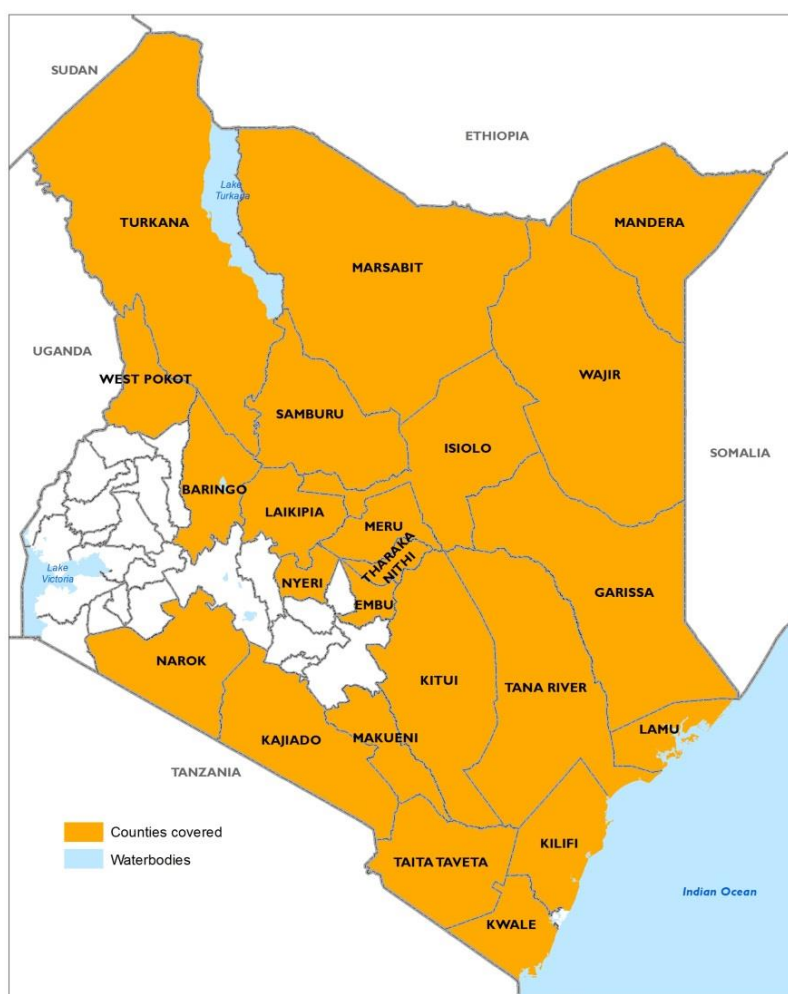




Government of Kenya

THE 2020 SHORT RAINS SEASON ASSESSMENT REPORT

Kenya Food Security Steering Group (KFSSG)



Collaborative report of the Kenya Food Security Steering Group (KFSSG): Ministries of Devolution and ASALs; Agriculture, Livestock and Fisheries; Water and Irrigation; Health; and Education, Science and Technology; the National Drought Management Authority (NDMA), WFP, FEWS NET, UNICEF, FAO, World Vision, ACF, and Arid and Semi-Arid Lands (ASAL) County Steering Groups (CSGs): with financial support from the Government of Kenya (NDMA), WFP, UNICEF and partners.

February 2021

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Acronyms

CBPP	Contagious Bovine Pleuro-pneumonia
CCPP	Contagious Caprine Pleuro-pneumonia
CSG	County Steering Group
CSI	Coping Strategy Index
CSMP	Community School Meals Programme
ECD	Early Childhood Development
ESMP	Expanded School Meals Programme
FEWSNET	Famine Early Warning System Network
FMD	Foot and Mouth Disease
FNSA	Food and Nutrition Security Assessment
GAM	Global Acute Malnutrition
HGSMP	Home Grown School Meals Programme
IPC	Integrated Phase Classification
KFSSG	Kenya Food Security Steering Group
KNBS	Kenya National Bureau of Statistics
LSD	Lumpy Skin Disease
LTA	Long-Term Average
MAM	Moderate Acute Malnutrition
MUAC	Mid-Upper Arm Circumference
NDMA	National Drought Management Authority
PPR	Peste des Petits Ruminants
RSMP	Regular School Meals Programme
SAM	Severe Acute Malnutrition
SDA	State Department of Agriculture
TLU	Tropical Livestock Unit
ToT	Terms of Trade
URTI	Upper Respiratory Tract Infection
WFP	World Food Programme
WHZ	Weight for Height Z-score

EXECUTIVE SUMMARY

I. Introduction

The Kenya Food and Nutrition Security Assessment (FNSA) is a multi-agency, multi-sectoral exercise led by the government of Kenya, and is conducted in 23 arid and semi-arid (ASAL) counties. The assessment is carried out by the Kenya Food Security Steering Group (KFSSG) in collaboration with the respective County Steering Groups (CSGs). The KFSSG is a multi-agency body comprised of government departments, United Nation (UN) agencies and Non-Governmental Organizations (NGO) concerned with food and nutrition security and is chaired by the National Drought Management Authority (NDMA) and co-chaired by the World Food Programme (UN WFP). Food security/insecurity in the country is highly dependent of rainfall. Given that the rainfall is bimodal in the ASAL counties, the assessments are conducted bi-annually, after the short rains of October to December and the long rains of March to May. The 2020 Short Rains Assessment was conducted between 13th January and 18th February 2021.

II. Objective

The main objective of the assessment was to determine the impacts of the 2020 short rains on food and nutrition security in 23 ASAL counties. The assessment also considered the cumulative effects of previous seasons and impacts of other shocks and hazards including COVID-19 pandemic on food security.

III. Methodology

The food security/insecurity analysis focused on acute food insecurity, but also considered other chronic issues that had direct impacts on food security. The assessment was centered on the four pillars of food security: food availability, food access, utilization and stability. The contributing factors and outcomes and their effects on the key sectors of agriculture, livestock, water, health and nutrition, education, peace and security, and markets and trade were also considered. The assessment also identified interventions to address the issues arising in each sector.

The assessment covered the 23 counties that comprise the ASAL region of Kenya, and whose population generally the most food insecure given their high levels poverty, high vulnerability to shock and hazards, and the of aridity and rainfall variability of the areas. The area covers approximately 80 percent of Kenya's landmass, and for the purposes of the assessment is classified into various livelihood zones grouped into five clusters; Pastoral North-West, comprising Turkana, Samburu and Marsabit; Pastoral North-East, comprising Wajir, Garissa, Isiolo, Tana River and Mandera; South-East Marginal Agriculture, comprised of Kitui, Makueni, Tharaka Nithi, Embu, and Meru; Coastal Marginal Agriculture, comprising Kilifi, Kwale, Taita Taveta and Lamu; and the Agro-pastoral cluster of Baringo, Narok, Kajiado, West Pokot, Laikipia and the northern part of Nyeri county (Kieni sub-county). The main livelihood activities in these clusters are Pastoralism, Agro-pastoralism, Mixed Farming, Marginal Mixed Farming and some Irrigated Cropping, and these form the unit of analysis.

The assessment involved the collection of both primary and secondary data. The principal sources were: (i) the NDMA's drought early warning and monitoring system; (ii) data collected from the relevant sectors at county and sub-county level; (iii) community interviews and market interviews using focus group discussions and trader interviews; (iv) secondary data from

nutrition surveys (SMART surveys); (v) field observations during transect drives; and (vi) agro-climatic data from FEWS NET.

The Acute Integrated Food Security Phase Classification (IPC Version 3) was used for the analysis. The IPC is a standard global tool for classifying the severity of food insecurity and ensures that best practice is being applied. IPC Acute Malnutrition analysis was also carried out to understand both the food and non-food causes of malnutrition.

IV. Drivers of Food and Nutrition Security

Rainfall Performance

The 2020 October to December short rains performance was mixed across the country. The rainfall onset also varied with the eastern part of the country receiving a late onset by one to over four dekads late. However, the western part of the country the rains were 1 – 3 dekads early except for the Lake Victoria region and parts of northeastern Kenya and localized areas in Turkana, Samburu, Garissa, Tana River, Taita Taveta, Kajiado and Narok where the onset was timely.

Cumulative amounts upwards of 200 percent of normal were received around the Lake Victoria region, northern West Pokot and western Turkana. Amounts of 111 – 200 percent of normal were received across most of Western Kenya including West Pokot and Turkana, in the coastal areas, and parts of central Marsabit. Average rainfall amounts measuring 91 – 110 percent of normal were received in central, southern and southwestern part of the country and parts of Turkana, Marsabit, Mandera, Samburu, Baringo and Laikipia counties. Across the rest of the country, cumulative rainfall received was 51 – 90 percent of normal with the exceptions of localized areas in Turkana, Marsabit, Wajir Tana River, Garissa and Lamu receiving 25 – 50 percent of the normal.

The rains were moderately distributed across space but poorly distributed across time where there were reports of dry spells and early cessation which negatively impacted crop production at their critical stages.

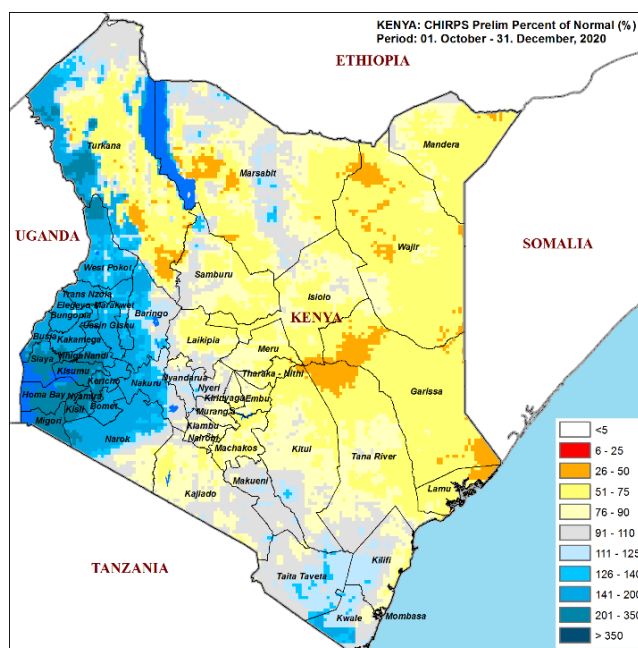


Figure 1.1: October to December short rains as a percent of normal

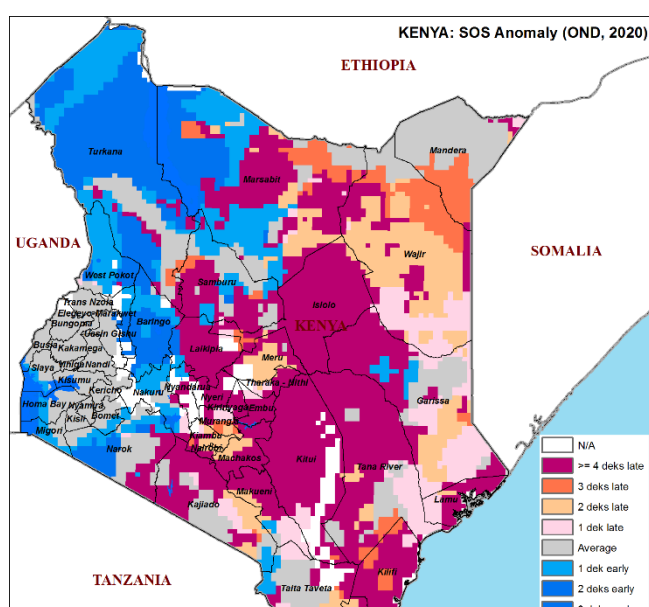


Figure 1.2. Rainfall onset anomaly

The COVID – 19 Pandemic

Since the first case of COVID-19 was reported in Kenya in March 2020, as at February 01, 2021 Kenya has had a total of 100,856 cases, 83,936 recoveries and 1,766 fatalities and over the month of January a positivity rate of 2.4 percent. The Ministry of Health (MoH) in January announced plans to acquire 23,000 health workers – among them 8,000 volunteers for the vaccination program, that will include data capture, logistics and planning, monitoring, reporting, and administration of the vaccine.

Measures currently in place include; mandatory testing and self-quarantine for travellers, encouragement of organizations and companies to let staff work from home and the encouragement of cashless transactions, enforcement of social distancing measures including public service vehicles (PSVs) ordered to carry only a 60 percent capacity, suspension of political gatherings and a nationwide daily 2200hrs-0400hrs curfew and mandatory testing of truck drivers ferrying essential goods at all border crossing points is still required. In early January, the tax relief measures announced including reduction of Value Added Tax (VAT), income tax among others lapsed reducing household income earnings and increasing the cost of commodities countrywide.

In January, schools reopened countrywide amidst concerns such as achievement of social distancing in overcrowded classrooms and the effect of the prolonged closures that resulted in teen pregnancies, poor nutrition and permanent dropouts. Gradual and partial easing of COVID 19 restrictions have been ongoing but poor households continue to face income deficits and constrained access to food due to decreased labour demand and income opportunities. With households mostly depending on markets before the currently available short rains harvests in February, food prices have been mixed across the country however the costs of non-food commodities like transport coupled with low household income continue to put a strain on household food security. Restricted imports have reduced supplies of nutrition commodities for management of acute malnutrition and the stigma associated with COVID-19 has resulted in poor health-seeking behavior with less people visiting the health facilities for treatment, which has also resulted in reduced growth monitoring and nutrition screening coverage for children under five years of age.

V. Other shocks and hazards

Desert Locust invasions

In Wajir the current wave of locust invasions was reported on November 2020 from Somalia through Diff and later from Mandera. This was followed by other swarms which has affected the entire county with most impact being reported in Wajir South and Wajir West sub counties. Out of the total of 78 swarms reported to date, 44 of them were controlled through spraying. There are currently five swarms present in the County. So far, the total impact is estimated at at destruction of 310 hectares of cropland that amounts to 65 percent of total cropped area and over 7,500 hectares of pasture and browse. Across the pastoral northwest areas of Turkana, Samburu and Marsabit, the locusts have also destroyed large areas of pasture and browse by feeding on leaves and leaving the trees bare. There were cases diarrhoea and even death of livestock after ingestion of the locust droppings which also affected open water sources carried by runoff water which caused stomach ailments in human beings.

