment drive by Fin Church Aid, Save the Children and Life Skills Promoters with support from UNICEF and in collaboration with MoE and Ministry of Interior and Coordination, free primary education, 100 percent transition policy by MoE, free day secondary education, re-entry policy for girls by MoE, and provision of bursaries like Elimu scholarship and wings to fly.

Table 16: Access- (Enrolment)

Level	Term I 2023			Term II 2023			Reasons for increase or decrease in enrolment
	Nº Boys	Nº Girls	Total	Nº Boys	Nº Girls	Total	
ECD	51, 415	41, 150	92, 565	52, 360	43, 431	95, 791	Availability of SMP by TCG and Mary's Meal organization.
Primary	97, 638	89, 032	186, 670	98, 743	89, 887	188, 630	Availability of SMP, out of school enrolment drive, free primary education through timely capitation
Secondary	10, 789	12, 627	23, 410	11, 617	12, 752	24, 369	100 percent transition policy, free day secondary education, re-entry policy for girls by MoE (Elimu scholarship) and bursaries

Non-Attendance Rate

Approximately 1,281 (426 boys, 532 girls) at ECD level, 2,446 (1,423 boys, 1,023 girls) at primary level and 631 (310 boys, 321 girls) learners dropped out of school during the Long Rains 2023 season. Factors driving non-attendance included insecurity in Turkana South and East, long distances to school, household chores like baby-sitting, truancy, *boda boda* business in major urban centres, fishing and hawking activities, teenage pregnancies, early marriages, poverty that hindered parents from paying school fees, drug abuse and indiscipline among others.

3.5.2 Food Availability in Schools During the Season

The school feeding programme was in being implemented in all learning centres at both the ECDE and primary levels. Turkana County Government and Mary's Meals Organization were supporting the ECDE centres while the Ministry of Education through NACONEK was implementing the in-kind school meals programme (ISMP) in primary schools. The number of beneficiaries is as shown in table 17, however, over the course of term II food had not been supplied to primary schools due to delays in transportation with the one supplied in term I lasting for 60 days.

Table 17: School Meals Programme

№ of schools with school meals programme		ISMP		County SMP		ECD		Total number of beneficiaries of SMP	
Level	No of schools	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls
ECD	940	0	0	52,360	43,431	52,360	43,431		
Primary	475	98,743	89,887	0	0	98,743	89,887		
Subtotal	1,483	98,743	89,887	52,360	43,431	151,103	133,318		
Total (boys + girls)	1,483	188,630		95,791		284,421			

Noteworthy, 50-kilogram bags of beans were stocked in some sub-county stores awaiting delivery of rice, salt and oil. Other stakeholders who provided school meals support included Salvation Army, Child Welfare Society of Kenya and Free Pentecostal Fellowship of Kenya (FPFK). Delays in delivery of food commodities, insecurity, poor road network, lack of pallets, inadequate food stores, lack of improved jikos, use of classes and office as stores were some of the challenges facing effective implementation of the SMP.

Availability of Water in Schools

Water availability occasioned by longer distances to water source, low water table in some areas, drying up of wells in sites that did not receive adequate rainfall, breakage of tanks due to the excessive heat before the onset of MAM rainfall and high salinity of water like in Sasame and Kokisilei remained a challenge to most schools. Approximately 324 primary and secondary schools did not have water within their compounds, the available water in 261 schools could not last for the next three months while about 180 were in dire need of water harvesting facilities. (Table 18). Water available in institutions was not treated and there were no proper lids on water containers. Boreholes and shallow wells were the dominant source of water in institutions while rivers like in Lomil posed a significant danger to children especially over the rainy seasons.

Table 18: Water for Schools

Main sources of water in schools	№ of schools which had NO access to safe water (functional source within 100m radius)			№ of schools with inadequate or no water to last for the next three months			№ of schools in need of water harvesting and storage facilities e, g gutters, water tanks	
	ECD	Primary	Secondary	ECD	Primary	Secondary	Primary	Secondary
Borehole	65	122	16	50	90	16	89	21
River	45	32	0	25	49	0	12	16
Taps	35	42	13	85	31	13	0	0
Water Pumps	80	42	11	65	35	11	23	11
Rain Water	60	38	8	220	14	2	5	3
Total	285	276	48	445	219	42	129	51

Effect of the Season on Learning Continuity

The damages experienced in various schools across the county ranging destruction of walls, iron sheets, doors, windows, solar panels of classrooms, water tanks, dormitories, kitchens, school compound (gullies) and teaching/learning materials such as charts, text books, wooden blackboards as a result of banditry attacks, vandalism, strong winds, termite invasion, flash floods and theft resulted to interruption of learning in some schools. Some of the schools affected included: Kalemunyang, Lomil, Tiya, Nariemeto, Lomekwi, Kaloyara, Narengewoi, Lokorkor, Lopii, Loperot, Napak and Kerio.

