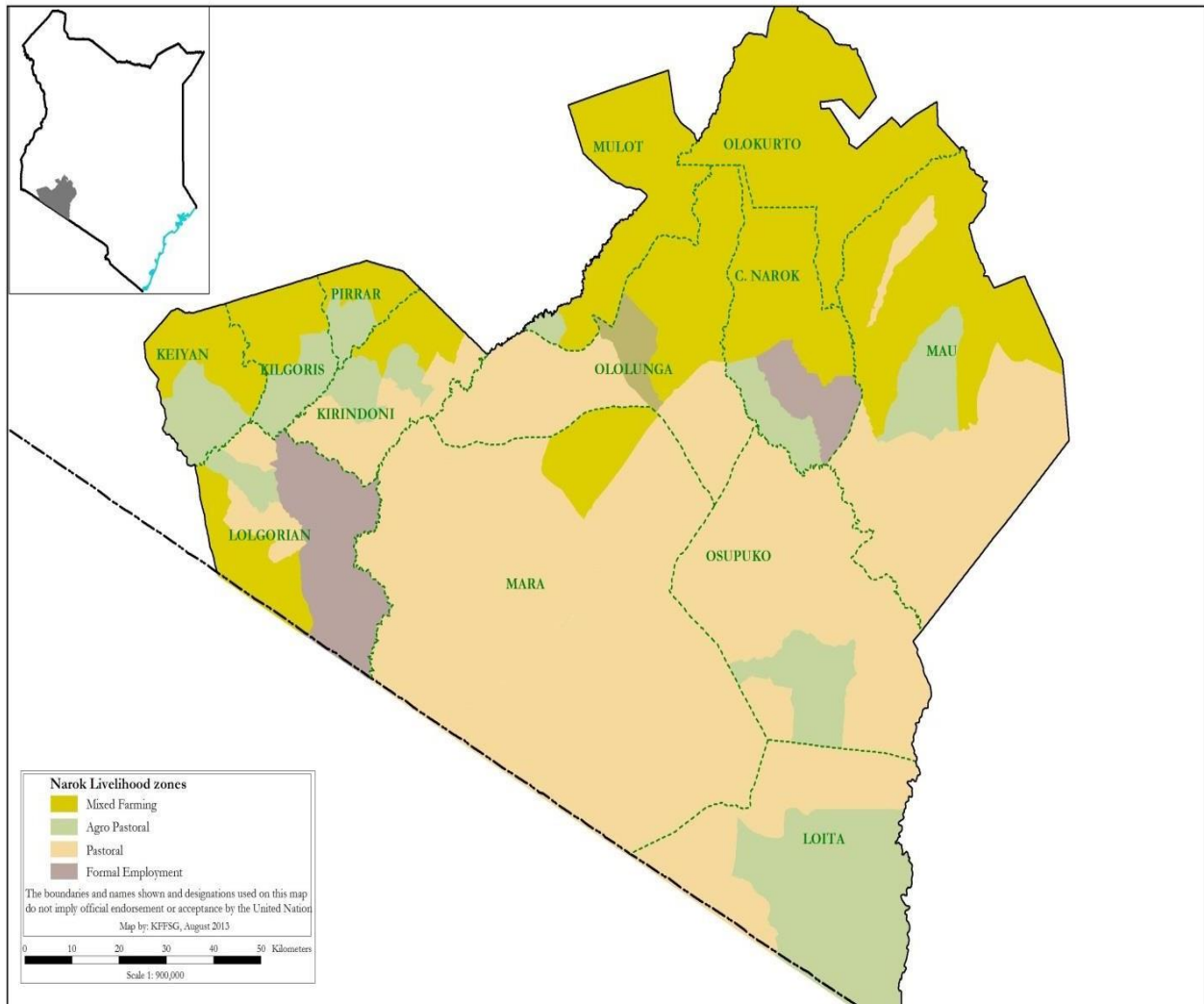


NAROK COUNTY 2019 LONG RAINS FOOD AND NUTRITION SECURITY ASSESSMENT REPORT



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

July, 2019

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EXECUTIVE SUMMARY

The Integrated Food Security Phase classification (IPC) places Narok County in the Minimal Phase (Phase 1). The main drivers to food and nutrition security were late onset, poor temporal and spatial distribution of the long rains along with crop and livestock pests and diseases leading to poor production and human-wildlife conflict in the County. Low projected crop production resulted from decreased area planted, crop failure due to erratic rains and wildlife destruction on crops in areas bordering wildlife habitats. Fall army worm and maize lethal necrosis disease posed a threat to maize production across the county during the period. The area planted was less than the long term average, with the projected harvests expected to be below normal with low stocks held by households. M reduced. Most households are depending on market supply for maize at the time which the terms of trade are declining. Pastoral areas recorded the highest maize price along with lowest goat price thus experiencing dismal terms of trade.

Pasture and browse condition was fair in pastoral livelihood zones, fair to good in agro-pastoral areas and good in mixed farming areas, where the body condition for all species was good in mixed farming zones, whereas that of cattle was ranged between fair to good in both agro-pastoral and pastoral areas. Livestock diseases were minimal and included Foot and Mouth Disease and Trypanosomiasis in parts of pastoral and agro-pastoral areas. No migrations had been reported despite below normal pasture quantities in pastoral areas. Livestock mortalities were normal. Milk production was good but consumption was below normal. The price of milk price was stable at Ksh40. The Market operations were normal, with goat price at 9 percent above normal. Maize price was above normal and equally the terms of trade remained above average at Ksh72.

Distance to water source was stable with most water sources normal. The coping strategy index stood at 5, more than the previous month. Water consumption by households was normal in all livelihood zones at 40, 30 and 20 litres per person per day in the mixed farming, agro-pastoral and pastoral zones respectively. The average return trekking distances from grazing area to watering points and domestic was normal in all the livelihood zones.

There was a decline in morbidity by 17 percent compared to the previous year, with three top diseases being upper respiratory tract infections (URTIs), diarrhoea and malaria. The percent of fully immunized children was 62 percent and lower than the standard value of 80 percent. Approximately 68 percent, 23 percent and 9 percent of the households fell within the acceptable, borderline and poor food consumption score categories respectively during the month of June. There was variation across the livelihood zones where most households in mixed and pastoral livelihood zones had acceptable food consumption scores with most households in the agro-pastoral livelihood zone falling in borderline food consumption score. There were very few schools providing school meals program in the county despite the program enhancing learning, especially for the ECD children. Schools retention rate was stable.

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1.0 INTRODUCTION

1.1 County Background

Narok County lies between latitudes 0° 50' and 1° 50' South and longitude 35°28' and 36°25' East. It borders the Republic of Tanzania to the South, Kisii, Migori, Nyamira and Bomet Counties to the West, Nakuru County to the North and Kajiado County to the East. The county is divided into six sub-counties which include: Narok North, Narok South, Trans Mara West and Trans Mara East, Narok East and Narok West. The county covers an area of 17,933.1 Km² representing 3.1 per cent of the total area in Kenya and therefore the eleventh largest in the country. It has a total population of 1,077,719 people (KNBS, projected 2016), that

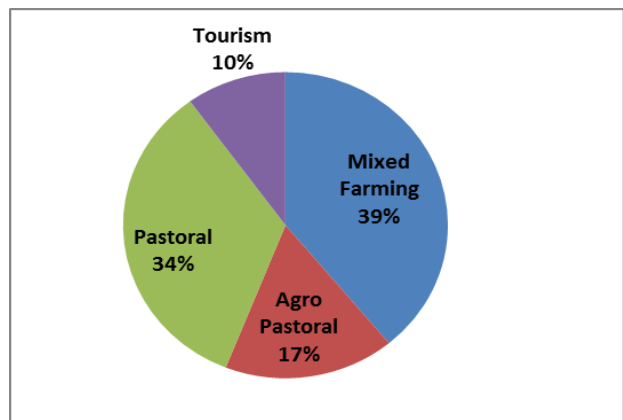


Figure 1: Proportion of population by livelihood zones

depends on four main livelihood zones which include pastoral, agro pastoral, mixed farming, and tourism/trade. Figure 1 shows the proportion of population in the four livelihood zones. The main source of food and income is livestock, crop production and tourism activities in Pastoral/Agro-pastoral, Mixed farming and Tourism/trade livelihoods respectively.