In the marginal areas, the desert locusts were reported to destroy over 1,000 hectares of millet, cow peas, green grams and maize in Mutha, Ikutha and Kanziko wards in Kitui South Sub

County of Kitui County, with about 400 households and 40 hectares of crop land in Makueni cropping zones affected, and about 350 hectares of maize and pearl millet affected in Tharaka sub county of Tharaka Nithi County.

In early February, many small highly mobile immature swarms are reported to be spread across 24 counties and through the month, the number of swarms arriving from the bordering areas of Somalia and Ethiopia have drastically reduced. According to the [FAO Desert Locust Bulletin](#) about 11,349 hectares were treated in Kenya in February out of which 6,067 hectares were done by aerial operations leaving only a few small swarms concentrated in some areas. However, some rains received in late February in Marsabit, Samburu and Turkana counties may be sufficient to drive the maturing of swarms and laying of eggs which may result in hatching of more locusts in the northern pastoral areas.

The current wave of desert locust invasions though significant is expected to be less impactful than that of 2020. This is because of various reasons including;

- 1.Improved surveillance capacity (more ground surveillance data, more ground surveillance teams, more reports using mobile apps and hotlines, aircrafts, awareness campaigns, coverage through aerial surveys
- 2.Better control capacity in terms of pesticide stocks available, spray assets in worst affected areas, ground control equipment, ground teams deployed.
- 3.The current swarms are much smaller (approximately 100 hectares compared to 500 hectares previously) and carry less locust numbers than the 2020 wave.

The current funding status for Kenya is adequate but was projected to run out between mid-March to mid-April. As at mid – January, the current funding status for the Greater Horn of Africa and Yemen was 79, 94 and 100 percent for curbing the spread of desert locusts, safeguarding of livelihoods and coordination respectively with funding gaps of 31.83 million USD and 3.89 million USD and no funding gap for coordination.

Conflict and Insecurity

Human-wildlife conflict was reported in Meru (Igembe North) where herds of elephants destroyed crops at the farms. In Makueni, areas bordering Tsavo national park reported destruction of water tanks and reservoirs by elephants, destruction of food crops, loss of human life and death of farm animals. In Kitui (Kitui South and Mwingi North) there was a reported loss of about 85 goats, 47 sheep and 14 cattle while in Kajiado County, communities bordering game reserves in Entonet/Lenkism, Olongulului and Matapato South Wards reported destruction of crops by wild animals in Kimana, Rombo and Kuku wards and wildlife encroachment into their lands that constrained access to pasture and browse for their livestock. In the farming areas bordering the game reserve in Wenje, Chara and Maziwa in Garsen, Tana River County, elephants, buffalos and other wild animals destroyed maize and green gram crop along the Tana Delta, further reducing food availability.

With the dwindling forage and water resources, resource-based conflict is on the rise especially driven by migration. In Tharaka Nithi and Meru, in-migration of livestock herders from Isiolo (Kina) resulted in limited access to pasture and conflict in the region while in Lamu livestock influx from Tana River and Garissa that are destroying crops have caused conflict between the farmers and livestock herders in Pangani, Lumshi, Witu, Bahari and Mkunumbi wards. In Isiolo, conflicts have been reported in Oldonyiro, Cherab, Sericho, Garbatulla, Kinna and Ngaremarara wards of Isiolo County and areas neighboring Garissa (Lagdera Sub County) that led to closure livestock markets, abandonment of strategic boreholes, closure of schools which

have not reopened yet and six human fatalities. A large-scale security operation in Baringo to quell the conflicts reported in Tiaty Sub-County has led to disruption of livelihood activities, market closures, interruption of transport, health and education services. Cattle rustling incidents were reported in Laikipia in Ol-Moran and Sipili.

Here were also incidences of inter-community conflicts and banditry reported. In Turkana, there has been increased conflict and retaliatory attacks over time restricting livestock movement and access to forage resources. Turkana East had a significant number of cattle rustling and bandit attacks in Kapedo/Napeitom ward that caused the closure of businesses in Kapedo and Lomelo markets leaving an estimated 10,000 households without access to food and non-food commodities. Ongoing government operations to improve security rendered the Marigat-Chemolingot-Kapedo and Lokori-Lomelo-Kepedo roads inaccessible. In Kapedo, bandits torched a primary school and houses leaving 10 households without shelter. There was insecurity following raids by members of the Merille and Toposa communities in Turkana West (Nanam, Lokipoto), Turkana North (Lokichoggio, Todonyang) and Kibish.

In Mandera County, inter clan conflicts were reported in Mandera South and Lafey sub counties that led to loss of six lives. Terror related threats continued to be experienced in areas bordering the Republic of Somalia mainly Mandera, Wajir, Garissa and Lamu counties constraining livelihood activities such as herding, trading, closure of health facilities.

VI. Summary of Key Findings

The number of people facing acute food insecurity is estimated at 1.4 million an increase from 739,000 reported during 2020 long rains assessment and therefore requiring food assistance. Out of 1.4 million, it is estimated that 238,000 people are in emergency phase (IPC phase 4) spread across eight counties (Mandera, Wajir, Garissa, Tana river, Marsabit, Samburu, Turkana and Isiolo) with the rest in Crisis phase (IPC phase 3). The increase in numbers is attributed to below normal performance of the short rains thus impacting negatively on already fragile food security situation in the ASALs. Moreover, the situation is expected to further deteriorate during the March – May long rains season with an estimated 2 million people likely to experience acute food insecurity.

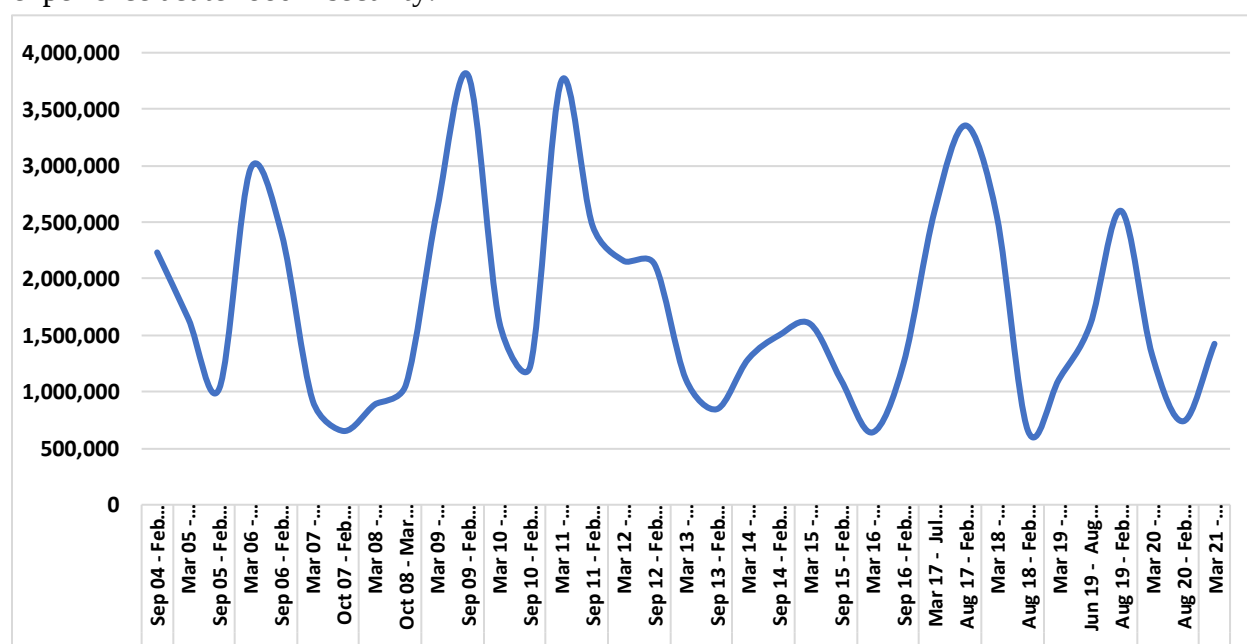


Figure 1.3: Trends of food insecure populations

The pastoral counties experienced a deterioration in food security situation owing to lingering impact of desert locust and covid 19 control measures alongside below average short rains. Pasture and browse regeneration was fair with current condition being fair to poor which is expected to last for 1 – 2 months compared to 2 – 3 months normally. Return trekking distances between grazing areas and water sources are comparable to normal of 5 – 15km. However, long trekking distances of over 25km was observed in parts of Wajir, Garissa as well as North Horr and Laisamis in Marsabit County. Most of the surface water sources recharged between 30 – 70 percent of capacity. Given poor recharge coupled with high temperatures, most of pans and dams have dried up while the remaining will last for 1 – 2 months. Over 85 percent of pans in Marsabit have dried up further exerting pressure on ground water sources. Watering frequency for shoats was every 1 – 3 days a week while for cattle was every 1 – 2 days a week compared to daily normally. Camel were watered every 4 – 7 days compared to once a week.

Milk production declined to 1 – 2 litres compared to normal of 2 – 5 litres owing to poor pasture condition and increased trekking distances. Consequently, milk consumption declined to 1 – 2 litres compared to 2 – 3 litres normally. Scarcity in milk has resulted in significant price increase with a litre retailing at Ksh. 60 – 80 compared to normal of 30 – 70. Milk production is expected to decline further with diminishing pasture and water as well as increased migration.

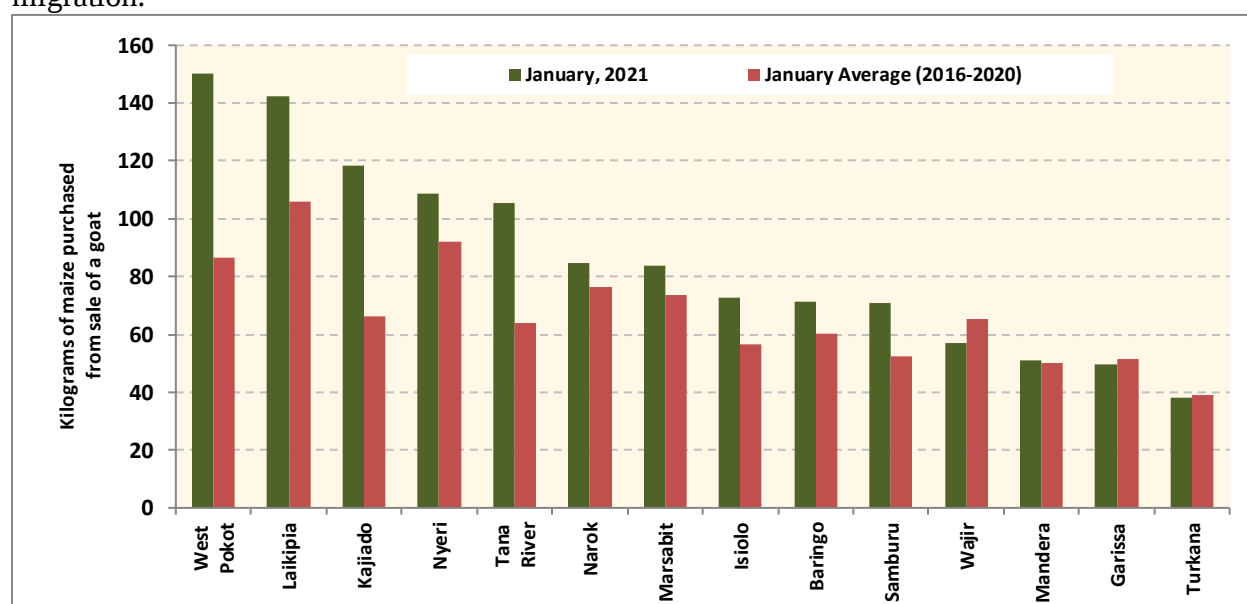


Figure 1.4: Comparative terms of trade in pastoral and agro pastoral counties`

Stable food and livestock prices across the pastoral counties ensured stable terms of trade and thus minimal negative impact on households purchasing power. The current terms of trade were favorable and above the five-year average across most of pastoral counties. However, earlier than normal migration in search of pasture and water within and outside the pastoral cluster were reported and in some areas over 60 percent of livestock having migrated to dry season grazing areas.

Household food security situation in the marginal agricultural areas remain stable despite the below normal short rains performance mainly attributed to carry over stocks from long rains season especially in coastal marginal counties. In south-eastern marginal, maize production was 77 percent of long-term average and households have 57 percent of long term average for

maize stock. Similarly, Coastal marginal cluster experienced below average rains with maize production declining by 46 percent while household maize stocks are 69 percent of long-term average. Increase in food commodity prices is expected to continue as household stocks diminish in coast marginal clusters while in southern eastern marginal counties prices are expected to remain below long term average.

VII. Categories of Food Insecure Populations

Findings from the food and nutrition security assessment indicate an overall worsened situation that has been greatly influenced by the poor performance of the October to December rainfall season (short rains) across all the livelihoods in the country. This is also aggravated by other factors that have been in play before and during the season including COVID-19 pandemic, crop pests and diseases including the desert locusts' invasion, food commodity price spikes and livestock diseases.