Cross-cutting Issues in Education that Promoted or Affected Learning

Health: Malaria, Diarrheal, Pneumonia, Typhoid, Flu, Measles, Bronchitis, scurvy Trachoma, Urinary Tract Infections were some of the illnesses affecting school going children in the county over the Long Rains season. However, some interventions to address learner health concerns such as supply of mosquito nets by UNICEF, malaria diagnosis and treatment in the nearest health facilities with referrals to Lodwar hospital, deworming and vitamin A supplementation were being implemented by various actors.

Sanitation and Hygiene: With respect to WASH, 311 ECD centres, 211 primary schools and 29 secondary schools had inadequate functional latrines with pupils'- toilet ratio above 1:60. Additionally, 167 ECD centres, and 318 primary schools had no or inadequate hand washing facilities while about 417 primary and 19 secondary schools received menstrual kits for girls.

Protection: There was influx of school going children to urban centers resulting to an increase in dropout rate, street children being physically abused and neglected by parents, drug abuse and stigmatization levels were on the rise. Additionally, children got involved in petty criminal offences, were being used to offer labour at home and in market areas, teenage girls married at an early age, child trafficking, and abductions by unknown people.

3.6 Child Protection

Children are among the most vulnerable as families are driven to reliance on negative coping strategies that indirectly or directly affects children. Teenage pregnancy and motherhood rate in Turkana is high with about one in every ten teenage girls between the ages of 15-18 years, having had a live birth or are pregnant with their first child (Table 19). There was evidence of child labour as most boys would be seen herding livestock instead of attending school and some areas like Turkana West children seek refuge in Kalobeyei Refugee settlement in search for food.

Table 19: Child Protection Concerns

NO.	Case Category	Number of Reported Cases
1	Child Separation / Children on the street	197
2	Family Separation	50
3	Gender based Violence (Physical violence, Child labour)	1,199
4	Psychosocial and Emotional violence	68
5	Neglect	678
6	Child Marriages	243
7	Teenage Pregnancies	9,883
8	Child Migration	8
9	Children with disability	
	Total	12,326

Increased cases of child headed households as a consequence of child separation were recorded. There are reports of attempts and cases of rape, as well as other types of violence, of girls and boys. Unfortunately, the cases are often not reported, because only few survivors agree to seek legal aid and report to the police, with most others fearing retaliation by perpetrators, other repercussions, and societal stigma. The living conditions of children living with disability were worsened by some drivers such as conflict, flooding and notably drought and therefore required special attention.

4.0 FOOD SECURITY PROGNOSIS

4.1 Assumptions

The August 2023 to January 2024 most likely food security scenario is based on the following assumptions for the Northwestern Pastoral livelihood zone

- Based on the Kenya Meteorological Department (KMD) preliminary forecast, World Meteorological Organization (WMO), other global forecasting centers and historical analogs of El Niño events, the October to December 2023 Short Rains will most likely be average to above average over most parts of the county with a more than 90 percent probability that El Niño may extend into early 2024.
- According to technical price projections by different agencies wholesale maize prices are expected to remain at least 25 percent above the long-term average but likely to decline with the anticipated harvest.
- Following the proposed tax on fuel that might translate to a likely 20-30 percent rise in diesel and petrol prices, it is projected that fuel prices will remain elevated and result to a significant increase in food and non-food commodity prices in the county throughout the scenario period.
- Forage and water resources are anticipated to deteriorate at the start of September. The start of the October to December short rains 2023 is however projected to drive regeneration of these resources.
- Social protection programmes like NDMA's HSNP III cash transfer, WFP's Lisha Jamii, and those implemented by other non-state actors like International Rescue Committee (IRC)/TUPADO, Concern Worldwide/LOKADO, SAPCONE, ADRA Kenya, World Vision, Kenya Redcross among others are set to continue throughout up to December 2023 providing cash/food rations to the most vulnerable households.
- However, the prevalence of acute malnutrition is anticipated to remain pronounced above the emergency threshold 'Critical' (GAM > 15percent) throughout the outlook period driven by a multiplicity of factors such as morbidity, poor child care practices, women time poverty, food insecurity among others

4.2 Food Security Outlook for August to October 2023

Seasonal decline towards the end of the dry period in the prices of all livestock species is expected as the body condition starts to deteriorate and that will result to reduced purchasing power due to the low terms of trade partly driven by the maize price that is also anticipated to remain high owing to the reduced influx of imports compounded by the high transportation cost. Livelihood coping mechanisms like firewood collection and charcoal burning will most likely be intensified with reduced milk consumption likely to fuel an increase in malnutrition levels across all sites. Subsequently, it will be highly probable that a remarkable proportion of households in all the livelihood zones will not be able to meet their basic food requirements without external intervention and thus will face Crisis food insecurity outcomes across September.