1.2 Methodology and Approach

The assessment exercise aimed at establishing the county's food security status through an objective, evidence-based and transparent approach. Primary and secondary data was systematically collected, collated and analyzed. Primary data was captured through sectoral checklists while secondary one obtained from NDMA's Early Warning database and monthly bulletins. The Technical County Steering Group (CSG) team provided briefs for respective sectors, which served as the basis for triangulation and validation. The sector briefs were discussed during the first CSG meeting held on July 8, 2019 before the assessment team proceeded to the field for verification and validation. The field visit exercise was conducted by the joint team of the Kenya Food Security Steering Group (KFSSG) and the County team constituted during the CSG meeting. The county team was constituted by technical officers from departments of Agriculture, Livestock, Water, Health and Nutrition and Education with representation of non-state actors.

The joint assessment team sampled various sites in the county through transect drives where more information was collected. Selection of sites was guided by the unit of analysis, of the livelihood zones. The team also considered the sub-counties and areas that experience frequent shocks such as floods, massive crop damage and those with livestock disease outbreaks. Schools, health facilities and markets were also visited during the transect drive. Field work started on July 9, 2019, where the team visited areas like Koromoto, Kipise, Katakala, Emarti, Kirindoni, Ilookwaya, Pusangi, Mararianda, Aitong, Lemek and Ngorengore. Information was collected through community interviews, focus group discussions, community leaders and key informants. Qualitative data was obtained by observation through visual inspection. The team held discussions with at least two communities, two key informants and two market centres in each of the sampled sites from

every livelihood. Data from the field was then reviewed and analyzed using the livelihood zone as the unit of analysis to generate the draft report. The report was finally presented to the CSG on July 12, 2019. The CSG deliberated on the report and adopted it with their inputs.

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

The long rains season onset was experienced late in the first dekad of April in comparison to normal which is in the second dekad of March. The total amount of rainfall received between March and June was 358 mm, compared to the long term amount of 497 mm received during the same period. There was poor temporal distribution of rainfall and uneven spatial distribution, as the Western (90 - 125%), Eastern parts including Narok East and Narok South and Northern parts of the county received normal to above normal rainfall while the Southern and Eastern parts received below normal rainfall (Figure 2). The rain cessation was late at the end of June.

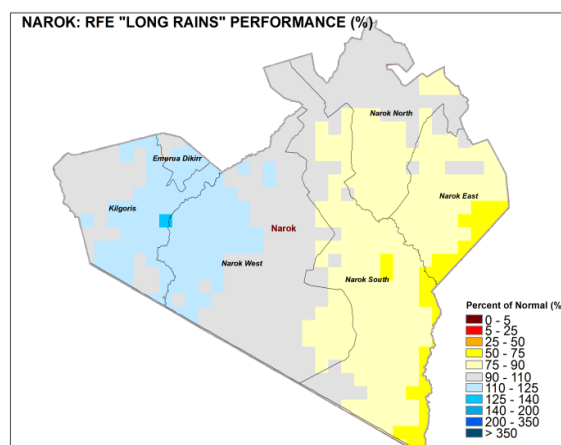


Figure 2: Long rains performance

2.2 Insecurity/Conflict

There were no incidences of conflict and insecurity in the county, except for human-wildlife conflicts at the wildlife dispersal areas. The households settled at the wildlife spill-over areas in pastoral and agro-pastoral livelihoods, especially in Trans Mara West, Narok East and Narok West sub counties were facing challenges of wildlife invasion to their crops and their livestock being preyed on. Wildlife menace had discouraged residents from farming. Most of them had resorted to livestock keeping avoiding cases of crop loss to wildlife. Wildlife had also restricted herders to few places thus limiting their forage access due to likely attacks and disease transmission from wildlife to livestock. The scenario was affecting food security in these areas, households could not cultivate food crops yet their livestock had limited access to pasture. The herders were keeping vigilant on their livestock to protect them from wildlife attack, as the game rangers maintain their patrols in these areas to control wildlife.

2.3 Other shocks and hazards

Foot and Mouth Disease (FMD) outbreak was affecting livestock in parts of Narok East and Narok South sub-counties, whereas tsetse infestation was reported in Transmara West sub-county at Sitoka, Pusanki and other areas bordering the Maasai Mara game reserve

Maize production was affected by fall armyworm infestation in all the sub-counties of the county, affecting about 10 percent of the planted acreage. Maize Lethal Necrosis Disease (MLND) had also affected maize production mostly in Transmara East, Transmara West and

Narok West sub-counties. Other livestock diseases reported in various parts of the county include, Blue tongue, Contagious Bovine Pleuropneumonia (CCBP), PPR and Contagious Caprine Pleuropneumonia (CCPP) and Trypanosomiasis.

3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

3.1.1 Crops Production

In Narok County, the long rains season is important for farmers across all livelihood zones for food production as well as selling. The major crops that were grown during the recent long rains were Maize, Beans, Irish Potatoes, Green Grams and Sorghum across the mixed farming, agro-pastoral and sections of pastoral livelihoods zones, with maize production being the largest staple food produced and consumed in the county. Acreage under maize in the mixed livelihood zones represents approximately 54 percent of the total maize grown in the county. The agro pastoral livelihood zone accounts for about 37 percent, while the pastoral livelihood zone accounts for 9 percent. 98 percent of the production is from mixed farming and agro pastoral livelihood zones attributed to the favorable agro climatic factors which contributed to higher production compared to the pastoral livelihood zones. The anticipated long rains in Narok County started during the month of April as compared to the previous long rains which started in March. This change of trend altered the planting patterns of the agro-pastoral and mixed farming communities. Most farmers prepared and planted their land during the month of March and replanted during the months of April with the exception of Narok West and Narok South sub-counties where planting was done during the months of December 2018 and January 2019. Maize and Beans in Narok West and Narok South that were planted during the 2019 long rains season were the most stressed crops which were affected by the delay of the long rains.

The poorly distributed and delayed long rains led to a slight reduction of maize hectareage by 7.3 percent within the county. It also contributed to the wilting of maize and beans in Narok West, especially in parts of Mara and Ilmotiok Wards and Narok South. The production of maize is projected to drop by 32 percent compared to LTA and a 48 percent drop in projected bean production compared to LTA. Performance of potatoes continued to improve as the rains continued during the month of June. Most farmers in Trans Mara East have shifted their planting season to short rains hence reduction in area planted with maize by 27 percent compared to LTA. Most farmers did not plant maize due to the delay of the long rains which started in the third week of April and a shift to pasture growing across all livelihood zones. However, maize planted across the county displayed symptoms of Maize Lethal Necrosis Disease and attacks by Fall Army worm, while Tomatoes had viral diseases especially in Naroosura scheme due to the increasing use of uncertified seed.

Table 1: Area planted and projected harvest

Crop	Area planted during 2019 long rains season (Ha)	Long term average (5 year) area planted during the long rains season	2019 Long rains season production (90 kg bag) Projected	Long term average (5 year) production during the long rains season

		(Ha)		(90 kg bag)
Maize	79,302	85,050	1,168,570	1,702,837
Beans	30,801	26,880	92,403	175,761
Irish Potatoes	7,872	8,268	393,600	430,848

The county also depends on irrigation mainly in Naroosura, Mosiro and Pulunga irrigation schemes though there was a slight decrease in maize hectareage from the LTA of about 4 percent. Breakage of infrastructure in the last two years has led to Mosiro scheme operating below its full potential.

3.1.2 Cereals stock

The main cereals in the county include maize, rice, sorghum and millet. Maize stocks held by households were below the LTA, though quantities of maize held by all actors was higher than LTA by 28 percent due to the greater amounts of maize held by NCPB. Traders have also continued to buy maize in anticipation of rising prices of maize grain hence the increase by 20 percent. Households are holding 91 percent of the LTA owing to the decreased production of maize due to erratic rains. The maize stocks held by the households in both agro-pastoral and mixed farming livelihood zones is expected to last for less than two months as compared to a normal of three months while in pastoral livelihood zone stocks could last one month as compared two months...