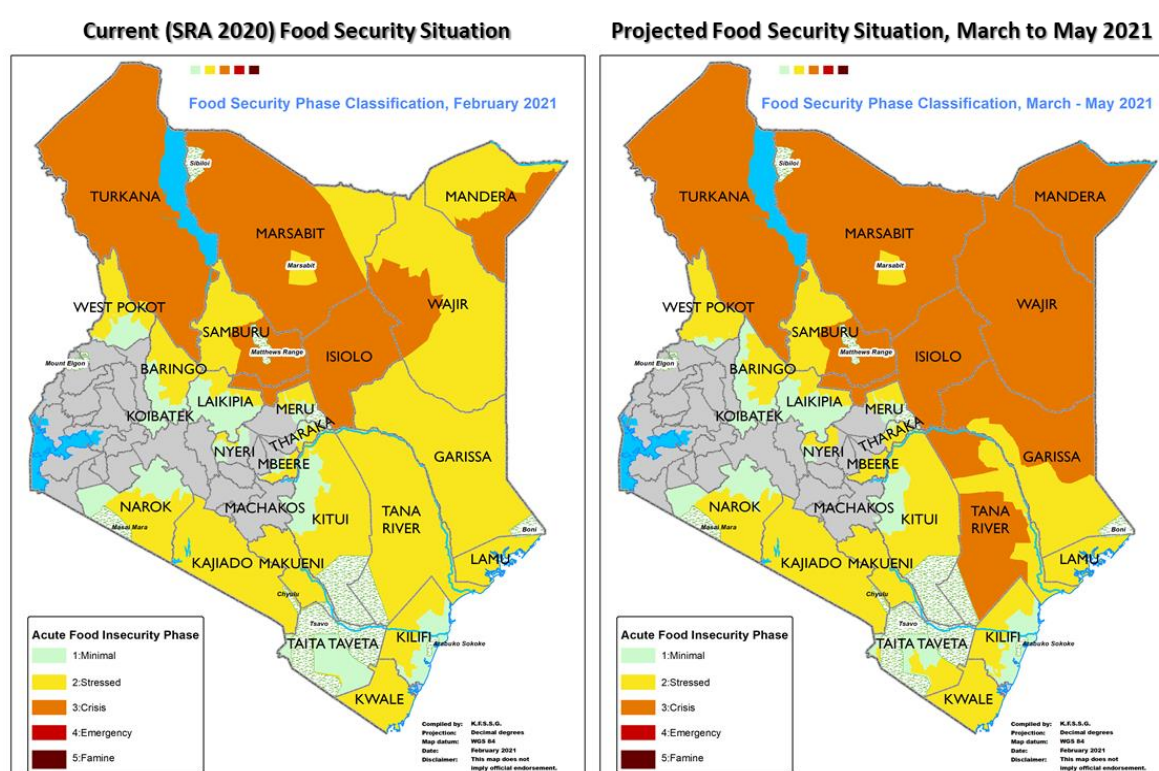


Figure 1.5: Current and projected national food security phase classification

While people in majority of the counties across were classified to have remained in IPC phase two¹ as it was from the food and nutrition security assessment conducted in August 2020, there were significant changes observed in Turkana, Marsabit, Isiolo Parts of Samburu, Wajir and Mandera counties depicting a worsened situation to crisis. For the areas which remained in IPC phase two, mostly counties in the South East Marginal Agriculture livelihood cluster including Kitui, Makueni, and parts of the North east Pastoral livelihood cluster including Tana river,

¹ IPC classification guides convergence of evidence by using generally accepted international standards and cut-offs. Phase 1 minimal; Households are able to meet essential food and non-food needs without engaging in atypical and unsustainable strategies to access food and income. **IPC Phase 2 (Stressed)** Households have minimally adequate food consumption but are unable to afford some essential non-food expenditures without engaging in stress coping strategies.

Garissa Wajir and parts of Mandera, despite this classification, the situation worsened and the number of people under this phase increased

The poor performance of the rains season remained the major factor that contributed to a worsened food security situation affecting all the livelihoods, worst hit being the pastoral and agropastoral livelihood zones. The social economic impact of COVID-19 pandemic also continued to play a key role to households' access to food during the season. This was mainly as a result of low trade volumes for most commodities in the market, mainly attributed to reduced purchase power for households, averagely larger numbers of household members to be fed during the period as a result of prolonged schools' closure. Presence of desert locust swarms was also reported in quite a number of pastoral, agro pastoral and mixed farming livelihoods. Though locust invasion had no immediate significant impacts to availability of food at the household level during this period, it is projected that this may impact more in a few weeks to come affecting pasture and browse as well as crop production for the next season.

VIII. Population in Crisis (IPC Phase3)²

The number of people considered to be in need of immediate humanitarian assistance are those classified to be either in IPC phase 3 (see footnote) or worse off. The proportion of people under this category increased by about 90% overall from 739,000 recorded in August 2020 to 1,425,000 in February 2021. In the counties with pastoral livelihoods as the most predominant, Turkana, and Isiolo had the highest increase where population in need almost doubled comparing August 2020 and the current season. Other counties with significantly higher number of people in phase three or worse were Mandera, Wajir, Garissa and Marsabit (Table 1).

For the counties with marginal agriculture and agro pastoralism as the predominant livelihoods, Lamu, Kwale and Kilifi counties in coastal marginal agriculture zones had the highest increase of people in IPC phase three, recording double the numbers that had been established under this category during the long rains assessment (LRA) in August 2020. Other counties including Makueni, Kitui, Tharaka Nithi, Meru (Meru North) which had minimal people in need of immediate humanitarian assistance during the LRA had recorded significant numbers during this assessment.

With the performance of the 2021 long rains season (March – May) forecasted to be poor, this situation will most likely worsen and these numbers may increase towards August, a situation that is highly dependent on the performance of the oncoming season, with rainfall and the main driver of food security situation across the ASAL areas in Kenya.

² **IPC Phase 3** (Crisis), Households either Have food consumption gaps that are reflected by high or above-usual acute malnutrition or Are marginally able to meet minimum food needs but only by depleting essential livelihood assets or through crisis

Table 1: Food Insecure Populations by County, March 2021

	County population (KNBS 2019 Census)	Population in need of assistance after the 2019 SRA	Population in need of assistance after the 2020 LRA	Population in need of assistance after the Oct – Dec 2020 SRA
Turkana	926,976	139,000	93,000	185,000
Wajir	781,263	111,000	117,000	117,000
Mandera	867,457	130,000	130,000	173,000
Garissa	841,353	84,000	84,000	126,000
Marsabit	459,785	69,000	69,000	92,000
Samburu	310,327	47,000	31,000	47,000
Laikipia	268,262	26,000	0	26,000
West Pokot	621,241	51,000	0	62,000
Tana River	315,943	47,000	32,000	47,000
Isiolo	268,002	40,000	27,000	54,000
Kajiado	1,117,840	56,000	0	6,000
Baringo	666,763	33,000	33,000	67,000
Narok	1,157,873	0	0	
Sub-total, Pastoral	7,551,115	833,000	616,000	1,002,000
Makueni	987,653	73,000	0	50,000
Kwale	866,820	78,000	43,000	87,000
Kilifi	1,453,787	80,000	73,000	145,000
Kitui	1,136,187	87,000	0	57,000
Taita Taveta	340,671	17,000	0	17,000
Embu (Mbeere)	272,357	27,000	0	0
Tharaka-Nithi (Tharaka)	133,595	40,000	0	7,000
Meru (North)	764,885	69,000	0	38,000
Nyeri (Kieni)	198,901	0	0	0
Lamu	143,920	14,000	7,000	22,000
Sub-total, Marginal Agricultural	6,075,275	485,000	123,000	423,000
Total	13,626,390	1,318,000	739,000	1,425,000

IX. National Nutrition Situation Summary

According to integrated phase classification for acute malnutrition (IPC-AMN), the nutrition situation has remained similar across arid counties compared to August 2020 analysis. Nutrition situation was critical in Garissa, Wajir, Mandera, Isiolo, Samburu, Turkana, North Horr & Laisamis sub-counties in Marsabit County and Tiatiy in Baringo County. Tana River and West Pokot Counties were classified in serious phase (IPC Phase 3), Saku and Moyale sub-counties in Marsabit County were in alert phase (IPC Phase 2) while Kitui was in acceptable phase (Figure 1.6 current map). Nutrition situation is expected to deteriorate within the same phase in most counties if the 2021 long rains perform poorly impacting negatively on food security situation with milk production and consumption in arid areas expected to worsen (Figure 1.6 projected map). The main driver of acute malnutrition was poor dietary intake with

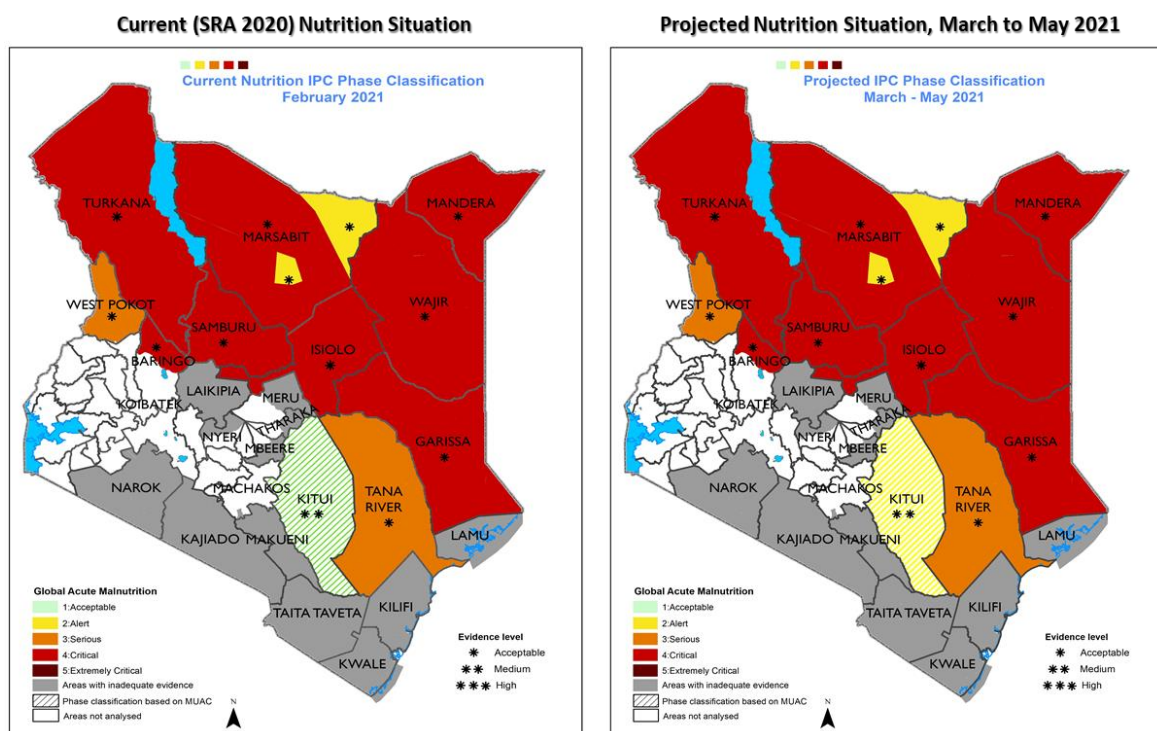


Figure 1.6: Current and projected acute malnutrition phase classification

reduced milk production and consumption which forms the main diet for children in arid areas reported across the arid areas. This was due to relatively poor performance of short rains resulting to deteriorating animal body condition. Other drivers included morbidity, poor childcare practices, poor sanitation and health environment. Recurrent and unusual shocks such as flooding reported due to backflow of Lake Turkana, interruption of regular operations and livelihood by the rising Turkwel Dam, current desert locust invasion in several counties, security incidences for example in Baringo County and COVID-19 related impacts especially in urban centers where livelihoods were most affected exacerbated the malnutrition problem. Basic causes such as low literacy levels, poor infrastructure and poverty that slow down recovery from the recurrent shocks increase exposure of the communities especially in arid areas to rapid deterioration of nutrition situation during the projection period.

Overall, an estimated 541,662 children 6-59 months and 98,759 Pregnant and lactating women require treatment of acute malnutrition (Table 2). Due to the COVID-19 pandemic that is affecting all counties in the country, caseload for children 6 to 59 months requiring treatment were calculated for all counties in the country to inform planning in the context of the pandemic.

Table 2: Number of Children 6 to 59 months and Pregnant and Lactating Women (PLW) Requiring Treatment of Acute Malnutrition

Area	Global acute malnutrition children 6-59 months		Severe acute malnutrition in children 6- 59 months		Moderate acute malnutrition Children 6-59 months		Pregnant and Lactating women	
	Total caseloads	Target	Total Caseloads	Target	Total Caseloads	Target	Total caseloads	Target
ASAL	352842	198, 733	89,247	66,935	263,595	131,797	96, 971	96,971

Area	Global acute malnutrition children 6-59 months		Severe acute malnutrition in children 6- 59 months		Moderate acute malnutrition Children 6-59 months		Pregnant and Lactating women	
Urban	59, 224	34, 616	20,018	15, 013	39,206	19,603	1,788	1,788
Non-ASAL	129,596	72,714	31,668	23,750	97,928	48,962		
Grand Total	541,662	306,063	140,933	105,698	400,729	200,362	98,759	98,759

COVID 19 Impacts on Food and Nutrition Security Situation

The COVID-19 pandemic reported since March 2020 in Kenya rapidly interrupted regular operations across sectors with rapid reprioritization of activities through business continuity plans. Effects of containment measures such as movement restriction and temporary closure of public places continued to have effect on households especially in urban centers due to loss of incomes. Though markets were temporarily closed, traded volumes were below long-term average due to the impact of the pandemic on movement of people, livestock and goods. The pandemic interrupted learning and school meals programs which were a major source of nourishment for school going children in arid counties.

The pandemic affected continuity of essential health and nutrition services in far flung areas due to scale down of integrated health and nutrition outreach services - though some have been reinitiated. Mechanisms to sustain access to health services including implementation of alternative strategies such as use of community health strategy in place of Malezi Bora weeks and use of family MUAC are being implemented to sustain and improve program coverage. Community mobilization and messaging has been heightened including through mobile applications such as mHero and Rapidpro platforms.

Scale up of COVID-19 preventive measures such as provision of handwashing facilities in public places was observed across counties assessed. Coordination mechanisms were put in place across all the counties analyzed to respond to the COVID-19 pandemic though the role of nutrition in the management of cases especially for home isolation and care was generally not been discussed as a major intervention. Continuous training of health workers and community health volunteers to continue responding to the pandemic is ongoing. A key observation was general adjustment of populations assesses to the 'new normal'. General complacency and obvious non-adherence to containment measures such as not keeping physical distance and wearing masks inappropriately were observed.

Key proposed actions

- Close monitoring of the projected worsening trends including safely resuming household level surveillance activities such as use of regular MUAC in the Early Warning System and integrated nutrition SMART surveys for improved detection and monitoring of the food and nutrition situation
- Continue to advocate for national and county governments to allocate resource aimed at addressing malnutrition including social safety net programs and procurement of commodities for management of acute malnutrition.
- Continued advocacy on the role of nutrition in disease management including in management of COVID-19 cases especially for cases under home-based isolation and care.