4.3 Food Security Outlook for November to January 2024

Following forecasted the average to above average performance of the short rains, vegetation and water resource will probably remain average to above average across most sites thereby impacting on livestock productivity positively. Consequently, household income out of livestock production is anticipated to experience an upward boost due to the better rangeland conditions whose recovery has been aided by the MAM 2023 rainfall. The likelihood of market systems experiencing positive results shall remain high and therefore positive effects on household food and nutrition security will most likely be felt more so among pure pastoral households who rely on the market for their staple food commodities such as maize.

5.0 CONCLUSIONS AND INTERVENTIONS

5.1 Conclusion

5.1.1 Phase Classification

The food security situation for Turkana has improved marginally since the short rains' assessment conducted in January 2023 with a reduction in the population falling under emergency. However, the county remains classified at 'Crisis' (IPC Phase III). Notably, the food security outcome indicators have improved compared to the previous season aided by the significant recovery of the contributing factors.

5.1.2 Summary of Findings

Food consumption improved slightly during the season with approximately 40 percent of the population being classified as having a poor food consumption score. The highest proportion of households classified as having a poor food consumption score were residents of the Pastoral livelihood zone. The reduced coping strategy index (rCSI) remained similar to those reported previously for the same period. Proportion of children aged five years and below either severely or moderately malnourished declined (26 in every 100) and that was occasioned by the ongoing interventions and improvement in the livestock and crop productivity.

5.1.3 Sub-County Ranking

Table 20: Ranking of Sub-County in Order of Food Insecurity Severity

Sub-County Ranking {(Most Food Insecure to Least (1-7))}	Predominant Livelihood Zone	Current Main Food Security Threats/ Performance of Contributing Factors and Outcomes	Hotspot Wards
Turkana East	Pastoral	Normal MAM 2023 rainfall (91-125 percent of Normal), Extremely critical GAM rate: 32.7 percent, Forage condition: Fair to Poor, Distance to waterpoints for livestock:7-10km, Crop production: expected harvest -36 percent of LTA, Incidents of insecurity in all the wards, <i>Prosopis Juliflora</i> widespread which has affected farming activities in Katilia and Lokori/Kochodin wards, Drop out: ECD (Boys 230, girls 340; total 570), Primary (boys 210, girls 240; Total:450), Secondary (boys 45, girls 58; total 103), School infrastructure destroyed:10, Maize price: KSh 100-120 in Katilia.	Lokori/ Kochodin, Katilia, Kapedo/ Napeitom
Turkana South	Agro-pastoral	Normal MAM 2023 rainfall (91-125 percent of Normal), Extremely critical GAM rate: 32.7 percent, Incidents of insecurity in Katilu, Lobokat, and Kaputir wards, Forage condition: Fair to Poor, Distance to waterpoints for livestock:8-10km, Crop production expected harvest at 20	Kalapata, Lokichar, Kaputir, Katilu, Lobokat