Table 2: Quantities held currently (90 kg bags)

Commodity	Maize (90 Kg)		Rice (bales)		Sorghum		Millet	
	Current	LTA	Current	LTA	Current	LTA	Current	LTA
Farmers	105,740	115,840	0	0	535	2,050	1,110	1,261
Traders	83,400	67,460	0	0	660	761	1,215	2,262
Millers	2,440	4,949	0	0	0	0	0	0
NCPB	106,207	77,241	0	0	0	0	0	0
Total	297,787	265,490	0	0	1,195	2,811	2,325	3,523

3.1.3 Livestock Production

The main livestock species in the county include cattle, sheep and goats where the dominant breeds are the Zebu, indigenous sheep and goats. Other livestock species include donkeys, poultry, rabbits and pigs. In pastoral livelihood zones, livestock contributes about 85 percent of the households' incomes while in agro-pastoral zones, it contributes to about 60 percent with estimated 40 percent in mixed farming livelihood zones. The long rains impacted positively on livestock productivity despite its delayed onset.

Pasture and browse situation

The pasture and browse quantity and quality in pastoral and agro-pastoral livelihood areas such as Kormoto, Kirindon, Mararianda were fair. In the mixed livelihood zone for example, Nairege Engare and Mulet, pasture condition ranged from fair to good. The delayed onset of the long rains season contributed to the deteriorating pasture and browse situation because they did not fully mature. Pasture is expected to last between one to two months while browse is expected to last between two to three months across all livelihood zones. Most parts of the County have improved pastures such as Napier grass, Rhodes grasses which supplement the natural grasses, while some mixed farming and agro-pastoral zones like Ololulunga, Ngorengore, Nkareta and Nturumeti have wheat, barley and maize straws and have embraced conservation initiatives (baling and storage) to supplement livestock feeding. Pastoral zones such as Mara and Siana wards in Narok West sub-county depend majorly on natural pastures and experience high competition with wildlife. The main factors limiting access to pastures were competition with wildlife, crop cultivation which encroaches on pasture land, steep slopes, thorny thicketed bushes and tsetse fly infestation particularly in Mosiro, Naikarra, Siana, Mara and Kimintet areas of the county.

Table 3: Pasture and Browse condition

Livelihood zone	Pasture					Browse				
	condition		How long to last (Months)		Factors Limiting access	condition		How long to last (Months)		Factors Limiting access
	Current	Normal	Current	Normal		Current	Normal	Current	Normal	
Pastoral	fair	good	1-2	2-3	Competition with wildlife, tsetse fly infestation	good	Good	4	4	Competition with wildlife, tsetse fly infestation
Agro pastoral	fair	good	2-3	3-4	Crops encroachment	good	Good	4-5	4	Competition with wildlife
Mixed farming	good	good	3-4	3-4	Crops encroachment	good	Good	4-5	4	Crops encroachment, steep slopes,

Livestock Productivity

Livestock body condition

Livestock body condition for sheep and goats was good across all livelihood zones, while that of cattle was good in mixed farming livelihood zones and fair in both agro-pastoral and pastoral livelihood zones. While the body condition for sheep and goats was normal across the livelihoods, the cattle body condition was below normal in the agro-pastoral and pastoral zones. The below normal cattle body condition in the former livelihoods is attributed to inadequate forage availability as a result of late onset of the long rains season.

Table 4: Livestock body condition

Livelihood zone	Current	Normal	Current	Normal	Current	Normal
	Cattle		Sheep		Goats	
Pastoral	Fair	Good	Good	Good	Good	
Agro pastoral	Fair	Good	Good	Good	Good	
Mixed farming	Good	Good	Good	Good	Good	

Tropical livestock units

The average tropical livestock units held per household varied depending on the livelihood zone and the socio-economic status of households. The decline in the livestock units for both agro-pastoral and mixed farming livelihoods is attributed to diminishing land sizes due to land demarcations, increased sale of livestock by household over time to cater for increased costs of living especially school fees, food commodities along with other needs and diversification from too many indigenous breeds to fewer improved breeds. In addition, there is a tendency in pastoral and agro-pastoral livelihood zones to shift from keeping large herds of cattle to small stock (sheep and goats) probably because of their tolerance to dry spells, especially after having previous experiences of cattle losses during past drought episodes.

Table 5: Tropical Livestock Units (TLUs) by household income groups

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	7	7	20	21
Agro pastoral	6	7	20	21
Mixed farming	4	5	6	7

Birth rate

There was a slight increase in the birth rates compared to normal, which is attributed to better rains received in the previous season in the county. The trend is positive to future household income and food security.

Milk production, Consumption and Pricing

In pastoral livelihood zones, milk availability was about one to two litres per day per household. In agro-pastoral zones it was between one to three litres per day per household while in mixed farming zones, it varied between three to eight litres.

Table 6: Milk production, consumption and prices

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	1- 3	2-3	1-2	2	50	50
Agro pastoral	2-5	2-4	1-3	3	40	40
Mixed farming	6-9	5-7	2-3	5	30	30

Milk production per household was generally stable despite decline in livestock holding sizes. The stability is attributed to improvement of breeds and livestock nutrition. Milk consumption per household/day has declined across all the zones compared to the LTA as a result of high volumes being sold for purchase of other items. Men, women and youth sell milk while decisions on milk proceeds are by men and women.

Migration

There were no livestock migrations apart from internal movements to cereal farms (wheat, maize and barley) after harvest to feed on straws as witnessed in parts Ololulunga, Nkorinkori and Kirindoni areas.

Livestock Diseases and Mortalities

The following diseases were reported: Foot and Mouth Disease (FMD), Peste des Petits Ruminants (PPR) at Kimintet, Logorian and Mara wards, Lumpy Skin Disease LSD at Suswa, Mosiro and Mara wards, Contagious Bovine Pleuropneumonia (CBPP) in some areas of Mosiro, Mara, Siana and Ilmotiok wards, blue tongue at Kimintet ward, ephemeral fever at Kormoto and sporadic cases of anthrax and rabies across the county. Ring vaccination against FMD, CBPP and PPR was done however it was not sufficient.

Water for Livestock

Water availability and access

The water in shallow wells, pans and seasonal rivers is expected to last for between one and three months compared to a normal of three to four months.

Table 7: Water for livestock

Livelihood zone	Sources		Return average distances (km)		Expected duration to last (months)		Limiting factors
	Current	Normal	Current	Normal	Current	Normal	
Pastoral	Boreholes, wells, rivers, springs, pans, dams	Boreholes, wells, rivers, springs, pans, dams	4-8	4-8	1-3	3-4	Human wild life conflicts
Agro	Boreholes, wells,	Boreholes, wells,	3-6	3-6	2-3	3-4	None

pastoral	rivers, springs, pans, dams	rivers, springs, pans, dams					
Mixed farming	Streams, wells, rivers, springs, pans, dams, shallow wells	Streams, wells, rivers, springs, pans, dams, shallow wells	0.2 -2	1-2	2-3	3-4	None

The main reason for variation in duration to last is gradual siltation across all the livelihood zones. It is also attributed to low water retention capacity by different soil types (e.g. in Narok East and West sub counties) coupled with high evaporation rates, high livestock concentration depending on one water source and competition with wild animals. There is also high upstream abstraction of water for irrigation and continued Mau forest catchment destruction.

3.1.4 Impact on availability

The crop production has least contributed to food availability in the county, since very little has been harvested to boost the household food requirements. Crop residue in some areas supported livestock feed availability, contributing to food security. Livestock contributed significantly to the season's food security through income from livestock and livestock product sales.

3.2 Access

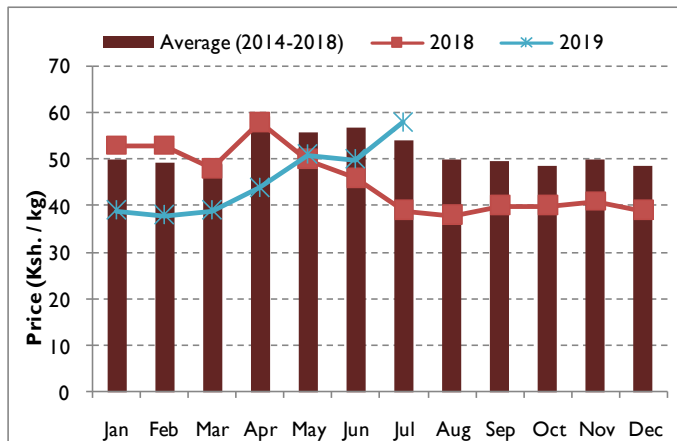
3.2.1 Markets

Market operations

Markets for livestock and other food commodities in all livelihoods were functioning normally. The markets are likely to operate without disruptions in the next six months. The major markets were Suswa, Mosiro and Ngosvani in pastoral areas, while Ntulele, Naroosura, Nkorinkori, Ewaso Nyiro and Ololulung'a were main markets in agro-pastoral areas. The main markets in the mixed farming zones were Sogoo, Mulot, Olokurto and Tipis. The markets supply sources were Kilgoris, Suswa, Aitong, Ololunga and Ewaso yiro. The markets were well provisioned with commodities where the main food staples available were, maize and rice, whereas cattle, goats and sheep. The key items households purchased were Sugar, Cooking fat, Bar soap, Irish Potatoes and Cabbages. The volumes traded were normal for the season, except for maize where quantities were slightly less than normal. Market supply trends remained stable apart from the supply for maize which seemed to be downward in all livelihoods. The demand for maize was high, especially in markets in the pastoral livelihood zone. More than 80 percent of the households in pastoral livelihood zones obtained food from markets as compared to about 70 percent in mixed farming. The percentage of households depending on market supply in the mixed farming areas was above normal while the situation was normal in pastoral livelihood zones for such time of the year. The trend of market dependence for supplies is likely to increase as compared to normal in the next three months, as harvests are expected to be lower than normal.