- Continue to monitor the effects of COVID-19 on continuity of essential services and livelihoods to mitigate its effect on food and nutrition situation.
- Ensure timely contingency and response planning for early action and to mitigate the effects of the projected worsening food and drought situation on nutrition.

X. Crop Production Prospects

The 2020 rains production estimates for maize from medium and high rainfall areas of Western and Rift Valley was approximately 10-15 percent above the long term average. Maize production for the 2020 long rains and short rains in the country is projected to be about 42 million (90 kg Bags). Bean production reduced significantly during the short rain as result of excessive rain during the long rains season that caused rotting and water logging and moisture stress at flowering during the short rains.

The acreage under maize in the marginal agricultural clusters was 15-20 percent below average due to forecasted below average rains and limited access to inputs such as certified seed and fertilizer. Consequently, maize production declined by 20-40 percent and was attributed to a number of factors, including to low acreage, depressed rains at the critical stage of cob formation and desert locust infestation. Total crop failure was reported in Marsabit, county which was attributed to early cessation of the rains. The production of other cereals such as pearl millet, sorghum and legumes (cowpeas, green grams and beans) reduced by 11-40 percent. Other than poor rainfall performance, quelea quelea birds also contributed to reduced production of pearl millet, sorghum and green grams in Kitui, and Tharaka counties. The short rains season accounts for 60-70 percent of annual maize production in the marginal agricultural areas, so this reduction will have a significant impact on household food security.

XI. Food and Livestock Price Trends

Staple food and livestock prices are mixed across the country with staple food prices being impacted by multiple drivers like cross-border imports and available harvests from both the high and medium potential areas and marginal areas. COVID-19 also continues to impact the supply chain with the restrictions at the borders like mandatory testing for truck drivers. A number of markets were closed due to conflict and insecurity in Turkana, Mandera, Baringo, Isiolo, Garissa and Lamu hindering access to hundreds of households.

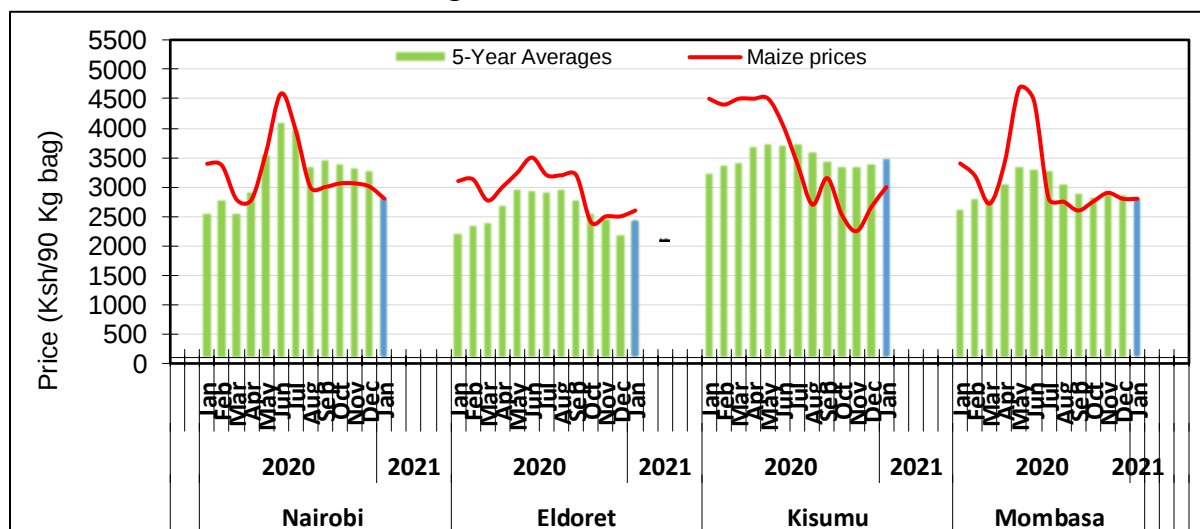


Figure 1.7: Maize price trends in urban reference markets

In the urban markets, wholesale prices of maize were within average in Nairobi and Mombasa driven by cross-border imports and continued availability of the 2020 long rains production in the high and medium rainfall areas of western and Rift Valley. In Kisumu, prices were 14 percent below average due to a combination of local harvests and cross-border imports from Uganda. However, in Eldoret prices were six percent above average as local supplies dwindled. Retail maize prices across the marginal areas remained within the five-year averages due to available local harvests. They however were, 11 percent below average in Kilifi due to a combination of local harvests, supplies from the neighboring Lamu County and cross-border imports. In Kwale, prices were 19 percent above average due to low household stocks and below average production. In the pastoral areas, prices were 10 – 22 percent above average in Kajiado, Wajir, Mandera and Garissa because of high demand and constrained cross-border supplies while they ranged from average to 6 – 9 percent below average due to supplies from source markets in neighboring counties.

Dry bean prices were average in Kisumu due to available cross-border imports but were 8 – 26 percent above average in the rest of the markets following below average production in successive seasons. In the marginal areas, bean prices were 6-33 percent above the five-year average due to low availability following three consecutive below average production seasons.

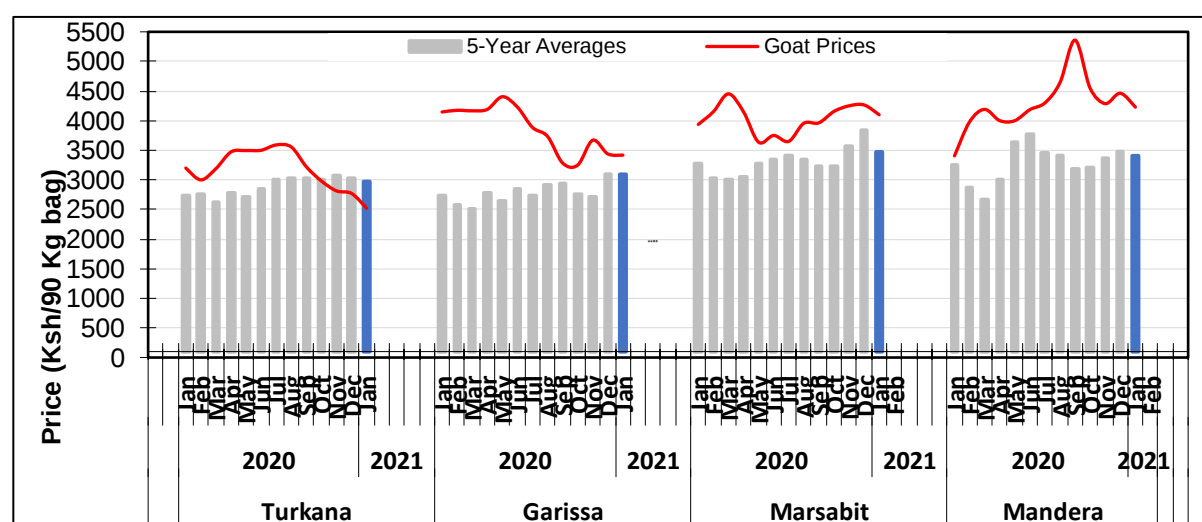


Figure 1.8: Goat prices in pastoral reference markets

Goat prices were 10 – 35 percent above average supported by relatively good body conditions and reduced supplies of livestock to the markets as pastoralists seek to replenish their herds while in Kajiado the price was double that of the average. The prices were however, within average in Wajir and 15 percent below average in Turkana due to deteriorating livestock body conditions. Due to a combination of high goat prices and average to below average maize prices, the goat-to-maize terms of trade was 18 – 36 above average across the pastoral and agropastoral counties and 64 and 79 percent above average in Tana River and Kajiado respectively. The TOT was within average in Mandera, Garissa and Turkana due to a combination of high maize and high goat prices. In Wajir however, the TOT is however 13 percent below average in Wajir due to high maize prices.

XII. Food Security Prognosis (March - August 2021)

Pastoral areas

Declining rangeland resources will likely keep livestock in the dry season grazing areas up to late-April after the onset of the long rains reducing household milk availability and consumption and reducing livestock sale values. Resource-based conflicts and livestock disease outbreaks are expected in the dry season grazing areas as overcrowding and competition for resources persists and will cause insecurity, loss of property, disruption of markets and other livelihood activities. The below average long rains will partially regenerate forage resources and will also drive the hatching of previously laid desert locust eggs into nymphs that will cause moderate destruction of forage. Despite below average regeneration, the improved rangeland resources will improve livestock body conditions and productivity albeit short-lived, through late June. Thereafter, declining rangeland resources will drive early livestock migration reducing milk availability at household level and drive an increase in acute malnutrition in children under five years of age. The increased migration is likely to increase herding labor opportunities, reduce household milk availability and sales while pushing livestock body conditions downward reducing income from their sale. COVID-19 and related restriction impacts will likely keep the non-livestock income-earning opportunities such as casual wage labor, petty trade and remittances below average forcing households to increasingly depend on consumption and livelihood coping strategies indicative of Crisis such as accelerated depletion of assets, withdrawing children from school, and reduce expenses on health. Turkana, Marsabit, Isiolo, Wajir, Mandera, Garissa, Tana River and Samburu counties will have area-level classifications of Crisis (IPC Phase 3) while a small proportion of worst affected households will employ emergency livelihood coping strategies and engage in asset depletion and will be in Emergency (IPC Phase 4).

Marginal Areas:

Below average household short rains food stocks will dwindle through March forcing households to obtain their food and seed from the markets raising the prices higher as the demand. Household income is expected to be constrained by the below average casual wage labor income-earning opportunities presented by the below average March to May long rains and by the COVID-19 related impacts on non-farm income earning opportunities. Desert locust breeding is also set to begin and intensify with the start of the rains as the hatching of the locusts and the emergence of crops are both driven by the rains resulting in a significant threat to crop production. Reduced on-farm income opportunities will force households to expand other income sources like charcoal and firewood sales and petty trade. However, other sources like non-farm casual labor and remittances are likely to remain below average affected significantly by the COVID-19 pandemic which will force households to apply coping mechanisms to meet their food needs. In May, some relief will come in the form of short cycle crops for a short-period. Food consumption will reduce at household level increasing malnutrition rates among children that are under five years of age. Stressed (IPC Phase 2) outcomes will likely persist through June. In July, the long rains harvest will improve household income, food availability and food consumption for a limited time through the end of August. However, poor households will likely deplete their food stocks earlier than normal and return to market dependency amidst high staple food prices and below average household income and face increasing food insecurity. Acute malnutrition will also likely increase as food and milk consumption and dietary diversity decreases. Households will increasingly apply livelihood coping strategies indicative of both Stressed and Crisis. Stressed outcomes will prevail but at least 20 percent of

households will be in Crisis (IPC Phase 3) in parts of Kitui, Meru (Meru North), Makueni, Tharaka Nithi (Tharaka), and Embu (Mbeere) counties. However, parts of Nyeri, Kitui, Meru, Taita Taveta and Kilifi will remain in Minimal (IPC Phase 1).

The key factors to monitor over the next six months include;

- Performance of the March to May long rains season
- COVID – 19 trends, control and related impacts
- Nutrition situation across the country given worsening projected trends
- Control of the Desert locust swarms and possible resurgence
- National food stocks
- Livestock disease outbreaks

XIII. Options for response

The table 3 below sets out the options for response by sector. All immediate, medium and long-term interventions should be anchored in the Ending Drought Emergencies Common Programme Framework.

Table 3: Summary of sectoral recommendations

Sector	Intervention	Cost Kshs(M)	Cost USD(M)
Agriculture	Provision of farm inputs, Pests and disease control, Postharvest management and preservation and value addition	6333	59.71
Livestock	Livestock vaccination and disease surveillance, Pasture and fodder establishment and conservation, Livestock value addition and capacity building of pastoralists and commercial livestock offtake	7660	72.26
Water	Water trucking, Repair, rehabilitation, extension and maintenance of water structures and systems, Promotion of rain water harvesting and technology and Covid 19 response	9300	87.73
Health and Nutrition	Procure commodities for management of acute malnutrition, update contingency plans, Scale up community level health and nutrition services in the face of Covid-19 cases, Close monitoring of the effects of COVID-19 and strengthen multisectoral linkages	6000	56.6
Education	Expansion school meals program, Water harvesting and provision, Expansion of infrastructure in existing schools, recruitment additional ECDE teachers and implementation covid 19 guidelines	5500	51.87
Food Assistance	Build resilience to future shocks through asset creation, safety net programmes and market access programmes; food commodities and cash including associated costs for about 1,425,000 food insecure people in need of assistance for the next six months (March 2021 – August 2021)	41000	386.8
Peace and Security	Peace and dialogue meetings and cross border initiatives	3500	33.02
Total		79293	747.99

1.0 Introduction

1.1 Assessment Coverage and Objectives

The 2020 short rains assessment was undertaken between 13th January and 18th February 2021 in the 23 ASAL counties by the government of Kenya through the Kenya Food Security Steering Group (KFSSG), in collaboration with the 23 county governments through their respective County Steering Groups (CSGs). The KFSSG is a multi-agency body comprising of key government departments, UN agencies and non-Governmental organizations, all with a stake in food and nutrition security in the country. The KFSSG is chaired by the National Drought Management Authority (NDMA) and co-chaired by the World Food Programme while the CSGs are county level multi-sectoral and multi-agency group that coordinates food security related activities.

Objectives

The overall objective of the assessment was to determine the impacts of the 2020 short rains on food and nutrition security in 23 ASAL counties considering the cumulative effects of previous seasons and impacts of other shocks and hazards on food security. At the same time, the assessment also considered the impacts of COVID-19 on food security. The assessment also set out to determine the impact of the season on food availability, access, utilization and their stability by evaluating the contributing factors and outcomes, and their impacts on agriculture, livestock, water, health and nutrition, education, peace and security, and markets and trade sectors. The results of the assessment and recommended interventions are presented in this report.