		percent of LTA, <i>Prosopis Juliflora</i> widespread which has affected farming activities in Lobokat, Katilu and Kaputir.	
Turkana Central	Fishing	Normal MAM 2023 rainfall (91-125 percent of Normal), High GAM rate: 25.4percent, Forage condition: Fair to Poor, Distance to waterpoints for livestock:8-10km, Crop production expected harvest at 30 percent of LTA, <i>Prosopis Juliflora</i> widespread which has affected crop production activities in select farming sites.	Kerio, Kangatotha, Kanamkemer
Turkana North	Pastoral	Above normal MAM 2023 rainfall (141-200 percent of Normal), High GAM rate: 23.7 percent, Forage condition: Good, Distance to waterpoints for livestock:4-5km, Crop production expected harvest at 2 percent, <i>Prosopis Juliflora</i> wide spread which has affected farming activities in Kaaleng/Kaikor and Lapur wards, Drop outs: ECD (Boys 100, girls 90: total 190), School infrastructure destroyed: 5, High maize price: KSh. 100-120	Kaeris Lakezone
Loima	Agro-pastoral	Normal MAM 2023 rainfall (91-125 percent of Normal), High GAM rates:25.4 percent, Incidents of insecurity in Lokiriam/Lorengippi ward, Forage condition: Fair, Distance to waterpoints for livestock:6-7km, Crop production expected harvest at 40 percent of LTA, Stocks: cereals available, <i>Prosopis Juliflora</i> wide spread which has affected farming activities in Turkwel and Lobei/Kotaruk wards, School infrastructure destroyed:15.	Lobei/ Kotaruk, Turkwel
Kibish	Pastoral	Above normal MAM 2023 rainfall (141-200 percent of Normal), High GAM rate: 23.7 percent, Forage condition: Good, Distance to waterpoints for livestock3-4km, School infrastructure destroyed:5, High maize price: KSh. 130	Kibish
Turkana West	Pastoral	Southern Part received normal rainfall (Letea, Kalobeyei, Kakuma) while other wards (Songot, Nanaam, Lopur, Lokichoggio) Above normal MAM 2023 rainfall (141-200 percent of Normal), High GAM rate: 21.6 percent, Incidents of insecurity in Letea, Lokichoggio and Naanam wards, Forage condition: Good, Distance to waterpoints for livestock:4-5km, Crop production expected harvest at 12 percent of LTA, <i>Prosopis Juliflora</i> widespread which has affected farming activities in Letea, Lopur, Lokichoggio, Songot and Kakuma wards, Drop out: ECD (Boys:3, girls:2, Total:5), Primary (boys 11, girls 7; Total:18), Secondary (boys 12, girls 9; total 21), School infrastructure destroyed: 6.	Songot, Lopur

5.2 Ongoing Interventions

5.2.1 Food Interventions

The following food interventions are ongoing in Turkana County:

- Cash transfer under the Hunger Safety Net Programme (HSNP) targeting 39,918 beneficiaries in all the seven sub counties with a cumulative amount of KSh. 21,000.
- WFP through World Vision International was conducting food distribution targeting 39,776 beneficiaries in all Sub counties through the LISHA Jamii phase II.
- SAPCONE (a local NGO) was implementing a cash transfer programme targeting 1,900 beneficiaries with a transfer value of KSh. 10,500 in Turkana North, South and Central sub counties.
- ADRA Kenya was conducting a cash transfer programme targeting 885 beneficiaries in Lokiriam and Lobei wards both in Loima Sub- County with a transfer value of KSh. 9,100.

5.2.2 Non-Food Interventions

Table below gives a summary of ongoing interventions

Table 21: Non-food Intervention

Sub County	Intervention	Specific Location	No. of beneficiaries	Implementer	Cost (Million)	Time frame
Water						
Turkana Central	Repair of broken-down hand pumps and Water systems.	Nagulei, Kachuna, Nakalale, Kaikol, Kangatotha Girls Kangatotha, Kanamkemer, township, Kerio & Kalokol	8,200	TCG/Partners	1.2	1 month
All sub counties	Water trucking of 22 sites, NB-currently reduced due availability of water in various water sources	Napetao, Nakwei, Kasarani Kaikor, Nadipo, Kwa D.O, Nakosimai, Lopiripira, Timama, Kaekori, Kerio Centre, Kerio Secondary Kerio health centre, Lokaparaparai A, Lokaparaparai B, Katapakori, Nangechel & Lokaparaparai C	23,000	TCG, Save the Children	6	1 year
All sub counties	Repair of broken-down water points	Nariomoru, Ageles, Kaechipaluk, Kasuroi, Kaaripun, Lochoredome	Human – 4000 Livestock – 20,000	TCG		FY2022/2023
Turkana South	Equipping of a borehole, provision of 20m3 storage tank and pipeline provision.	Kasuroi	Human-3000 Livestock-5,000	TCG	4	
	Drilling and equipping of Katong'un borehole.	Kakimat	Human- 400 Livestock-8000	TCG	3	
Turkana South	Improvement of water supply- replacing destroyed pipeline to dispensary and community.	Kalemngorok	Human – 5000	TCG	4	
	Drilling and equipping of Katilu borehole	Katilu	Human- 4000	TCG	4	
	Drilling and equipping of Lopur borehole and provision of elevated steel tank.	Lopur	Human- 6000	TCG	10	
Turkana South	Rehabilitation of Nawoyaregae water source	Nawoyaregae Kaputir, Kapelbok, Juluk and Nakwamoru	Human-11000 Livestock-10,000	TCG	18	
	Improvement of Kainuk water supply	Kainuk, Kakong'u, Loyapat	Human- 9800 Livestock-15,000	TCG	11.5	
	Drilling and equipping of Looreng'o borehole	Looreng'o	Human-200 Livestock-5,000	TCG	3	
Turkana South/ Kalapata	Equipping of Engomo 2 borehole and piping of water to Ikalaleakamar	Ikalaleakamar	Human- 400 Livestock-6000	TCG	7	
	Equipping of drilled capped boreholes	Nalamaru and Naaguro	Human – 700 Livestock - 8000	TCG	3.5	
Lokichar/ Kalapata	Water trucking to water stressed areas	Kang'olemongin, Kekorisogol, Lomookamar, Ikalaleakamar and Kakali	Human- 3000	LMS (ACDI/VOCA)		
All wards	Repair and maintenance of water points damaged by floods	7 wards (30No. water points targeted)	30,000	TCG	0.9	3months