Market Prices

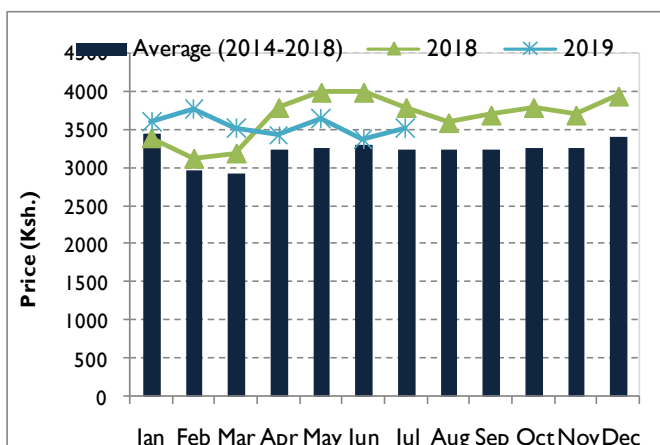
Maize prices



The average price of maize per kilogram was Ksh 58 in July compared to 50 in June, Pastoral areas recorded the highest price of Ksh 58 per kg, while mixed farming livelihoods recorded the lowest price of ksh50 per kg. The current maize price is lower than LTA by 8 percent. Maize price is likely to decrease towards the month August after harvest.

Figure 3: Current maize price compared to LTA

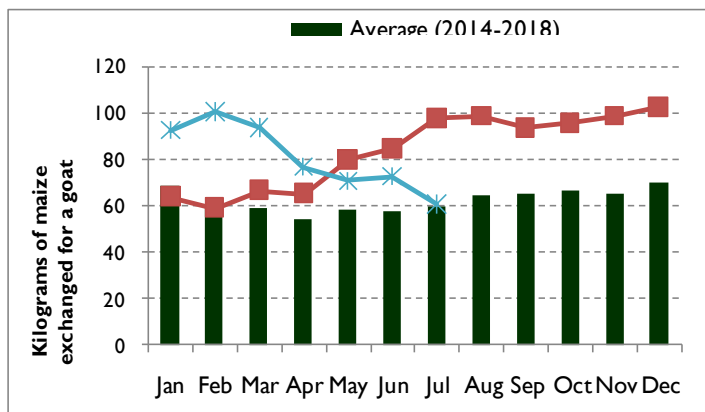
Goat prices



The average price of a medium size goat was Ksh 3,530 in July a slight increase from June Kshs 3,377 where the highest price was recorded in the mixed farming livelihood zone at Kshs 4,500 while the lowest price was recorded in the pastoral livelihood zone at Kshs 2,800. The current price falls above the LTA (Figure 4) by 7 percent. The increase in price is attributed to improved body condition as a result of forage regeneration. The goat price is likely to decrease owing to the expected decrease in browse condition following poor performance of the rains.

Figure 4: Current goat price compared to LTA

3.2.2 Terms of Trade



The current terms of trade of 61 in July was lower than that recorded in June of 73 but was close to the LTA value of 60. The mixed farming livelihood zone recorded the highest terms of trade of 79, whereas the pastoral livelihood zone had the lowest at 62. The high goat price along with relatively lower maize prices in mixed farming and agro-pastoral livelihood zones led to the better terms of trade as compared to the situation in

Figure 5: Current terms of trade compared to LTA

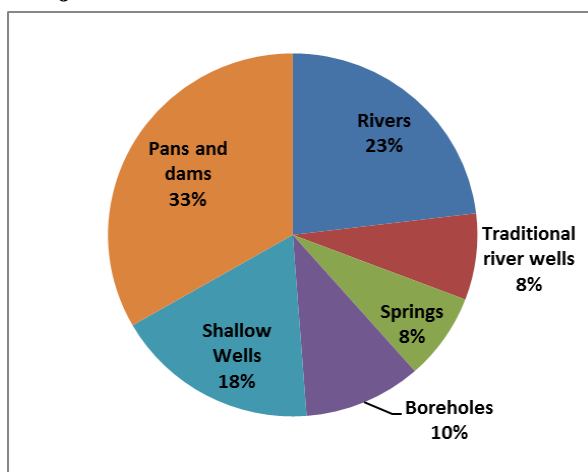
pastoral livelihoods where goat prices were lower with higher maize prices. In the next three months, goat prices are likely to decrease while the price of maize is expected to increase, which could lead to unfavourable terms of trade, especially in pastoral areas.

3.2.3 Income sources

The main income source was sale of livestock in pastoral areas while mixed farming and agro-pastoral livelihood zones depended mainly on sale of livestock, milk and farm produce. The income sources were normal for such time of the year and expected to be stable in the next three months. The stable income sources would have a positive impact on food and nutrition security in county.

3.2.4 Water access and availability

Major sources of water



The major sources of water for domestic use in the County are: rivers, dams/pans, boreholes, shallow wells and springs. The proportion of the population using the available water sources is 31, 24, 19 and 11 percent for pans/dams, rivers, shallow wells and boreholes respectively. The population using springs and traditional wells constitute 7.1 percent each (Figure 6). The surface water sources and shallow wells were recharged to about 80 percent during the rainfall season in all the livelihood zones. The current water sources were the normal ones used at such time of the year. Piped water is the main source of water in major urban areas.

Figure 6: Current sources of water

The major permanent rivers in the county include Enkare Narok River, Ewaso Nyiro River, Siyiapei River, Enkare Ngoso river and Amala river which are currently experiencing normal flow even though the seasonal rain onset was late. About 75 percent of boreholes are operational, with the rest being non-operational, where most of non-operational ones are located in Narok South and Narok West sub-counties. Mismanagement due to collapse of managements committees, breakdowns and dilapidated infrastructure are reasons for non-operationalization of these boreholes. Some of these water sources especially dams, water pans and boreholes need rehabilitation to enable them attain their maximum efficiency. Lower parts of Narok East and Narok South have the lowest number of water points due to vastness and poor accessibility. In the mixed farming and agro-pastoral livelihood zones, pans are likely to last for the normal six months while in pastoral zones, they will last for about the three months instead of the four months expected normally. All rivers and boreholes will last for a normal duration of 12 months, as the latter are permanent, whereas pans are still experiencing normal water levels as the aquifers did not change much but charged fairly well.

Table 8: Water availability

Ward/ Livelihood zone	Water Source	No. of Normal Operational	No. of Current Operational Sources	Projected Duration	Normal Duration of water	% Recharged by the Rains	Locality of Non-operational Water Sources
Pastoral	Rivers	3	3	Permanent	All year	90%	None
	Water Pans	47	38	3 Months	4 months	80%	Across the livelihood zone
	Boreholes	5	5	12 Months	12 Months	90%	None
Agro-pastoral	Rivers	3	3	permanent	All year	90%	None
	Water Pans	65	46	6 Months	6 months	80%	Across the livelihood zone
	Boreholes	23	12	12 Months	12 Months	90%	Narok South, Narok West
Mixed Farming	Rivers	2	2	Permanent	All year	100%	None
	Water Pans	253	184	6 Months	6 months	90%	Narok South
	Boreholes	5	3	12 Months	12 Months	100%	Across the livelihood zone

Distance to water sources

The average return distance to water sources in the mixed farming zone was less than one kilometre while in the agro-pastoral zone, distance ranged between 0.5 km and 3 km. The return distance in the Pastoral zones ranged between 1 and 5 Km. The distance was normal for such time in all livelihoods of the county. Distance to water sources in the mixed farming livelihood zone was lower than the other livelihood zones due to existence of shallow wells at the household level and scattered springs. Both pastoral and agro-pastoral livelihood zones have fewer water sources which are relatively distant compared to mixed farming areas. Areas with exceptionally high distances include those in the pastoral livelihood zone such as Mosiro, Suswa and Loita while in the agro pastoral areas, long return distances were recorded in parts of Katakala, Olongoolin, Esoit, Mulot ,Ololulunga and Sogoo.