1.2 Methodological Approach

The seasonal assessments cover the arid and semi-arid region of the country comprising of 23 counties, which are generally the most food insecure and exhibit high levels of vulnerability and covers approximately 80 percent of Kenya's landmass. The area covered by these counties is further classified into generalized livelihood zones which comprise of; Pastoral North West Livelihood cluster (Turkana, Samburu and Marsabit counties), Pastoral North East (Wajir, Garissa, Isiolo, Tana River and Mandera Counties), South East Marginal Agriculture Cluster (Kitui, Makueni, lower parts of Tharaka Nithi, and Embu counties and the Northern parts of Meru County). Other clusters include Coastal Marginal Agriculture (Kilifi, Kwale, Taita Taveta and Lamu counties) and Agro Pastoral cluster (Baringo, Narok, Kajiado, West Pokot, Laikipia and northern part of Nyeri county- Kieni). The main livelihood activities across these include Pastoralism, Agro-pastoralism, Mixed Farming, Marginal Mixed Farming and some Irrigated Cropping, which formed the unit of analysis for this assessment.

This assessment included collection of secondary and primary data with varied data sources including; Data from NDMA sentinel sites, which is collected monthly using questionnaires, Data from the various government sectors (livestock, water, agriculture, education, health and nutrition) at the county and sub counties using checklists. Also included was data collected through community interviews and market interviews through focus group discussions and interviewing of traders respectively, drought early warning bulletins among others and field observations through transect drives. During the analysis, Acute Integrated Food Security Phase Classification (IPC Version 3) protocols were used. The IPC is a standard global tool for classifying the severity of food insecurity, was used to analyze the severity, causes as well as reach a technical consensus on the food security situation

2.0 Food and Nutrition Security Analysis by Livelihood Cluster

2.1 The Pastoral North-West Livelihood Cluster

2.1.1 Cluster Background Information

The cluster comprises of Turkana, Samburu and Marsabit Counties and covers an area of 173,815.1 square kilometers with an estimated population of 1.69 million persons (KNBS Census 2019). The cluster has three main livelihood zones namely: Pastoral livelihood zone, accounting for 69 percent of the population, Agro Pastoral 24 percent and Fisheries/Formal employment at seven percent as shown in Figure 2.1.

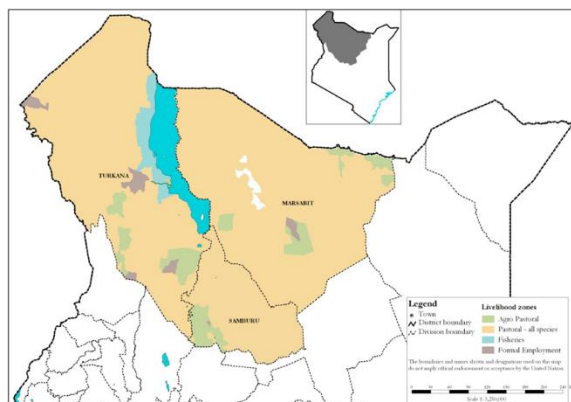


Figure 2.1: Pastoral Northwest cluster livelihood zones

2.1.2 Current Drivers of Food Insecurity

Rainfall performance

The onset of short rains of October to December 2020 was timely in Marsabit and Samburu Counties while there was late onset in Turkana County during the second dekad of October 2020 as opposed to the first dekad of the same month normally. Most parts of Cluster received average rains which constituted 51-110 percent of normal while some parts of Turkana West, Loima and Turkana South recorded 111-140 percent of the normal rainfall. Parts of Moyale Sub County, North Horr and Laisamis and pockets of Turkana East and South received 25 to 50 percent of normal.

Conflict/Insecurity

Incidences of resource based conflicts and insecurity were reported during the October to December period with most cattle rustling and revenge retaliatory attacks resulting in loss of lives and livelihoods. Conflicts and insecurity disrupted market operations and also restricted livestock access to water and pastures. The most affected areas in Turkana County included parts of Turkana East, Turkana West, Turkana North and Kibish attributed to the Merille and Toposa attacks. In Marsabit County, conflict between warring communities was reported in the period under review with several livestock stolen by bandits and casualties reported across the County while in Samburu County, Samburu North witnessed incidences of cattle rustling and revenge retaliatory attacks.

Livestock Diseases

In Marsabit County, livestock deaths as a result of hypothermia were reported in North Horr and Laisamis sub county. In North Horr Sub County 4,389 sheep and goats died (Dukana - 706, Maikona - 2,525 and Turbi - 1,158) while in In Laisamis sub county, approximately 2,000 livestock also died due to hypothermia.

Desert Locust Invasion

The Cluster experienced the second wave of desert locust invasion. The locusts have destroyed huge chunks of pastures and browse by feeding on leaves and leaving the trees bare. Cases of diarrhoea in livestock after ingesting of desert locust droppings were reported across the areas of invasion.

COVID-19 Pandemic

The effects of COVID-19 outbreak continued being felt across all levels during the short rains period with the lifting of the containment measures like unrestricted travel leading to confirmed positive cases spiral in the county and that had a significant negative impact on food security occasioned by the diversion of meager household resources to cater for medical expenses.

2.1.3 Current Food Security Situation

The Pastoral North West livelihood cluster counties were classified in the Crisis Phase (IPC Phase 3) except Moyale Sub county in Marsabit and Samburu North and East Sub counties that are in the Stressed Phase (IPC Phase 2). Maize stocks held at the household level for Samburu, Marsabit and Turkana counties were 20 percent, 42 percent and 79 percent below the LTA respectively. Pasture condition was fair to good in Marsabit and Turkana Counties and fair to poor in Samburu County while browse was good to fair across the cluster. Livestock body condition ranged between good and fair for all species. Market price for maize was four percent below LTA for Marsabit and Samburu retailing between Kshs 47-49 and 16 percent below LTA in Turkana County. Goat prices were above LTA by three percent and 30 percent for Marsabit and Samburu respectively but 15 percent below LTA for Turkana. Favourable terms of trade (ToT) were recorded in Marsabit and Samburu but in Turkana ToT were 5 percent below LTA. Majority of households within the cluster had acceptable food consumption while proportions of three percent, five percent and 30 percent reported poor food consumption in Marsabit, Samburu and Turkana counties respectively. The proportion of children under five years at risk of malnutrition for Marsabit, Turkana and Samburu was 10.5 percent, 6.1 percent and 27.2 percent respectively wood hich were above LTA.

2.1.4 Food Security Trends

Pastoral North West Food security trends		
Indicator	Short rains assessment, Feb 2021	Long rains assessment, July 2020
Percent of maize stocks held by households	23 percent of LTA	38 percent of LTA
Livestock body condition (Cattle)	Good to Fair	Good to Fair
Water consumption (litres/ person/ day)	7-11	13-19
Price of maize (per kg)	54	56
Distance to grazing in km	6-12	4-6
Terms of trade (pastoral zone)	57	66
Coping strategy index	15	14
Food consumption score	Acceptable-52 Borderline-36 Poor-13	Acceptable-65 Borderline-38 Poor-10

2.1.5 Impacts of Drivers on Food and Nutrition Security

2.1.5.1 Crop Production

Rain-fed crop production

The cluster mainly depends on long rains for crop production, which contributes up to 80 percent of total annual food production in Samburu and Turkana counties. In Marsabit, the long

rains contribute about 30 percent of the total annual crop production. The production of maize and beans was 16 percent of the LTA while that of sorghum was 89 percent of LTA. The decrease in production was mainly attributed to crop failure occasioned by the poor distribution of the short rains, fall armyworm infestation, destruction by elephants and poor agronomic practices that resulted to pre- and post-harvest losses in Turkana.

Rain-fed crop production

Crop	Area planted during 2020 short rains season (Ha)	Long term average area planted during the short rains season (Ha)	2020 short rains season production	Long term average production during the short rains season
Sorghum	3,229	3,100	27,850	31,000
Maize	1,151	1,858	4,761	29,308
Beans	1,110	720	1,195	7,600

Irrigated Crop Production

The main crops grown under irrigation were maize, sorghum and kales. Other crops grown included tomatoes, cabbages and spinach. Irrigated agriculture is mainly practiced along River Turkwel and Kerio in Turkana. The area under maize was 67 percent of LTA while that of sorghum and kales was six percent above the LTA. The decrease was attributed to siltation of canals caused by floods during the 2020 long rains season. The projected production of the maize is 64 percent of LTA while that of sorghum and kales was six percent above the LTA. The reduced production for maize was attributed to COVID-19 measures that limited the interaction between farmers and various stakeholders involved in food security interventions in the cluster.

Crop	Area planted during 2020 short rains season (Ha)	Long term average area planted during the short rains season (Ha)	2020 short rains season production (90 kg bags)	Long term average production during the short rains season (90 kg)
Sorghum	1790	1688	20750	19568
Maize	1286	1915	33848	52230
Kales	50	22	371	350

Cereal Stocks

The main staple food stocks are maize and sorghum. The overall sorghum and maize stocks held in the cluster were 39 and 52 percent of LTA. The maize stocks held by farmers, traders and millers were 54, 71 and 95 percent of LTA respectively. The stocks with farmers were from the current production in irrigation schemes (Elelea and Katilu) in Turkana, while stocks in the markets were obtained from Trans Nzoia, Uasin Gishu and Uganda. Most cereals stores had closed due to the difficult economic circumstances occasioned by COVID-19 pandemic. The current maize stocks are likely to last for about 1-2 month across the cluster.

Cereal stocks in the cluster

Commodity held by	Maize		Rice		Sorghum	
	Current	LTA	Current	LTA	Current	LTA
Farmers	13,320	24,857	0	0	3,863	11,500
Traders	16,606	23,500	2,240	6,500	890	500
Millers	3,500	3,680	0	0	0	40
Food Aid	0	12,500	0	500	0	0
Total	33,426	64,537	2,240	7,000	4,753	12,040

2.1.5.2 Livestock Production

Livestock production contributes about 85 and 45 percent to cash income in the Pastoral and Agro Pastoral Livelihood Zone respectively. Pasture condition was good to fair in the Agro Pastoral Livelihood zone and fair to poor in the Pastoral zones while browse condition was good to fair in all the livelihood zones which was within the normal seasonal range. Access to pasture and browse was hindered by water scarcity, insecurity in some sub counties (Samburu North, Turkana East, Moyale and Saku) and the high prevalence of livestock diseases in some areas. The emergence of non-palatable vegetation was witnessed in some parts of North Horr, Laisamis, Saku and Moyale sub-counties of Marsabit County also posed a challenge to access to pasture and browse. The Desert Locusts decimated approximately 450,447 hectares whose recovery was greatly hindered due to the poor performance of the Short Rains leading to earlier than normal migrations thereby affecting close to 82,000 households.

Pasture and browse situation

Livelihood zone	Pasture condition				Browse condition			
	Current	Normally	Projected Duration to last (Months)		Current	Normally	Projected Duration to last (Months)	
			Current	Normally			Current	Normally
Pastoral	Fair - poor	Good-Fair	1	2-3	Good -Fair	Good - Fair	2	3
Agro pastoral	Fair - poor	Good-Fair	1	2-3	Good -Fair	Good - Fair	2	3-5
Fishing	Fait - poor	Good-Fair	1	2-3	Fair	Good - Fair	2	3

Pasture conservation status

Samburu is the only county that reported on the status of hay conservation within the cluster. Most of the pastures is conserved in terms of standing pastures in Marsabit and Turkana counties. In Samburu County, pasture conservation efforts were supported by World Food Programme (WFP), Veterinaries Sans Frontiers - Suisse (VSF) and Livestock Market Systems (LMS) project. The county has a storage capacity of about 186,000 bales of hay and currently holding over 188,000 most of which is in the feedlots.

Livestock body condition

The livestock body condition for cattle, sheep, goats and camels was good to fair across all the livelihood zones in the cluster and was within the normal seasonal ranges. However, livestock body condition was generally fair and on a deteriorating trend in the Fisheries Livelihood zone and Pastoral zone in Turkana County and in isolated areas of North Horr and Laisamis sub-counties of Marsabit County. The fair to poor livestock body condition was attributed to rapid depletion of forage due below average 2020 Short rains, long trekking distance in search of water and forage and invasion by desert locusts.

Livestock body condition

Livelihood zone	Cattle		Sheep		Goat		Camel	
	Current	Normally	Current	Normally	Current	Normally	Current	Normally
Pastoral	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good
Agro pastoral	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good
Fishing	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good to Fair	Good

Tropical Livestock Units (TLUs)

Among the middle income households, average TLUs in the Pastoral and Fishing Livelihood zones declined by 26.7 and 25 percent respectively but remained stable in the Agro Pastoral Livelihood zone when compared to LTA. The decline in TLUs is attributed to poor performance of the 2020 Short rains that led to decreased kidding, lambing and calving rates, effects of the 2016-2017 severe drought that led to massive livestock deaths. In addition, increased frequency of livestock raids especially in the conflict hot spots in Turkana and Samburu County where a high number of households have lost their livestock has also contributed to a decline in average livestock ownership per household.

TLUs by livelihood zones

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	3-6	4-10	8-14	10-20
Agro Pastoral	2-4	3-8	2-8	2-8
Fishing	3	4	6	8

Milk production, consumption and prices

Goats and camels were the major milk producers across the three livelihood zones. The average milk production per household per day declined below the LTA by 40, 28.5 and 87.5 percent in the Pastoral, Agro Pastoral and Fishing livelihood zones respectively. The decrease in milk production was attributed to below normal short rains performance which resulted to inadequate regeneration of forage, low recharge of water sources which has occasioned livestock migration to the dry season grazing areas in search of water and pasture. Below normal milk consumption was attributed to low milk availability at the household levels. For example, in all the terminal markets within the major urban centers in Turkana County, there was no raw milk sale and thus residents of these centers relied on powdered milk.

Milk production, consumption and prices

Livelihood zone	Milk Production (Litres) /Household		Milk consumption (Litres)/Household		Prices (Ksh)/Litres	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	1-2	2-5	0-1	1-3	60-80	40-75
Agro pastoral	1-4	2-5	0-3	1-5	60-90	40-75
Fishing	0-0.5	2	0	1	90	60

Distance to water sources

The main water sources for livestock in the Pastoral livelihood zone were boreholes, shallow wells, water pans and traditional river wells. The average return trekking distances to water points from grazing increased by 3.4, 18.1 and 66.7 percent in the Pastoral, Agro Pastoral and Fishing livelihood zones respectively when compared to the LTA. The watering frequency for the small stock averaged three to four times in a week, two to three times per week for cattle with camels accessing water once in a week compared to 4 – 7 days a week normally. Available water sources in the cluster are likely to last for less than a month to 3 months in all livelihood zones against the normal of 2-6 months.