T/West	Water trucking	(Kakuma, Lopur, Songot and Nanam		TCG		
	Installation of hand washing facilities	Lokore and Kakuma town	40,000	TCG		
	Kakuma town water subsidy cost at 50% to caution on Covid-19 effect	Kakuma town	33,500	TCG	2.1	3months
All wards	Fuel subsidy for water trucking, O&M and Gensets	All wards	50,000	TCG	0.5	3months
T/ East	Eradication of prosopis and de-silting of the canal	Lokori morulem, Katilia	25,000	NIB/TCG		6 months
Education						
Sub County	Intervention	Specific Location	No of Beneficiaries	Implementer	Cost (Million)	Time Frame
Turkana East	Provision of sanitation and wash facilities	Turkana East Lokori, Katilia, Lotubae, Lokwii Nakukulas and Katilia	17,950	MoE and NGOs		1year
	Provision of dignity kits	Turkana East Lokori, Katilia, Lotubae, Lokwii Nakukulas and Katilia	17,950	MoE		3months
	Hand washing facilities	Turkana East Lokori, Katilia, Lotubae, Lokwii Nakukulas and Katilia	17,950			
Turkana West	Provision of sanitary towels to needy girls	Kakuma	11,860	MoE, NGOs		3 months
		Letea/Lokipoto/Loreng	2,100	MoE		3 months
		Kalobeyei/Oropoi	2,000	Government SEQIP program		3 months
	Provision of physical facilities and sanitation facilities	Lopur	2,050	MoE, NGOs		3 months
Turkana South	Mop-Up of Out of School Children Mary meals Food Provision FPFK Food Provision NACONEK Food Provision	Lokichar, Katilu, Lobokat Kaputir, Kalapata	52,540	MoE, Chiefs Village Elders, Partners		January to March 2023.
Loima	Provision of school meal programme and boarding schools	Namoruputh	19,438	MoE		Termly
	Supply of water	Turkwel		UNICEF and MoE		Always
	Provision of sanitary pads	Kalemunyang	3,500	Moe, Girl child network and UNICEF		Termly
Livestock						
Sub County	Intervention	Specific Location	No of Beneficiaries	Implementer	Cost (Million)	Time Frame
T. West	Training groups on pasture production and range reseedling	Letea	60	TCG CRS/KRAP	Logistics funds Technical experts	July
T. West	Training groups on construction of water harvesting structures	Lokiriama/ Lorengipi	60	TCG/KRAP		
T. West	Training water management committees	Lobei/Kotaruk	30	TCG/KRAP		
T. Central	Pasture reseedling -capacity building	Lokichar	10	JICA, ADRA -TCG		
T. East	Pasture reseedling.	Kalapata		TCG.		
Agriculture						