Table 9: Access to Domestic Water

livelihood zone	Return Distance to Water for Domestic Use (Km)		Cost of Water at Source (Ksh. Per 20litres)		Waiting Time at Water Source (Minutes)		Average Water Consumption (Litres/person/day)	
	Normal	Current	Normal	Current	Normal	Current	Normal	Current
Agro pastoral	0.5 - 2	0.5 - 2	3 - 5	3 - 5	1 - 30	1 - 30	30	30
Mixed farming	0.2 - 1	0.2 - 1	3 - 5	3 - 5	1 - 30	1 - 30	40	40
Pastoral	1 - 5	1 - 0	3 - 5	3 - 5	1 - 30	1 - 30	20	20

Waiting time at the source

The waiting time at the water source varied between five and 30 minutes across the livelihood zones. The duration is normal. The areas in pastoral areas like Loita, Mosiro and Suswa, including those in agro-pastoral zones such as Mulot and Olongoolin recorded higher waiting time at the source as the water points are boreholes where pumping is involved.

Cost of water

Cost of water is normal in all the livelihoods although it varied with the type of water supply system. The cost per 20 litre Jerry can varied between five to 30 shillings in all livelihood zones, with the pastoral zones recording relatively higher than the rest as most water sources in these areas use energy powered system for example diesel or electric. The places with such high prices include, Mosiro and Loita.

Water consumption

The average water consumption has improved when compared to the previous season. Households in the Mixed farming livelihood zone consumed 40 litres per person per day, while in the agro-pastoral zone, the consumption was 30 litres. Pastoralists consumed 20 litres per person per day. The variation is attributed to the fact that water is available at a short distance in mixed farming areas than in both pastoral and agro-pastoral zones. Water consumption was normal in all livelihoods of the county. Areas where the distance to water was high had lower water consumption per person per day and include Mosiro and Loita, mainly located in pastoral areas. Water quality in the open waters sources such as rivers, pans /dams and pond was poor as it is heavily polluted since the sources are open to many pollutants. Open defecation and spraying of chemicals are some of the pollutants affecting water quality in the county. However, are reported cases of water borne diseases but it was in the short rains assessment where six cases of cholera occurred at Oletukat. To control contamination mostly from defecation, some pans/dams which have been constructed recently have in co-operated erection of sanitation facilities for example toilets and bathrooms.

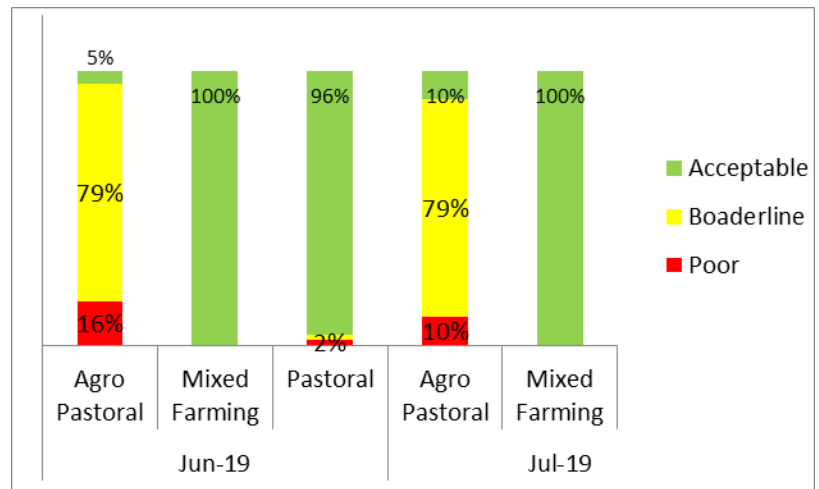
3.2.5 Food Consumption

Milk consumption

The current average milk consumption was 1.7 litres per day per household, which is less than 2.1 litres consumed normally at such time of the season. Although mixed farming zones accessed milk normally, households in pastoral and agro-pastoral zones accessed less milk than normal. The lower milk consumption was as a result of some households selling milk for income. The average price of milk per litre was Kshs 40, which is normal for such time of the year. The decrease in milk production is likely to negatively affect food security in the county, especially for children under five years as well as an income alternative since some milk is usually sold to provide cash for other food commodities.

Food Consumption

The variation of food consumption score per livelihood zones shows that majority of households in agro pastoral livelihood zone lied at borderline meaning that the households are consuming staples every day, accompanied with pulses and oil once in a while. A good percentage of the households across all livelihood zones were placed at acceptable food consumption meaning that the households were consuming staples, pulses and vegetables accompanied by milk once in a while.

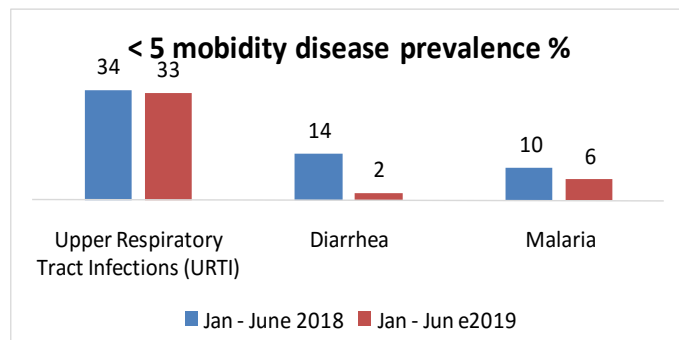


3.2.6 Coping strategy

The county's Coping Strategy Index (CSI) was 5 an upward trend from 3 in June, indicating a deterioration of food security due to food shortfalls at the household level. It can also be noted that in June 2019 48.3% of the households did not employ any coping strategy while only 51.7% employed the stressed coping strategy compared. This trend has actually been stable in July 2019 where the percentages remained the same for both the none and stressed coping strategy

3.3 Utilization

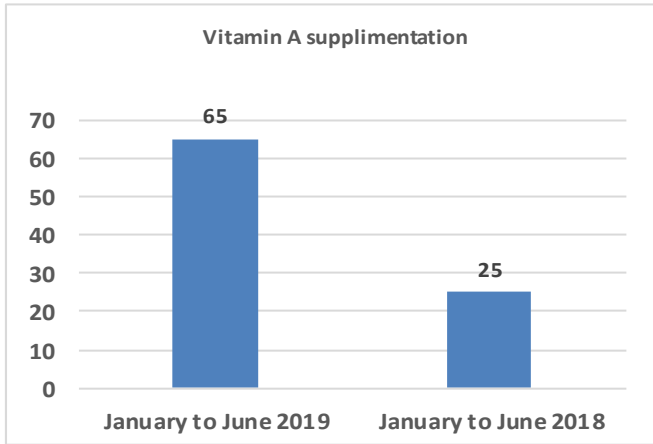
3.3.1. Morbidity and mortality patterns



The morbidity prevalence among children under five years of age includes; upper respiratory tract infections (URTIs), diarrhea and malaria, there was a significant decline of 17 percent in total reported cases from 2018 to 2019 during the period of Jan – May, although a slight decline was noted in URTI infections.