Water for livestock

Livelihood zone	Return trekking distances (Km)		Expected duration to last (Months)	
	Current	Normal	Current	Normal
Pastoral	5-25	4-25	<1 – 3	2-4
Agro pastoral	3-10	1-10	1-2	2-6

Fishing	4-6	3	2	2
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Livestock migration, diseases and mortalities

Earlier than normal migration of livestock both within and outside the counties was reported across all the livelihood zones in the cluster. In Turkana, livestock migration into Uganda dry season reserves and to other sub counties within the county were reported with approximately 50 - 75 percent of the herd having migrated from the wet season grazing areas in search of pasture and browse. In Marsabit, internal livestock migrations were reported with livestock from Moyale Sub County moving towards Kenya/Ethiopia border and with continuation of the drier than usual conditions, intense livestock migration is expected in North Horr and Laisamis sub-counties.

Widespread livestock diseases incidences that were reported in all the livelihood zones across the cluster included; Contagious Caprine Pleuro Pneumonia (CCPP), Pestes des Petits Ruminants (PPR), Enterotoxaemia, Helminthiasis, Sheep and Goat Pox, Mange, Trypanosomiasis, Hemorrhagic septicemia, Abortions and Anaplasmosis. Outbreak of New castle disease was reported in Samburu County

Effects of COVID – 19

COVID -19 affected the livestock market as very few traders from outside the counties participated in trading activities and that consequently affected the household purchasing power due to the prevailing low demand of livestock resulting to low livestock prices. The creation of awareness on COVID-19 affected pastoralist mobility with those migrating opting for areas that were considered safe.

2.1.5.3 Market Performance

Market operations were normal and most markets were well provisioned with essential food commodities and livestock. However, market disruption attributed to insecurity incidences was reported in the feeder markets of Dukana, Forolle, Kapedo and Lomelo while market closure was reported in Lorengipi and Namuruputh due to non-compliance with COVID-19 protocols.

Market supplies and traded volumes

Most markets were well provisioned with essential food commodities and livestock. The major food commodities traded included: maize, beans, rice, vegetables, cowpeas leaves, green grams, fruits, oil and sugar. Most food items traded such as cereals and pulses were sourced externally from Trans Nzoia, West Pokot, Uganda, Meru, Nanyuki, Nyahururu, Ethiopia, Isiolo, Nakuru, Laikipia, Meru and Nyandarua while livestock were sourced locally.

Market prices and terms of trade

Maize prices remained stable over the October 2020 and January 2021 period and were within the long-term average across the cluster ranging from Ksh. 47 per kilogram in Samburu to the highest of Ksh.66 in Marsabit and Turkana Counties. The high prices in Marsabit were attributed to weak market integration and insecurity incidences. Also, the rising water levels in Lake Turkana hindered flow of food commodities resulting to high transport cost. Notably, high maize prices of Ksh 80 were recorded along settlements near Lake Turkana belt which were completely cut-off. Terms of trade were favorable in Marsabit and Samburu counties as households were able to buy more kilograms of maize from the sale of a goat compared to the long-term average.

In Marsabit County, a medium sized goat would be exchanged with 84 kilograms of maize against the long-term average of 74 kilograms. On the other hand, Turkana County reported slightly unfavorable terms of trade compared to the long-term average where household were able to purchase only 38 kilograms of maize from the sale of a medium sized goat compared to the long-term average of 39 kilograms (Figure 2.2).

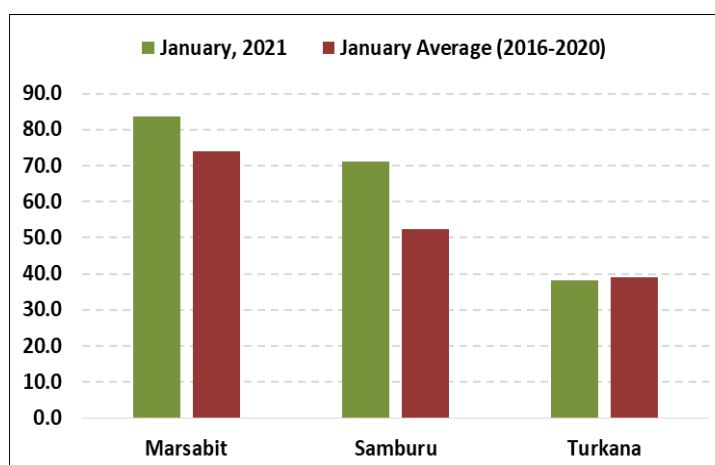


Figure 2.2: Comparative terms of trade

2.1.5.4 Water Access and Availability

The main water sources for domestic use are boreholes, shallow wells, pans and dams, Lake Turkana, River Turkwel, Kerio and Ewaso Nyiro. Rock catchment and underground tanks are also major water sources in Marsabit. The short rains recharged water pans and dams by 10-30 percent and the remaining water in Marsabit and Pastoral areas of Samburu will last for less than a month. However, due to fair recharge from the long rains, water pans in the Turkana and Agro-pastoral areas of Samburu are expected to last for 1-2 months compared to the normal 2-3 months. About 85 percent of all pans and dams in Marsabit were dry resulting to increased congestion and long pumping hours hence frequent breakdown of many strategic boreholes across all livelihood zones.

Distances to water sources have increased across the cluster with the pastoral zone of Turkana and Marsabit recording 4 - 8 kilometres compared to the normal 3 – 6 kilometres while the pastoral zone of Samburu recorded 10 -15 kilometres compared to the normal 5 – 10 kilometres. Distances in the Agro-pastoral zone of Samburu range between 1 - 3 kilometres compared to 0.5 -1 kilometres while in Agro-pastoral areas of Turkana, return distances average 3-6 kilometres compared to the normal is 2-3K kilometres. Agro-pastoral livelihood zones of Marsabit recorded the highest return distances of 5 – 12 kilometres compared to the normal 5 – 10 kilometres. However, in the isolated areas of Marsabit for instance in North Horr sub-county had long return trekking distances of up to 8 – 15 kilometres while some areas around Huri Hills in North Horr sub-county had exceptionally long return trekking distances of between 15 - 30 kilometres.

2.1.5.5 Food Consumption

Food consumption gaps heightened across the cluster in January 2021 compared to a similar period in 2020 due to reduced household incomes following disruption of livelihood activities by COVID-19 restrictions and increased incidences of insecurity coupled with prevailing drought situation and back flow of Lake Turkana. Households in the acceptable food consumption category declined by 13 percent to stand at 50 percent in January 2021 from 63 percent in year 2020. The remaining 39 and 11 percent of households had borderline and poor food consumption scores respectively.

2.1.5.6 Coping Strategies

Coping strategy index (CSI) across the cluster increased in Samburu and Marsabit but remained stable in Turkana County. The coping strategy index for Marsabit was at 17.5, Turkana at 16.6

and Samburu at 10.5. High CSI was attributed to depressed rainfall received during the season, lower purchasing power, increasing food prices and depleting household food stocks. Most households across the cluster employed consumption based coping strategies. Main strategies included borrowing food, relying on help and reducing meals, using less preferred or less expensive food and taking credits from neighbors. The meal frequency for both under-fives and the general population was 1 – 2 meals in a day compared with the required 3 – 4 meals per day. In this cluster, households within the Pastoral and Pastoral all species livelihood zones were applying crisis and stressed coping strategies while households in the Agro Pastoral zones were mainly employing stressed coping strategies.

2.1.5.7 Health and Nutrition

According to integrated phase classification for acute malnutrition (IPC AMN), the nutrition situation across the Pastoral North West cluster counties has remained similar to the August 2020 analysis. Currently, Turkana and Samburu Counties and Laisamis and North Horr Sub Counties in Marsabit counties are classified in the Critical phase ((IPC AMN Phase; 4 GAM 15.0 to 29.9 percent)), while Saku and Moyale sub counties in Marsabit are classified in Alert nutrition situation (Phase 2; GAM WHZ $\geq$ 5 to 9.9 percent).

From MUAC results, the proportion of Children with MUAC less than 125 mm in Marsabit was 10.50 percent while Samburu had above 25 percent of children who were malnourished. According to mother MUAC results in Turkana, the proportion of malnourished children based on mid upper arm circumference (Colour MUAC) was 6.1 percent. This is a deterioration from 3.5 percent recorded earlier, indicating a deterioration in household food security situation across the OND season following the poor performance of the short rains.

Morbidity and mortality

Across the cluster, acute respiratory tract infection (URTIs), Malaria and Diarrhoea remained the predominant causes of morbidity during the period under review. However, the cases remained within the seasonal morbidity trends. In Turkana, malaria cases were lower in 2020 than in 2019. Similarly, in Samburu, the number of URTI and Diarrheal diseases decreased compared to the same period in 2019. This could be attributed to fear and stigma that was associated with COVID- 19 pandemic.

Immunization and micronutrients supplementation

Generally, there was a decrease in immunization and Vitamin A supplementation during the period under review. For instance, in Marsabit, OPV 3 coverage decreased from 107.4 percent in 2019 to 77.7 percent in 2020 while in Samburu, OPV 3 coverage declined to 40 percent in 2020 from 60 percent in 2019. A similar trend was observed for Vitamin A supplementation across the cluster for children 6-59 months. Provision of these services was affected due to closure of integrated outreaches either due to lack of funding and/or COVID-19 related restrictions.

Water, hygiene and sanitation

Over 80 percent of the population in the cluster are aware of the hand washing practices. However, hand washing at critical times remained low across the cluster. The proportion of households treating water is still low across the cluster at less than 25 percent. The status of water treatment among households in Samburu, Turkana and Marsabit stands at 12.6, 18.4 and 22 percent respectively. The main water treatment methods were boiling and use of chemicals. The latrine coverage in Turkana and Samburu counties was 21 percent and 27.4 percent respectively. This is still below 50 percent WHO recommended SPHERE standards. Marsabit

County has a fair latrine coverage at 54.8 percent. However, there was an improvement in latrine coverage in Turkana County to 34 percent from 28 percent in 2019.

2.1.5.8 Education

Access: Enrolment

There was a decrease in enrollment across the cluster in the three levels of education by 9, 5 and 9 percent in ECDE, Primary and Secondary respectively. The decrease was attributed to insecurity, migration of livestock in search of pasture and water, lack of school meals, engagement of learners in motor bike business and fishing activities in Lake Turkana, transfers outside the county, moranism for boys, fear of infection of COVID-19 pandemic and teenage pregnancies and early marriages, occasioned by the long stay at home.

Enrolment

	Term I 2020			Term II 2021 (includes new students registered and drop-outs since Term I 2020)			Increase or Decrease Variation)	% Increase or decrease	% Boys Enrolment	% Girls Enrolment
Enrollment	No Boys	No Girls	Total	No Boys	No Girls	Total				
ECD	9732	9777	19509	9079	8710	17789	-1720	-9%	50%	50%
Primary	27055	26458	53513	25335	25748	51083	-2430	-5%	50%	50%
Secondary	4754	4464	9218	4254	4112	8366	-852	-9%	51%	49%

Effects of Covid-19 on Schools

The outbreak of COVID-19 had a significant impact on the education sector in the cluster due to the prolonged 9 month school's closure leading to an increased number of drop outs, over 338 teenage pregnancy cases reported and damages to schools used as quarantine centers as a result of vandalism (Our Lady of Mercy in Kakuma and Naiborkeju primary schools in Samburu). The enrolment at all levels before COVID-19 outbreak was high due to the stable supply of school meals that contributed to a high transition rate, the government policy of 100 percent transition. The major challenges noted included inadequate water in some schools which affected regular hand washing and overcrowding due to infrastructural challenges such as few desks, classrooms, toilets and dormitories.

Effects of Short Rains

The short rains had an adverse effect on schools' infrastructure with the strong winds blowing off the roofs of classrooms in 26 schools in Turkana County (Turkana Central - 11, Loima - 3, Turkana North - 6, Turkana West - 3 and Turkana East - 3). In addition, Ngimuriae and Longech schools were submerged due to the rising water level in Lake Turkana that affected their re-opening and thus forcing learners to shift to the neighboring schools.

School Meals Programme (SMP)

All the public primary schools in the cluster are on the Regular School Meal Programme (RSMP) benefitting 429 primary schools with a total enrolment of 168,974 (Boys - 85,784, Girls - 75,928) and 74,562 (Boys - 40,123, Girls - 34,439) at ECDE level in Turkana County; 164 primary schools with 61,424 pupils (32622 boys and 28802 girls) in Samburu County; and approximately 51,083 learners (25,335 boys, 25,748 girls) in Marsabit County.

While there was no food distribution to schools at the time of assessment, about 20 percent of food that had remained unused from Term I of 2020 before closure of schools as a result of COVID-19 pandemic was carried over to term II 2021 and was then being utilized at the time of the assessment, although it was expected to be fully consumed by the end of January 2021. The school meals program increased school enrolment, promoted consistency in attendance and participation, increased retention and transition of learners, improved academic performance and promoted timely syllabus coverage. Occasionally, all children in ECDE, primary schools missed RSMP meals due to lack of water, fuel for cooking and cooks to prepare the food.

Inter-sector links

Food insecurity

Proposals to sink boreholes as an intervention aimed at ensuring there was access to safe water for drinking, cooking and other purposes like tree planting and kitchen gardens so as to improve the nutritional value of meals and food security in schools were forwarded to various partners and stakeholders. In some parts of the cluster, migration impacted on children access to education especially in Turkana East and North where parents moved with their children in search of pasture or due to insecurity.