Sub County	Intervention	Specific location	No. of beneficiaries	Implementer	Cost (Million)	Time Frame
All Sub counties	Post Harvest Handling and Management	All wards	60,000	MoALDF & Partners	1	1Month
All Sub counties	Pest Management	Agric wards	500	MoALDF & Partners	3.5	1 Month
	Food utilization and preservation	Agric wards	2,000	MoALDF & Partners	2	1 Month
Loima	Development of Naipa irrigation scheme	Naipa	2,000	National Irrigation Authority (NIA)	13	1 year
T/East	Food processing	Morulem	3,500	MoALDF/NA RIGP/WFP	8	1 Year
T/East	Rehabilitation of Morulem irrigation scheme	Katilia	120	MoALDF /NARIGP/ WFP	11	1 year
			150	MoALDF	1.2	
T/West	Drip Irrigation	Lokichogio	350	MoALDF	1.2	
Turkana South	Rehabilitation of irrigation and infrastructure improvement	Naotin Lokapel, Juluk and N Nakwamoru	12,000	NIA	13	3Years
All Sub counties	Establishment of Agricultural training centre and agricultural mechanization services station	Irrigation Schemes	2,100	MoALDF	50	2 Years
T/East, T/Central, Loima, T/South	Development of Pro-Small Holder Procurement Strategy 2023-2027	Katilu	1,400	MOALDF	10	1 Year
T/South	Maize Seed Production	Agriculture wards	3,900	MOALDF /Kenya Seed Company/ NIA	15	1 Year
County Wide	Farm input subsidy	Turkwel, Katilia & Katilu		MoALDF/Partners	45	3Years
Loima, T. East & T. South	Bush clearing/Expansion and canal desilting of Lokapel Farm	Lapur, Lokori, Katilia, Loima	1,400	USAID-Nawiri TCG	5	1 Year
Loima, T. East & T. North	Promotion of Sustainable land management activities	Songot, Namaleteny & Kopeto	45,000	NARIGP/AS DSP/TCG	20	1 Year
T/South	Construction of Rain Water Harvesting Structures at	Loirengippi, Namaleteny & Kopeto	3,900	ASDSP/TCG	34	
Health and Nutrition						
Sub county	Intervention	Location	No. of beneficiaries	Implementer	Cost (Million)	Time Frame
All Sub counties	Vitamin A Supplementation	Outreaches MCH	Male: 150,000 Female: 149,788	MoH/Partners	3.2	June and November 2023
All Sub counties	Zinc Supplementation	All Health Facilities	Male: 88,000 Female: 77690	MoH		Routinely
All Sub counties	Management of Acute Malnutrition (IMAM)	All health facilities providing IMAM in the county	Male: 46700 Female: 43500	MoH/Partners	670	Routinely
All Sub counties	IYCN Interventions (EBF and Timely Intro of complementary Foods)	All health facilities in the county,	Male: 98,990 Female: 99003	MoH	8	Routinely

All Sub counties	Iron Supplementation Pregnant Women	Folate among	All health facilities in the county	Female: 56000	MoH/Partners	75	Routinely
All Sub counties	Deworming		Outreaches ECDC MCH	Male: 92601 Female: 92308	MoH/Partners	3.2	June and November 2023
All Sub counties	Food Fortification-MNP		ECDC M2MSG	Male: 42960 Female: 42100	MoH	1.4	Routinely

5.3 Recommended Interventions

5.3.1 Food Interventions

Following the long rains assessment on the impact of the March to May 2023 rainfall on various livelihood sectors, the team recommended cash transfer as the most appropriate implementation modality for delivering assistance to the most food insecure population in accordance with the proportions depicted in table 22.

Table 22: Population in Need of Food Assistance

S/No	Sub County	Ward	Population Range (%)	Total Population	Population in Need of Food Assistance (on the higher side)
1.	Turkana East	Kapedo/Napeitom	45 - 50	24,447	12,224
		Lokori/Kochodin	45 - 50	75,099	37,550
		Katilia	40 - 45	38,980	17,541
2.	Turkana South	Kalapata	45 - 50	33,526	16,763
		Lokichar	45 - 50	43,411	21,706
		Lobokat	40 - 45	14,825	6,671
		Kaputir	35 - 35	11,666	4,083
		Katilu	35 - 40	50,308	20,123
3.	Turkana Central	Kerio Delta	45 - 50	37,065	18,533
		Kalokol	40 - 45	25,726	11,577
		Lodwar Township	35 - 40	49,020	19,608
		Kanamkemer	30 - 35	46,603	16,311
		Kangatoha	30 - 35	26,891	9,412
4.	Turkana North	Kaeris	40 - 45	16,587	7,464
		Nakalale	40 - 45	16,093	7,242
		Lakezone	35 - 40	29,956	11,982
		Lapur	30 - 35	19,490	6,822
		Kaaleng/Kaikor	30 - 35	24,560	8,596
5.	Loima	Lobei/Kotaruk	40 - 45	12,442	5,599
		Turkwel	35 - 40	67,241	26,896
		Loima	30 - 35	11,049	3,867
		Lokiriama/Lorengippi	30 - 55	17,063	9,385
6.	Kibish	Kibish	35 - 40	11,394	4,558
7.	Turkana West	Songot	35 - 40	18,282	7,313
		Lopur	30 - 35	77,240	27,034
		Nanam	30 - 35	15,707	5,497
		Letea	25 - 30	18,261	5,478
		Kalobeyei	25 - 30	35,512	10,654
		Lokichoggio	20 - 25	22,327	5,582
		Kakuma	20 - 25	36,212	9,053