Figure 7: Morbidity and mortality trends

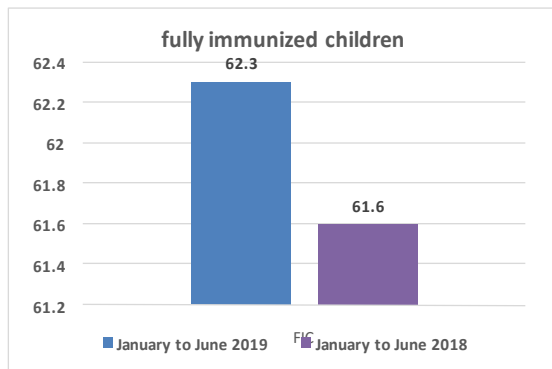
Morbidity prevalence among the general population exhibited similar trends being 8.5 percent lower in 2018 compared to 2019 of total reported cases, though URTI disease had decreased this could be attributed to the fact that the data for 2019 is up to May and not June as usual because the LRA activity started early before the data was available on DHIS. Variation exist within counties; malaria is higher in the sub counties of Transmara East and West while diarrhea is higher in the pastoral areas of Narok East and South due to lack of clean sources of water and poor sanitation especially latrine coverage which is very low. There was an unusual outbreak of cholera between January to February 2019 with 14 cases reported. This was attributed to lack of clean safe water due to the poor short rains and delay of long rains. There was an outbreak of cholera between January to February 2019 with 14 cases reported. Others diseases reported from the field visits included skin infections, gastro - intestinal infections, worm infestations, asthma, eye infections, typhoid and joint pain attributed to brucellosis. Most of the community members interviewed said they searched for health services in the public facilities but said the drugs were mostly unavailable, they also said that most of the facilities are usually understaffed. No unusual deaths were



reported for the under-fives or the general population.

reported for the under-fives or the general population.

3.3.2 Immunization and Vitamin A Supplementation



The county's immunization coverage referred to as fully immunized children (FIC) show an insignificant increase from 61.6 percent in 2018 to 62.3% percent in 2019. Immunization, the community members said that most of their children have been immunized which they rated at 50% although most of the time they had to go to health facilities which are very far and expensive in terms of transport and preferred if there were outreaches. The community is not aware of all the vaccinations necessary for the children. Both the supplementation of 6-11 and 12-59 children went

Figure 8: Fully immunized children up especially during the Malezi Bora period.

3.3.3 Nutritional status and dietary diversity

GAM by MUAC showed an upward trend of 10 percent though it was with normal average of 10 percent. It was still stable compared to the same time last year. The stable situation in nutrition trends is attributed improved household milk availability, increased consumption of food from own production e.g. pulses, local vegetables as a result of the short rains. Meal frequency for adults is at three in mixed farming zones and 3-4 for under five children and in Agro-pastoral and pastoral zones, was 3 meals for both adults and children but children had extra drinks like milk, porridge or tea. The meals consumed are mainly Ugali with tea, milk or vegetables e.g. amaranth, black night shade and spider flower or Saget, potatoes and rice depending on ability to buy. Cooked food is rarely stored and therefore there was no storage place as such. This is normal at this time of the year. Dietary diversity for all populations in Pastoral livelihood zones was below recommended standards with households consuming meals mainly comprising of starch with little milk. In agro-pastoral and pastoral livelihood zones, households consumed three to four food groups while in the Mixed Farming livelihood, households consume at least six food groups. One notable good thing in the pastoral areas is the diversification of income and sources of food. There was increased farming and rearing of chicken among pastoralists. Maternal and young child nutrition in the county is low with poor meal frequency and dietary diversity. Exclusive breastfeeding in the county as per the 2013 nutrition survey is at 38.5 percent while early initiation of breastfeeding according to KDHS 2014 was at 69.4 percent. The community interviews conducted revealed a low rate of exclusive breastfeeding rate as low as 10 percent in pastoral livelihood zone while agro-pastoral and mixed farming livelihood zones ranged from 10-30 percent. Children who are not exclusively breastfed are given milk with herbs and porridge.

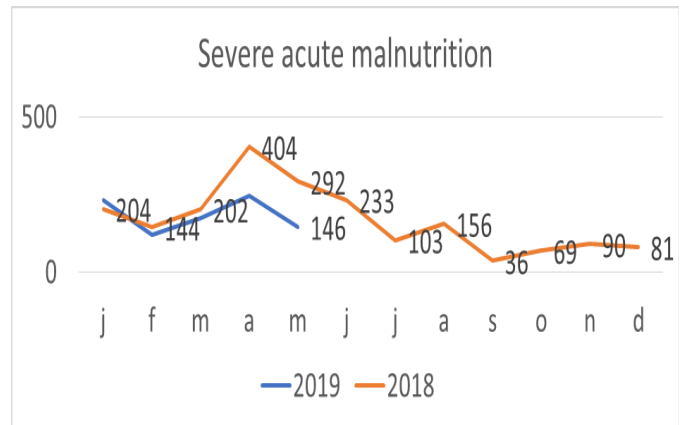


Figure 9: Nutrition status and dietary diversity

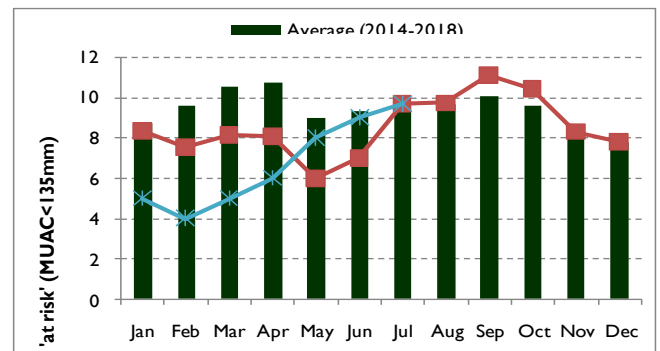


Figure 10: Percent MUAC of children at risk of malnutrition

3.3.4. Sanitation and Hygiene

The county latrine coverage lies at 52.4 percent according to SMART survey conducted in February 2018, most households were getting water from dams/water pans and used directly

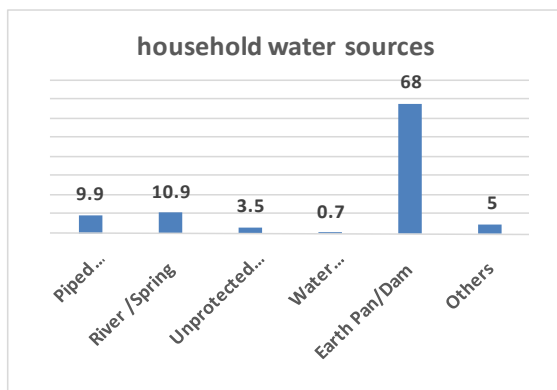


Figure 12: Main household water sources

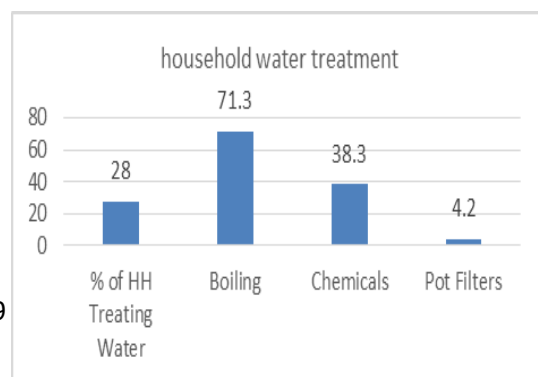


Figure 11: Household water treatment

without any treatment or boiling which explains diarrhea cases in the county. Most of the pastoral areas had no toilets and in one of the areas visited out of 30 HHs only one had a latrine. The situation gets better as you move to agro-pastoral and mixed farming areas. Households washing hands at the 5 critical times were 1.7 percent, it was also noted that household treating drinking water were 28 percent, with 71 percent boiling their drinking water.

3.4 Trends of key food security indicators

Table 10: Food security trends in Narok County

Indicator	Short rains assessment, February 2019	Long rains assessment, July 2019
% of maize stocks held by households	148 percent above LTA	91 percent of LTA
Livestock body condition	Good for sheep and goats across all livelihood zones. Fair -good for cattle in AP, Fair in Pastoral, Good in MF.	All species Good in MF zones Cattle Fair - good in AP zones Cattle Fair in pastoral zones
Water consumption (litres per person per day)	MF=30 lpppd AP=30 P=15	MF - 40L Agro-pastoral - 30L Pastoral 20L
Price of maize (per kg)	39/Kg	54/Kg
Distance to grazing	MF=0.2-1 AP=2-8 P=1-10	MF-0.2-2KM, Agro-pastoral 5km, Pastoral- 6km
Terms of trade (pastoral zone)	103 kg	61kg
Coping strategy index	P=5.4, AP=0.2, MF=3.7 Average =3.1	Mean for the county 3.0
Food consumption score	0:8:92 92 percent in acceptable	6:26:72 72 percent in acceptable

Cross-cutting Issues

3.5 Education

3.5.1 Enrollment

Narok County has a total of 941 public ECD centers, 699 public primary schools and 162 public secondary schools which have a population of 74,257, 216,759 and 38,224 enrolments respectively. The enrollment for ECD rose by 17 percent from term I in 2019 to term II in 2019, while at the same time the enrollment for primary decreased insignificantly by one percent. The enrollment at secondary level increased by three percent from term between term I and term II in 2019. The increase in enrollment for ECD is attributed to efforts by County government in its intervention of employing more ECD teachers and improvement of learning facilities while that for secondary is linked to the Ministry of Education policy on 100% transition for secondary schools. However, the decrease in enrollment observed in primary schools, is attributed to the

effect of the dry spell that affected households, leading to late planting. The children could have been involved by child labour. The respondents confessed that the enrollment would resume to normalcy as the situation has already changed after rains improved.