Water, sanitation and hygiene

At the time of assessment, rain water harvesting from roofs was the main source of water for schools. Other sources were earth pans, rock catchment, boreholes and water trucking carried out by partners or commercial vendors. Most schools did not have adequate water storage facilities including mobile ECDE centres leading to lack of access to sufficient and safe water for use while in school. The sanitation and hygiene in all the levels of education was poor with the 161 primary schools, 161 ECDE centres and 12 secondary schools in Turkana County having inadequate functional latrines and no access to safe drinking water. In Samburu County, the water department in the county was conducting water trucking to schools without water to enhance improved hygiene and sanitation. In Marsabit County, most schools reported that their water storage from rain harvest was depleted due to the increased frequency of hand washing to contain COVID-19 pandemic. However, while most schools had pit latrines, no school had met the recommended ratio of 1:25 for girls and 1:30 for boys leading to sharing of the same toilet between boys, girls and teachers and open defecation in some schools that had received notice of closure from public health offices due to lack of adequate toilets.

During the COVID 19 schools closure, girls found it difficult to access sanitary pads while at home because they were unavailable at the local markets. Therefore, girls from humble backgrounds were reported to have used non-conventional materials during their menstruation. Lack of sanitary pads led to absenteeism, poor performance, low self-esteem and drop outs and exposure to sexual abuse.

2.2 The Pastoral North-East Livelihood Cluster

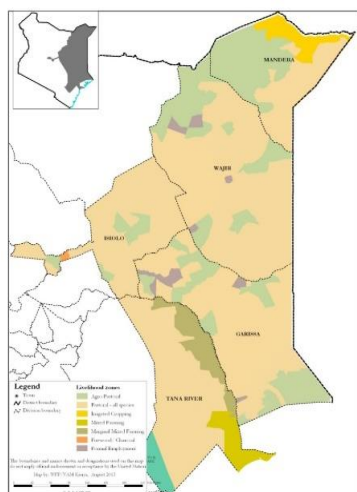


Figure 2.3: Pastoral Northeast cluster livelihood zones

2.2.1 Cluster Background

The cluster covers Mandera, Wajir, Garissa, Tana River and Isiolo counties, with an approximate area of 193,245 square kilometres and an estimated population of 3,074,018 persons (KNBS 2019). The major livelihood zones are Pastoral all species Livelihood Zone and Agro pastoral Livelihood Zone, accounting for 51.8 percent and 19.2 percent of the population, respectively. The other livelihood zones include the Marginal Mixed Farming Livelihood Zone, Irrigated Livelihood Zone and Informal/Formal employment/Business/Petty Trade with 7.6 percent, and 5.4 percent of the population, respectively. Livestock production contributes 60 percent to cash incomes while crop production contributes 30 percent.

2.2.2 Current Drivers of Food Insecurity

Rainfall Performance

The start of the October to December short rains was timely in Garissa, Mandera and Wajir counties during the third dekad of October but was late by one dekad in Isiolo and Tana River. The short rains were of both poor spatial and temporal distribution. Cumulative seasonal totals received were 51-75 percent of normal except in the Agropastoral Livelihood Zone in northern Garissa (parts of Balambala, Sankuri and Shant-Abak), southern parts of Hulugho and Sangailu, Rhamu Dimtu, in Mandera North, Bangale ward in Tana North subcounty, and isolated pockets in Wajir West sub county that received 26-50 percent of the normal. The rainfall cessation was normal in most of the cluster except in Tana River where cessation occurred earlier than normal, during the third dekad of December compared to the first dekad of January.

Conflict/Insecurity

Resource-based conflicts over pasture, browse and water were reported in Oldonyiro, Cherab, Sericho, Garbatulla, Kinna and Ngaremara of Isiolo County and areas neighbouring Lagdera Sub County in Garissa. The conflicts led to the closure of Belges, Escort and Duse livestock markets, abandonment of strategic boreholes in Sericho and six human deaths in Cherab and the southern border between Wajir and Garissa, December 2020. Following the conflicts, some primary schools such as Raspu remain closed. In Mandera County, resource-based inter clan conflicts Mandera South and Lafey sub counties led to six human deaths. At the same time, terror related threats in areas bordering the Republic of Somalia continued to limit livelihood activities such as trading and closure of health facilities. Human-wildlife conflicts were reported among farming communities bordering the game reserve in Wenje, Chara and Maziwa in Garsen where elephants, buffalos and other wild animals destroyed maize and green gram crop along the Tana delta.

Other shocks and hazards

Crop pests, especially the Fall Army Worm led to maize crop losses in Isiolo and Garissa counties. Desert Locust invasion was reported across the cluster leading to destruction of

pastures and browse. Rift Valley Fever (RVF) outbreak was reported in livestock in Garissa and Isiolo Counties. However, other endemic livestock diseases such as Lumpy Skin Diseases (LSD), Foot and Mouth Diseases (FMD) and Contagious Caprine Pleuropneumonia (CCPP) remained within normal levels. Floods were reported in Isiolo and Mandera Counties while the COVID-19 control measures such as nighttime curfews and social distancing continued to affect household food availability and access.

2.2.3 Current Food Security Situation

The Integrated Food Security Phase Classification for the cluster is Stressed (IPC Phase 2) except Isiolo County and parts of Mandera and Wajir counties which are in Crisis (IPC Phase 3). Household food stocks in Isiolo, Mandera and Wajir range between 0-2 percent below average and 40 percent and 99 percent below average in Garissa and Tana River, respectively. The pasture conditions in Wajir, Tana River and Mandera ranged from fair to poor while browse conditions were good to fair except in Mandera where browse conditions were poor. As a result, cattle body conditions were fair to poor while browsers such as goats and camel were fair to good. In Isiolo and Garissa, pasture and browse conditions were good to fair and supported fair to good livestock body conditions. Maize prices were 8-9 percent below the five-year average in Isiolo and Tana River and 6-22 percent above the five-year average in the rest of the cluster. Goat market prices were within average in Wajir and 12-24 percent above average in the rest of the cluster. As a result, the goat-to-cereal price ratio (Terms of trade (TOT)) were average to 39 percent above average in most of the cluster except in Wajir, where TOT was 11 percent below average. Household water consumption ranged between 7-30 litres per person per day. Household food consumption, measured using the Food Consumption Score (FCS), was acceptable among a majority of households except in Pastoral Livelihood Zone and Mixed Livelihood Zones of Tana River County where 51.7 percent and 46.7 of households had poor food consumption scores. Also, 36.1 percent of households in Wajir had poor food consumption scores. The adoption of consumption-based coping strategies measured using the Reduced Consumption Strategy Index (rCSI), was 8.4-17. The prevalence of acute malnutrition among children under five years of age, measured using the Mid-Upper Arm Circumference (MUAC<135mm), was above the five-year average except in Garissa.

2.2.4 Food Security Trends

Indicator	Long Rain Assessment, July 2020 (Previous Season)	Short Rain Assessment, February 2021 (Current Season)
% of maize stocks at household level	68% of LTA	44% of LTA
Livestock body condition (Cattle)	Good	Good to Fair
Water consumption	18-23(litres per person per day)	11-15(litres per person per day)
Price of maize (per kg)	Ksh. 62	Ksh. 60
Distance to grazing (km)	4-9	8-20
Terms of trade (pastoral zone)	65 kgs	67 kgs

2.2.5 Impact of Drivers on Food and Nutrition Security

2.2.5.1 Crop Production

Rain fed crop production

The major food crops grown under rain fed agriculture are maize, sorghum, and green grams while beans and cowpeas are grown on small scale. While maize crop is grown throughout the cluster, Tana River accounts for 57 percent of the total production. During the 2020 short rains season, the total area under maize, sorghum and green grams was 65, 80 and 51 percent of the

LTA respectively. The decrease in area planted was attributed to COVID-19 pandemic restrictions that limited availability and access to farm inputs such as seed and fertilizers, and delayed farm operations due to reduced availability of casual laborers. The production for maize, sorghum and green grams was 30, 31 and 37 percent of the LTA respectively which was attributed to poor rainfall performance, reduced acreage under the crops and infestation by Desert Locust that destroyed an estimated 1,895 ha of crop in Garissa County.

Rain fed crop production in the cluster

Crop	Area planted during 2020 short rains season (Ha)	Long term average (5 year) area planted during the short rains season (Ha)	2020 short rains season production (90 kg bags)	Long term average (5 year) production during the short rains season (90 kg bags)
Maize	2,798	4,319	14,734	48,601
Sorghum	1,318	1,648	3,246	10,388
Green Grams	631	1,227	4,443	12,015

Irrigated Crops

Irrigation is mainly practiced along River Tana in Garissa and Tana River Counties and along River Dua in Mandera. In Wajir, water for irrigation is sourced from shallow wells and water pans. The major crops grown under irrigation were maize, bananas and mangoes while watermelons, tomatoes, onions and kales are produced in small scale. Tana River County accounts for about 90 percent of the maize grown under irrigation. The area under maize and bananas was within the LTA while that under mangoes was eight percent above. In Wajir, the acreage under watermelon, tomatoes, bulb onions and kales was 17 percent below the LTA due to a reduction of water for irrigation. The production under maize, bananas and mangoes was 17, 15 and 13 percent above the LTA due to improved management practices and continued agronomical support from the county government and partners such as Concern Worldwide, Kenya Climate Smart Agriculture Project (KCSAP), World vision, Kenya Red Cross, World Food Programme (WFP), Pastoralist Girls initiative (PGI) and Arid Lands Development Focus (ALDEF).

Irrigated cropping in the cluster

Crop	Area planted during 2020 Long rains season (Ha)	Long Term Average area planted during the Long rains season (Ha)	2020 Long rains season production (90 kg bags)	Long Term Average production during the Long rains season (90 kg bags)
Maize	1,782	1,776	30,406	25,890
Bananas	905	870	13,575	11,800
Mangoes	650	600	13,000	11,500

Cereals Stocks

Maize stocks held by households, traders and millers were six percent, 29 percent and 38 percent below LTA respectively, due to constrained supplies following the COVID-19 restrictions. Households rice stocks were 48 percent of LTA, a key staple and substitute to maize, while stocks held by traders were within the LTA. Sorghum stocks held by households were 54 percent below the LTA while stocks held by traders were equal to the LTA. Households stocks of green grams were within the LTA while stocks held by traders were seven percent below. The available maize stocks in the cluster are likely to last 1-2 months.

Cereal stocks in the cluster

Commodity	Maize		Rice		Sorghum		Green grams	
	Current	LTA	Current	LTA	Current	LTA	Current	LTA
Farmers	34,689	36,711	2,730	5,697	947	2,077	5,202	4,932
Traders	21,208	29,996	65,440	62,667	1,188	1,133	2,810	3,029
Millers	1,320	2,163	0	0	75	200	-	-
Food Assistance	1,200	4,300	5,500	2,500	6,452	8,952	3,334	1,400
NCPB	0	1,650	24	1,500	0	0	0	0

2.2.5.2 Livestock Production

Livestock production contributes about 68 - 85 percent to cash incomes in the Pastoral Livelihood Zone and 15 - 60 percent Agro Pastoral Livelihood Zone. The main livestock species kept in the cluster were cattle, camel, sheep and goat.

Pasture and browse conditions

The pasture and browse conditions were fair to poor across all the livelihood zones in the cluster compared with good to fair normally. In the Pastoral and Agro Pastoral livelihood zones, pasture is projected to last for 1-2 months compared to 3 months normally, while browse is projected to last 1-2 months compared to 3-4 months. Access to pastures and browse was limited by water scarcity in Isiolo, Mandera and Tana River, Desert locusts in Wajir and Garissa, cross border insecurity and conflicts between Lagdera and Garbatulla, Wajir south and Merti, and along the Wajir and Somali border, and cases of tsetse fly in Isiolo (Kinna and Garbatulla wards) and in Garissa around Boni Forest.

Pasture and browse condition

Livelihood zone	Pasture condition			Browse condition		
	Current	Normally	Projected Duration last (Months) to	Current	Normally	Projected Duration to last (Months)
Pastoral all species	Fair- poor	Good – Fair	1-2	Fair to poor	Good–Fair	1-2
Agro pastoral	Fair-poor	Good – Fair	1-2	Fair to poor	Good-Fair	1-2

Pasture conservation status

Pasture conservation in the form of hay was being promoted in the cluster by World Food Programme (WFP), Veterinary Sans Frontiers Suisses (VSF) and Livestock Marketing System (LMS) Project in Isiolo, Regional Pastoral Livelihood Resilience Project (RPLRP), Samaritan Purse and Pastoralist Girls Initiative (PGI) in Tana River County, except in Wajir County. The cluster had 46 hay stores with a capacity to storing 114,300 bales but currently holding 73,912. The average weight per bale was 12–15 kilograms and were being sold at Kshs. 200–500 per bale.

Hay Conservation Status

County	No. of Hay Stores	Storage Capacity (bales)	No. of Bales currently being held	Average Weight per bale (in Kgs)	Average price per bale (Kshs.)	Comments – E.g. percentage held by farmers and other Institutions
Garissa	11	30,300	-	15	200	
Tana River	2	9,000	12	12	250	
Wajir	0	0	0	0	0	0
Mandera	28	25,000	70,000	15	500	100% held by farmers

Isiolo	5	50,000	3,900	15	250	100% held by farmers groups
Total	46	114,300	73,912	12-15	200-500	

Livestock body condition

Livestock body condition for all livestock categories was good to fair across all the livelihood zones compared with good normally. The good to fair livestock body condition was attributed to the availability of pasture and browse from the previous good seasons throughout the short rains season and few incidences of widespread diseases outbreaks. However, in pastoral livelihood zone of Mandera and Tana River counties, the body condition of cattle and sheep ranged from fair to poor due to reduced availability of pastures and browse. The expected decline in pasture and browse availability will lower livestock body conditions between February and March.

Livestock body condition

Livelihood zone	Cattle		Sheep		Goat		Camel	
	Current	Normally	Current	Normally	Current	Normally	Current	Normally
Pastoral all species	Good to fair,	Good	Good to fair	Good	Good to fair	Good	Good	Good
Agro pastoral	Good to fair	Good	Good to fair	Good	Good to fair	Good	Good	Good

Tropical Livestock Units (TLU)

The Tropical Livestock Units (TLU) held by poor income households were 15.3 and 23 percent below the LTA in the Pastoral and Agro Pastoral livelihood zones, respectively. TLUs among the medium income households in the Pastoral and Agro Pastoral livelihood zones were 26 and 40 percent below normal. Households in both wealth categories are yet to recover herd numbers following the massive losses and offtakes from previous droughts, theft, and diseases.