5.3.2 Non-Food Interventions

Table 23: Non-Food Recommended Interventions

Sub County	Intervention	Specific Location	No. of beneficiaries	Implementer	Required Resource (million)	Available Resource	Time Frame
Water							
Turkana East, Central, South	Pipeline extension	Lopii primary school and dispensary, Nakoret water source to Namesekin village, Kangatotha to Ng'ikeng'oi and Napak, Akurichanait village and primary school and Narengelup	4,300	TCG/IPs	9	Human	FY 2023/24
Turkana East, Central, South	Drill additional boreholes	Lokori/Kochodin/ Nagoloki, Regei, Nakolobai, Akatorongot, Lonyangkapel, Kaikit, Kaikit, Kangibenyoi, Nakaskou, Keporonit Nayokori/Katilia Nakormoru, Lotubae Girls school, Nayanae akatwan primary and Morulem mixed Natapar-angiloi, Nalukoewoi, Kalochilia, Kodring, Napesek Kaarikosi. Narii, Lokurumuka, Nagulei Kachuna, Narii, Lokurumuka, Nagulei and Kachuna, Narengelup, Losanyanait, Akurichanait and Kanaodon centre.	23,000	TCG/Ips, Peace Winds Japan	102	Human	FY 2023/24
Turkana East,	Upgrade the solar system	Nakangae borehole in Lokwii.	1,000	TCG/IPs	3	Human	FY 2023/24
Turkana East,	Rehabilitate borehole.	Lokamusoi	1,000	TCG/IPs	1	Human	FY 2023/24
Turkana East,	Construct water pans	Lopetasiki, Nakosowan, Namarias, Ayanae Esajait.	2,000	TCG/IPs	40	Human	FY 2023/24
Turkana East,	Desilting of water pan.	Namaniko	1,000	TCG/IPs	5	Human	FY 2023/24
Turkana East,	Construct cattle troughs	Lokorkor	800	TCG/IPs	0.1	Human	FY 2023/24
Turkana Central	Provision of a large storage	Nakoret water supply Kangatotha water supply	3,500	TCG/IPs	5	Human	FY 2023/24
	Rehabilitate the boreholes, redesign to ensure water reaches Kerio centre	Nangolekuruk	5,000	TCG/IPs	3	Human	FY 2023/24
Turkana South	Replacement of the faulty submersible pump	Kanaodon	3000	TCG/Ips, Peace winds Japan.	1	Human	FY 2023/24
	Replacement of 2No 10,000m ³ plastic tanks	Kanaodon, Kangakimak	3800		2	Human	FY 2023/24

Sub County	Intervention	Specific Location	No. of beneficiaries	Implementer	Required Resource (million)	Available Resource	Time Frame
	Repair of broken-down water points	Ageles, Kaechipaluk, Kaaripun, Lochoredome, Kagete, Kanaodon, Kakalel, Katioko, Natorubei, Nabeye, Namakat, Kalakoda, Napeot, Aligoi, Lorogon, Kamarese, Chibilet, Naoyatiira, Nakipi, Kapesre 1,2&3, Nayulkalale, Katiir, Loperot, Kagitankori, Kangakipur	Human: 10,000 Livestock: 20,000	TCG/IPs	10	Human	July-September 2023
	Equipping of drilled capped boreholes	Katilu and Kaputir (Kalowasa and Kalomwae)	Human: 2000 Livestock: 10,000	Peace Winds Japan	7	Human	July-September 2023
Education							
Turkana East	Provision of sanitary towels	Lokori Kochodin and Katilia, Turkwel/Lobei Kotaruk/loima/Lorengippi /Lokiriama, kibish	11,281	M.o.E/ Girl child network and education development trust	1.75	Nil	3 months
	Provision of safe drinking water	Lokori/Kochodin and Katilia	9,286	MoE, NDMA	48	Nil	3 years
Turkana West	Sanitation facilities	Kakuma, Kalobeyei, Letea, Lopur, Nanam and Lokichoggio	17,000	MoE, NGOs, World bank	3.47	Nil	2 years
Turkana South	Water Supply to Schools, Sanitary Pads, Provision of Learning Materials	Lokichar, Katilu Lobokat, Kaputir Kalapata	54,285	MoE, NGAO Education Partners	20	Nil	1 year
Loima	35 schools to be made low-cost boarding	Turkwel Lobei/Kotaruk Loima Lorengippi/Lokiriama	34,982	MoE, UNDP UNICEF, TCG	42	Nil	2 years
	Provision of school meal programme		9,305	MoE Mary Meals UNICEF	100	Nil	Termly
	Supply of water		31,450	Practical Action	60	Nil	2 Years
	Introduction of boarding schools		13,452	MoE/NACON EK/UNICEF	20	Nil	1 Year
Kibish	Provision of school meal programme	Kibish	3,765	TCG, MoE NGOs	150	Nil	Termly
	Supply of water		1,526	TCG, MoE NGOs	12	Nil	2 Years
Turkana Central	Child protection	Lodwar township Kanamkemer	1,800	MoE, Education Partners	7.5	Nil	1 Year
	Food for fees	Kanamkemer	2,000		15	Nil	6 months
Turkana South	Child Protection	Lokichar	1,100		5	Nil	1 Year
	Food for fees	Lokichar	1,300		17	Nil	6 Months
Turkana East	Child Protection	Katilia Lokori/Kochodin	1,700		7	Nil	1 year
Livestock							
All Sub counties	Distribution of Supplementary livestock feeds	County wide	20,000`	TCG and Partners	200	100	3 Months