Table 11: Enrollment

Enrollment	Term I 2019			Term II 2019			Comments (reasons for increase or decrease)
	No Boys	No Girls	Total	No Boys	No Girls	Total	
ECD	24,800	22,550	47,350	26,789	28,682	55,471	More attain school age
Primary	107,305	102,043	209,348	105,683	101,773	207,456	Children doing casual work
Secondary	17,423	14,587	32,010	17,797	15,272	33,069	Normal increase, transfers

3.5.2 Participation

ECDE and Primary level had stable participation by all gender. However, the boys' participation was slightly higher than girls by 1 percent. Secondary schools had a higher participation rate compared to 2018 due to 100 percent transition policy. However, in terms of gender, the percentage of boys' participation was slightly higher as compared to that of girls.

3.5.3 Retention

Across the levels girls are more likely to drop out of school than boys except term I 2019 in primary schools where a higher number of boys' dropout was recorded. This is attributed to engagement of boys in search of pasture due to prolonged dry spell in term I 2019. Girls' dropout was more in term II 2019 due to early marriages and teenage pregnancies. Dropout in ECDE is attributed to movement of casual laborers and pastoralists together with their children. In secondary, the dropout for both genders was slightly in term I 2019 as compare to term II due to teenage pregnancies during the December holidays and prolong drought in term one. Some dropout and absenteeism was due to insecurity and violence in Transmara East and West. The dropout rate in term one 2019 was 0.13 percent, 0.11 percent and 0.28 percent for ECD, primary and secondary respectively. In term two, the dropout was 0.27 percent, 0.09 percent and 0.18 percent for ECDE, primary and secondary respectively. The dropout rate was higher in term two for ECD while it was lower for primary and secondary.

3.5.4 School meals programme

Most schools have Homegrown Schools Meals Programme (HGSMP), there are other informal school feeding arrangements initiated by parents and BOMs for example, Kimintet Primary Transmara West and Ilkirangaren Primary School in Narok East. Low cost primary boarding schools also depend on intermittent feeding programs supported by well-wishers and parents. A total of 110 primary schools in the county, with an enrolment of 57,081 (32,339 boys and 24,742 girls). 110 schools out 699 are benefiting from HGSMP in the county (16%). 589 Primary schools do not have any type of school feeding program in term two 2019. It was noted that, the

schools with feeding program had a higher enrollment, participation and retention compare with those without schools feeding program. Challenges in implementation of school feeding programs includes, transportation of the food items to schools, lack of water for cooking in dry season, lack of ECD feeding programs and lack of variety of food items.

3.5.5 Inter Sectoral links

Most schools affected by drought had challenges of water, sanitation and hygiene. A few of them had functional water storage tanks with clean water, a few had non-functioning hand washing facilities due water rationing, 560 out 699 Primary schools had no hand washing facilities and 402 schools had no drinking water. The students to latrine ratio was high in majority of schools. 22 Primary schools had no functional latrines. This had no effect to the current status of enrolment, participation and retention for girls and boys as it is normal in the County. The following health and nutritional services were provided to schools. 136 Primary schools in Transmara East sub-county had a deworming program while 150 Primary schools in Narok South had communicable diseases program. These programs have improved health of the children hence their participation and retention. Girls in some schools benefit from Government provision of sanitary towels, therefore improve access, participation and retention. Availability of food improved enrolment, participation and retention of girls and boys.

4.0 FOOD SECURITY PROGNOSIS

4.1 Prognosis Assumptions

- According to Kenya Meteorological Department weather report of June 2019, the March – May long rains season has officially ended and rains are expected only in the western and central parts of Kenya through the rest of June, with cumulative rainfall of 50-80 percent average across eastern Kenya and 25-50 percent of average in Tana River County. Narok County being among the areas that will not have rainfall, therefore the food security prognosis for the next six months is based on the following assumptions:
- The off-season rains are likely to be sporadic and poor in temporal and spatial distribution.
- Maize price will drop during harvests and sharply start increasing as the yields will be below normal.
- Pasture and browse will be depleted in pastoral livelihoods in the next three months following the short growing period due to late onset of the rains.
- Crop harvests and stock for maize and beans will be below normal, due low yields affected by erratic rainfall, fowl army worm and maize lethal necrosis disease.
- Normal market operations with stable commodity food prices to prevail
- The body condition of cattle will deteriorate in the next three months leading to decreased prices.
- Livestock migrations in pastoral areas likely to start early.
- Most water pans in pastoral areas will dry earlier than normal due to low recharge and high evaporation.

4.2 Food security outlook August to October 2019

The sporadic off-season rains expected in few parts of the county will support pasture in mixed farming livelihood zones but leave most parts of pastoral and agro-pastoral livelihood zones with under grown pasture and browse. There will be crop failure for crops which will not have matured. Due to below normal pasture and water, milk production will drop and affect food availability and access by households. The livestock body condition will deteriorate and lead to lower livestock prices thus negatively affect the terms of trade and eventually food security. The food consumption will be affected by poor milk consumption and low terms of trade, hence triggering malnutrition rates to the under five years children, Since harvests will be below normal, households will lack sufficient food and nutrition status will decline. Livestock migrations will occur in most pastoral zones.

November 2019 to January 2020

The short rains in Narok County are expected to be timely hence improving crop production and forage. Most open water sources are expected to be recharged to normal capacity hence reducing distance to water source and improve water access for household use and livestock use. It is expected that the livestock body condition will improve across all livelihood zones, hence increase of milk availability consumption of milk at household level and better livestock prices improving the household purchasing power. Due the increased milk production, milk utilization at household will increase hence the malnutrition rates will improve among the fewer than five year's children. Food stocks at the household level will increase hence it is expected that the household food consumption will improve due to diversification of diets.

5.0 CONCLUSION AND INTERVENTIONS

5.1 Conclusion

5.1.1 Phase classification

The county is classified in the Minimal Phase (Phase 1) of the Integrated Food Security Phase Classification (IPC). Despite of the delayed onset of the long rains, the three livelihood zones of the county exhibited stability, owing to the fairly performing food security indicators. Most of the food security indicators are modest with those for the mixed farming tending to none stressed while the agro-pastoral and pastoral livelihood zone being classified in Phase 1. The food security situation is expected to worsen. Factors that need to be monitored include, crop and livestock pests and diseases in order to minimize associated risks.

5.1.2 Summary of Findings

The main drivers to food and nutrition security in the county include, erratic rainfall, crop and livestock pests and diseases and human-wildlife conflict. The area planted was less than the long term average, with the projected harvests being below normal. The stocks held by households were below normal and maize price is expected to increase as the goat price likely to drop. Pasture and browse condition was fair in pastoral livelihood zones, fair to good in agro-pastoral areas and good in mixed farming areas, where the body condition for all species was good in mixed farming zones, whereas that of cattle was ranged between fair to good in both agro-pastoral and pastoral areas. No migrations had been reported despite below normal pasture quantities in pastoral areas. Livestock mortalities were normal. Milk production was good but consumption was below normal. The price of milk price was stable at Ksh40. The Market

operations were normal, with goat price at 9 percent above normal. Maize price was above normal as the terms of trade remained above normal at 72. Distance to water source was stable with most water sources normal. The coping strategy index was 3, less than for the previous year in the same period. There was a decline in morbidity by 17 percent compared to the previous year. The percent of fully immunized children was 62 percent and lower than the standard value of 80 percent. There were very few schools providing school meals program in the county despite the program enhancing learning, especially for the ECD children. Retention rate was stable.