Sub County	Intervention	Specific Location	No. of beneficiaries	Implementer	Required Resource (million)	Available Resource	Time Frame
	Capacity building of farmers		10,000	TCG, ASDSP, ELRP, GIZ and WFP	10	Nil	FY 2023/2024
	Improve overall production by increasing acreage under fodder production		10,000	TCG, ASDSP, ELRP, GIZ and WFP	60	Nil	3 Months
	Restocking of destitute households		7,500	VSG –G, ELRP TCG	150	50	August-October 2023
	Distribution of Poultry to destitute Households		1,200	ELRP, TCG and Partners	100	10	August to January 2023
Health and Nutrition							
All Sub counties	Mass screening	All sub counties	200,000	MOH/ partners	10	Nil	September to December 2023
	Integrated outreaches	In all 693-malnutrition hotspots	150,000	MOH/ Partners	100	Nil	August to Dec 2023
	Blanket Supplementary Feeding Programme	All 693 hotspots in the county	200,000	MOH/ Partners	5000	Nil	August to Dec 2023
	General food distribution	All 693 hotspots in the county	87,000	MOH/ Partners	2000	Nil	August to December 2023
Agriculture							
T/west East, South, Central Loima	Bush clearing	Heavy invested agricultural lands with prosopis	2,500	TCG/Partners	25	Nil	2 years
All Sub counties	Solarization of high yield boreholes to aid in irrigation	Irrigation schemes Rain-fed farms	30,000	TCG/Partners	2	Nil	2 Years
	Facilitate extension officers to cascade knowledge on good agricultural practices	All farming sites	119,000	TCG/Partners	56	Nil	5 Years
	Establishment of functional demo plots for modern technologies	All farming sites	119,000	TCG/Partners	2	Nil	5 Years
T/North T/West	Pest and disease control	All farming sites	119,000	TCG/Partners	4	Nil	1 Year
All Sub counties	Agricultural research	All farming sites	119,000	TCG/Partners	15	Nil	2 Years
	Establish community seed system	All farming sites	119,000	TCG/Partners	10	Nil	2 Years
	Expansion and rehabilitation of irrigation schemes	Morulem, Katilu, Naoros Kaitese, Nadunga Nasinyono	26,000	TCG/Partners	30	Nil	3 Years
T/East, T/South,	Develop and implement a	Irrigation schemes	119,000	NIA/TCG/ Partners	3	Nil	1 Year

Sub County	Intervention	Specific Location	No. of beneficiaries	Implementer	Required Resource (million)	Available Resource	Time Frame
Central, Loima	production calendar						
All Sub counties	Agricultural Farm mechanization services	All farming sites	120,000	TCG/Partners	35	Nil	5 Years
	Build a strong Public Private Partnership	All farming sites	50,000	TCG/Partners	1	Nil	1 Years
Child Protection							
Turkana Central & South	2 radio talk back shows per month	Lodwar, Lokichar, Kakuma	Children aged 1-18 years	UNICEF, DCS & MoH	1.44	0.24	6 months
Turkana Central & South	Capacity building through trainings	All wards	CHV's/ Village elders/Child protection volunteers	UNICEF, DCS & MoH	2.3	0.8	6 months
Turkana West, Loima	Create more safe places for girls and boys: boarding schools, child protection centres	All wards	Children aged 1-18 years	UNICEF, DCS & MoH	5.2	0.9	6 months
Turkana South/ Loima	Enhance awareness on child protection helpline 116. Have customer care speaking the local language.	All wards	Children aged 1-18 years	UNICEF, DCS & MoH	3.1	1.1	6 months
Turkana North	Special cash assistance for children living with disabilities	All wards	Children aged 1-18 years	UNICEF /TCG	40	Nil	6 months