5.1.3 Sub-county ranking

Sub-county	Food security rank (1-6)	Food security rank (1-6)
	Very Good (5-6)	Good (4) Fair (3) Poor (1-2)
Narok East	1	<ul style="list-style-type: none"> - Poor rainfall distribution & poor pastures - Invasive weed species- depleting pastures - Sanitation issues - Malnutrition is high - Livestock diseases FMD - Poor access to market - Human wildlife conflicts
Narok South	2	<ul style="list-style-type: none"> - Poor rainfall received - High malnutrition rates - Pastures in poor condition and Inadequate water quality - Poor toilet coverage - Wildlife conflicts - Low income diversification
Transmara East	3	<ul style="list-style-type: none"> - Crop pest and diseases-FAW, MLND - High malnutrition rates - Inadequate market structures
Narok West	4	<ul style="list-style-type: none"> - Livestock diseases - Wildlife conflict
Narok North	5	<ul style="list-style-type: none"> - Good market infrastructure - Fair rains - Better toilet coverage
Transmara West	6	<ul style="list-style-type: none"> - Good market infrastructure - Better rains - Better toilet coverage

5.2 Ongoing Interventions

5.2.1 Food interventions

5.2.2 Non-food interventions

Livestock

organization	Intervention	Location	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost	Time Frame
MOALF	Promotion of livestock productivity (extension services)	Countywide	60% of population	MOALF	+VE	10M	continuous
	Livestock diseases prevention and treatments		All affected households	Vet. department	+VE		
RPLRP (Regional pastoral livelihood resilience project)	Development of water infrastructure, capacity building ,livestock marketing infrastructures and disease control	Mulot, Nkareta, Ewaso Ngiro Suswa and Low land areas of the County	45% of population	MOALF and Relevant line ministries	+VE	100M	2018-2022
ASDSP Project and	Support Capacity Building beef and dairy Value Chains	County wide	60% of population	MOALF and partners staff	+VE	30M	2018-2022
NARIGP (National agricultural rural inclusive growth project)	Improvement of agricultural productivity and profitability	20Wards of the County	75% of population	MOALF	+VE	300M	2018-2022
KENTTE C	Tsetse and Trypanosomiasis control and eradication	Tsetse infested areas of the County	40% of population	MOALF and their staff	+VE	6M	continuous

**Agriculture
Immediate interventions**

County	sub county	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (Kshs)	Time Frame
Narok	All	Fertilizer Subsidy	15,000	Agriculture	Improved crop production	35.5 million	continuous
	Transmara west Transmara east Narok North Narok West, Narok South	Piloting of crop insurance	All farmers targeted, 45 farmers registered	MOAI, Insurance companies	Farmers ready to risk as they are cushioned against hazards affecting crop farming	127,056	Started in the long rains season
Narok	All	Capacity Building/chemical support for fall armyworm management training	Farmer groups where maize is grown	Agriculture	Improved crop production	ion	continuous
Narok	All	Quelea quelea bird control 6 million birds	Wheat, sorghum farmers	MOAI, national and county	Prevention of grain losses		continuous
Narok	Narok North, Narok South, Narok East	Plant clinics	farmers	Agriculture	Plant health		continuous

Medium term / Long Term interventions

County	Sub county	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food	Cost (Kshs)	Time Frame
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					security		
Narok	All	Plantwise Clinic	24000 farmers	Agriculture ,CABI	Reduction in crop losses	3 million	2 years

EDUCATION

Sub-county	Intervention/ activity (Please be as detailed as possible.)	Name of school	№ beneficiaries	Implementers (Please list all partners.)	Please detail any impacts (positive and negative) of each intervention.	Timeframe (please detail whether activity is long-term, short-term, when it began and when it will finish.)
Narok East	Farming/livestock fattening	Olasiti Boarding	860	School	Provision of meals	Continuous
Narok West	Home Grown School Feeding Program	34 Schools In Section 4	20526	GoK	Access And Retention	Long-Term
Narok South	Parent program School meals for boarders	Elangata Ntuka Kuntai Masantare	2000	Parents BOM	Parent can't afford to provides food	Short - Term

Sub-county	Intervention/activity	Justification/ reason/need for this activity	Location	№ beneficiaries targeted	Proposed implementers	Required resources	Available resources	Timeframe
Narok West	Timely, adequate and regular release of Home Grown School Feeding Program Funds	Low Retention And Access	Narok West	20526	GoK	Funds	Nil	Immediate

Transmara East	Provision of food	There are pockets of poverty area. Drop out cases is high	Emurua Dikirr	14,000 5,000	Head teachers Teachers	Maize Beans Hand wash Water	Human resources	May June
Narok South	Home Grown	To reduce absenteeism	Narok	1000	Parents BOM	4500	1	2 yrs

5.3 Recommended Interventions

5.3.1 Food interventions

No food interventions were made

5.3.2 Non-food interventions

Immediate

Coverage	Intervention	Specific locations	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Countywide	Pasture improvement, establishment, conservation and construction of strategic feed reserves	All wards	5,000 households	MOAL&F Community, relevant stakeholders, Development partners	10 M	5 m (1 Tractor And Baler For Pasture Harvesting, Human Resources)	2019-2020
Countywide	Enhanced disease surveillance and control, vector control and treatments	countywide	Countywide	MOALF and partners	8M	Human resource	2019-2020
Countywide	Breed improvement	Countywide	3,500 households	MOAL&F and partners	3 M	None	2019-2020

Long term recommended interventions

Area	Intervention	Locations (examples)	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Countywide	Reseeding of denuded areas (rangeland management)	Eleng'ata, Enterit, Ntuka, Mosiro, Koyaki, Ongata Naado, Ewaso Ngiro	5,000 households	MOAL&F and partners	50m	None	2019-2020
Countywide	Breed improvement	County wide	3,500 households	MOAL&F and partners	30 m	None	2019-2020
Countywide	Development of market infrastructure- sale yards, holding grounds, market information and linkages to markets	County wide	5,000 households	MOAL&F, livestock marketing councils and the community	20m	None	2019-2020

Agriculture

Immediate interventions

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Medium term / Long Term interventions

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Narok	All	Plantwise Clinic	24000 farmers	Agriculture CABI	Reduction in crop losses	3 million	2 years

EDUCATION

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Sub-county	Intervention/activity	Justification/reason/need for this activity	Location	No beneficiaries targeted	Proposed implementers	Required resources	Available resources	Timeframe
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Transmara East	Provision of food	There are pockets of poverty area. Drop out cases is high	Emurua Dikirr	14,000 5,000	Head teachers Teachers	Maize Beans Hand wash Water	Human resources	May June
Narok South	Home Grown	To reduce absenteeism	Narok South	1000	Parents BOM	4500	1	2 yrs

Water

Immediate On-going Interventions							
Sub County / Ward	Intervention	Location	No. of beneficiaries	Implementers	Cost	Time Frame	Implementation Status (% of completion)
Mosiro	Construction of Olmunanda water pan	Angata Naado	800 People 10,000 Livestock	Resilience project		2 months	60%
Melilii	Drilling of Olendeem bore/hole and reticulation	Olendeem		Rift Valley Water Works Agency		3 months	30%
Medium and Long Term On-going Interventions							
Narok Town	Construction of Narok sewer system	Narok town	40,000	ADB			25%

Recommended Interventions

Immediate interventions

Agriculture

County	Sub county	Intervention	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Narok	All	Capacity building	5000 farmers	Agric Department, Stakeholders	3 Million	Agricultural officers	1 year (annually)
	All	Provision of drought recovery	2000 farmers	MOAI, Agriculture	4 Million	Trained Agricultural officers	1 year (annually)

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Medium term/Long Term interventions

County	Sub county	Intervention	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time frame
Narok	All	Fertilizer Subsidy	25,0000	GOK	2.1billion	Personnel, Vehicles, motor bikes	Continuous
Narok	All	Upscaling of crop insurance	2000 farmers	MOAI, Insurance Companies	To mitigate against crop production losses brought about by hazards	6 million	5 years

Education

Sub-county	Intervention /activity	Justification/ reason/need for this activity	Location	No beneficiaries targeted	Proposed implementers	Required resources	Available resources	Timeframe
Narok West	Timely, adequate and regular release of Home Grown School Feeding Program Funds	Low Retention And Access	Narok West	20526	Gok	Funds	Nil	Immediate
Transmara East	Provision of food	There are pockets of poverty area. Drop out cases is high	Emurua Dikirr	14,000 5,000	Head teachers Teachers	Maize Beans Hand wash Water	Human resources	May June

Narok South	Home Grown	To reduce absenteeism	Naroos ura	1000	Parents BOM	4500	1	2 yrs
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