Tropical Livestock Unit (TLUs) by Household Income Groups

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	2-9	3-10	10-30	9-45
Agro-pastoral	2-8	3-10	5-20	7-35

Milk production, consumption and prices

Livestock birth rates were within the normal ranges across the cluster. The current birth rates are likely to continue to build up livestock herd sizes. Milk production in the Pastoral and Agro Pastoral livelihood zones decreased by 57 percent and 40 percent respectively following the gradual decline in livestock body conditions. As a result, milk prices across the cluster were 42 percent above LTA. Also, household milk consumption declined to 23 and 40 percent below the LTA in Agro Pastoral and Pastoral livelihood zones respectively. Milk production and consumption is expected to decline further across the cluster driven by declines in livestock body conditions.

Milk production, consumption and prices

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices Ksh per/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	1-2	3-4	1-2	2-3	50-120	30-80
Agro pastoral	1-2	2-3	1-2	2-2	50-120	30-80

Water for livestock

The return trekking distances from grazing areas to watering points were within average in the Agro Pastoral Livelihood Zone and 14 percent above average in the Pastoral Livelihood Zone. (Table 10). The increase in trekking distances in the Pastoral Livelihood Zone resulted from declined water availability following the drying of important open water sources following a below average recharge and depletion of pastures and browse near water sources. The increase in watering distances lowered watering frequency for cattle to 1-2 days per week, and sheep and goats after every 1-3 days compared to daily, normally. Camels on the other hand were watered after every 4-7 days compared to 5-10 days normally across the cluster. The water sources are expected to last between 1-2 months across the livelihood zones compared to 3-4 normally. Mandera County is worst hit as most of open water sources may not last for more than a month.

Water for Livestock in the Cluster

Livelihood zone	Return distance-KM		Expected duration to last (Months)		Watering frequency (Days per week)							
					Cattle		Camels		Goats		Sheep	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	7-18	6-16	1-2	3-4	1-2	7	4-8	5-7	1-3	7	1-3	7
Agro-pastoral	8-12	9-10	1-2	3-4	1-2	7	4-10	5-7	1-3	7	1-3	7

Migration, livestock diseases and mortalities

Internal and intercounty livestock migrations from wet grazing areas to dry grazing areas in search of forage and water were reported across the cluster where approximately 60 percent of livestock had migrated. Livestock from Oldonyiro ward in Isiolo migrated to Laikipia West Sub-County and Samburu County while those from Wajir and Garissa counties migrated to Isiolo County. Wajir County also reported in-migration of livestock from Lagdera in Garissa County. Livestock migrations are likely to increase between February and March with the expected depletion of forage and water resources.

Livestock diseases reported were confirmed cases of RVF in Isiolo County (Sericho and Cherab ward) and Garissa (Danyeri ward and Masalani ward), LSD in Isiolo (Chari, Cherab and Sericho wards) and Wajir Counties. Other endemic livestock diseases reported were FMD, CCPP, Contagious Bovine Pleuropneumonia (CBPP), Peste des Petits Ruminants (PPR), Sheep and Goat Pox. Trypanosomiasis in camels was also reported in Isiolo, Tana River and Wajir. Interventions in place to address diseases outbreaks are disease surveillance, vaccination against RVF in Isiolo and confirmation of suspected cases, continued to support the communities through training of disease reporters on early syndromic disease recognition, disease detection and home-based control as well as community-based disease surveillance by the departments of veterinary services and partners. Livestock mortalities remained normal.

2.2.5.3 Market Performance

There were no major market disruptions reported except escort market in Isiolo and Belges market in Madogo in Tana River, that were temporarily closed due to insecurity. Supply sources for food commodities in the markets included: Nairobi, Thika, Meru, Nanyuki, Samburu, Marsabit and cross border supplies from Somalia and Ethiopia. Markets within the

cluster were operating sub-optimally with low trade volumes due to the poor road infrastructure, insecurity in some areas, closure of the Ethiopia and Somalia borders and COVID-19 restrictions that affected the supply of goods.

Market prices

Maize prices ranged between Ksh. 56-83 in Wajir, Garissa, and Mandera, in January 2021, which was 10-22 percent above the five-year averages following supply deficits due to the closure of the Kenya-Ethiopia border, the COVID-19 restrictions and availability of substitutes such as rice. However, in Isiolo and Tana River, maize prices were Ksh. 46-49 which was 6-18 percent below average, in January 2021. In Isiolo, prices were driven by availability of local supplies from neighboring counties such as Meru, while in Tana River, prices were influenced by local production. Goat prices remained stable but varied across the cluster and ranging from Ksh. 3,461 in Garissa County to Ksh. 4,500 in Mandera County. The goat prices were average in Wajir and 11-35 percent above average in the rest of the markets due to good body conditions.

Terms of trade

The goat-to-maize price ratios (Terms of Trade) were above average in Tana River and Isiolo, average in Mandera, and below average in Wajir and Garissa (Figure 2.4). In Tana River, households were able to purchase 105 kgs of maize from the sale of a mature medium sized goat compared to the five-year average of 64 kgs. kilograms. However, in Garissa, the price of a similar goat could afford a household 49 kgs of maize compared to the five-year average of 52 kgs.

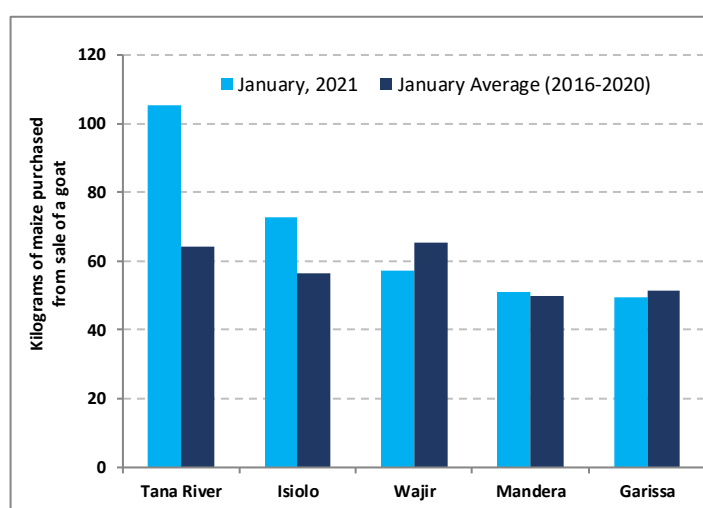


Figure 2.4: Comparative terms of trade

2.2.5.4 Water Access and Availability

The main sources of water for domestic use are boreholes, pans/dams, shallow wells, Benane springs in Garissa, and rivers such as Tana, River Dua, Isiolo, and Ewaso Nyiro, Bisan. Other sources include Berkads” (Underground Tanks) Infiltration Gallery Wells (IGWs) in Mandera County. The open water sources such as water pans and dams recharged to 40-70 percent of their capacities following the below average short rains. Following continued use, open water sources are expected to last for 1-2 months compared to 2-3 months normally except in Wajir and parts of Modika to Modogashe in Garissa where a significant number of water pans have dried up.

The return trekking distances to water sources for households ranged between 5-10 km compared to 1-5 km normally in Wajir and Garissa and 2-6 km in Tana River and Isiolo compared to 1-3 km normally. In Mandera, return trekking distances ranged between 7-20 km compared to 5-10 km normally. The increase in distances resulted from drying of nearby open sources and curtailed access to water sources due to insecurity and breakdown of facilities.

With declining water availability, the cost of water increased to Ksh. 10-30 per 20 litres jerrycan in Wajir and Mandera from Ksh. 2-5 per 20 litres jerrycan normally. In Garissa and Isiolo, the cost of per 20 litres jerrycan was Ksh. 2-7 compared to Ksh. 2-5 per 20 litres jerrycan normally. In Tana River, the cost of water increased from Ksh. 2-5 per 20 litres jerrycan to Ksh. 20-30. Water consumption was 10-15 litres per person per day in Tana River, Mandera and Isiolo compared to 15-20 litres per person per day normally. In Wajir consumption was less than 10 litres per person per day compared to 15-20 litres per person per day normally while in Garissa, water consumption was 20-40 litres per person per day compared to 30-40 litres per person per day normally. The current waiting time increased from 5-10 minutes normally in Wajir, Garissa and Tana River to 20-40 minutes.

2.2.5.5 Food Consumption

Declining livestock productivity and household milk availability, in addition to constrained food access, lowered food consumption among the poor households in the cluster. The proportion of poor households with poor food consumption scores were 2-7 percent while those with borderline food consumption scores were 18-51 percent, in January 2021. Garissa had the highest proportion of households with poor food consumption scores while Tana River had the highest proportion of households with borderline food consumption scores.

2.2.5.6 Coping Strategies

Faced with constrained food availability and access, the adoption of consumption-based coping strategies, measured using the Reduced Coping Strategy Index (rCSI), was evident. According to NDMA sentinel site data, 75-90 percent of poor households engaged in Stressed consumption-based coping strategies, with the highest proportion in Isiolo and lowest in Wajir. Approximately 1-15 percent of poor households engaged in Crisis/Emergency consumption-based coping strategies except in Wajir. Reliance on less preferred or less expensive food, borrowing food or relying on help from a friend, taking credit from neighbours and shops, reducing portion size of meals as well as skipping meals were the most employed coping mechanisms.

2.2.5.7 Health and Nutrition

The prevalence of acute malnutrition, according to Integrated Phase Classification (IPC) of Acute Malnutrition was Critical (IPC AMN Phase 4 GAM WHZ) in Mandera, Wajir, Garissa and Isiolo while Tana River was serious (IPC AMN Phase 3 GAM WHZ). The main drivers of acute malnutrition in the cluster were food insecurity, human diseases, poor infant and young child feeding practices. The prevalence of acute malnutrition is projected to worsen but remain within the current IPC AMN phase.

Mandera and Wajir had the highest admissions into both supplementary feeding programme and outpatient therapeutic feeding programmes. Across the cluster, admissions into the outpatient therapeutic programme dropped in December 2020 following the disruption of health services due to industrial unrest, insecurity, and closure of health services. Some acute malnutrition cases remained in the community due to the fear of visiting health facilities associated with COVID-19.

Morbidity and mortality

Upper Respiratory Tract Infections (URTI), diarrhoea and Malaria were the leading causes of morbidity among children under five years of age and the general population. Cases of URTI were highest in Wajir, Mandera and Garissa counties. Diarrhea caseloads were stable but spiked in November following the onset of the short rains. Nonetheless, morbidity trends across

the cluster were within the seasonal trends but below those of 2019. In Garissa County 93 confirmed cases of Visceral Leishmaniasis (Kala-azar) from Lagdera and Garissa Sub Counties were reported, with three deaths while in Isiolo County 17 cases of Rift Valley Fever were reported in Garbatulla and Merti sub-counties.

Health and Nutrition in COVID 19 context

Garissa County has so far recorded 723 COVID-19 cases, followed by Isiolo with 262 cases, Mandera with 107 cases, Tana River with 104 cases and Wajir with 84 cases. Following the COVID-19 outbreak, preventative routine services across primary and community health services nutrition counseling at the household level as well as nutrition screening in the community have been constrained. Health facilities have reported reduced numbers of clients seeking health services due to fear of contracting the disease, giving a rise to home deliveries especially in Isiolo and Tana River. Although mother-Child Health and Nutrition Weeks “*Malezi bora*” activities have been scaled down or cancelled, Community Health Workers (CHWs) have been instrumental in implementing the Family MUAC approach. The COVID-19 pandemic has led to the improvement of health facilities including setting up isolation centers and intensive care units to manage critical cases. At the same time, counties within the cluster have set up COVID-19 response teams and coordination mechanisms.

Immunization and micronutrient supplementation

Immunization and micronutrient supplementation was better compared to previous years. The coverage was highest in Isiolo County following the roll out of Universal Health Coverage (UHC). The coverage was lowest in Mandera, Wajir and Tana River Counties due to longer distances to health facilities. Vitamin A supplementation for children was above 80 percent in the second semester of 2020 in Tana River and Isiolo sub-counties and between 60–80 percent in Garissa and Wajir counties (Figure 2.5). The observed performance was attributed to accelerated vitamin A

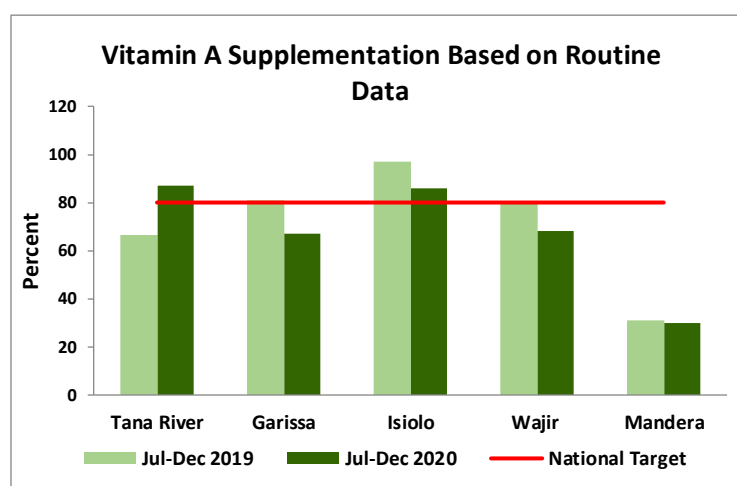


Figure 2.5: Vitamin A supplementation coverage

supplementation carried out during *Malezi bora*. However, Mandera County posted low coverage within the cluster (30%), which compares to the last two semesters. The poor performance might be attributed to poor health seeking behaviour and reduced community level activities due to the COVID 19 pandemic and scaling down of outreaches as a result of reduced funding.

2.2.5.8 Education

Access: Enrolment rate

Enrolment in Early Childhood Development Education (ECDE) declined by six percent between Term I 2020 and Term II 2021. However, more boys (54 percent) than girls (46 percent) were enrolled. Similarly, primary school enrolment declined by seven percent with more boys (57 percent) enrolled than girls (43 percent). Also, transition to secondary school decreased of seven percent with 61 percent of boys and 39 percent of girls. The decline in enrolment and transitions resulted from decreased household incomes following the COVID-

19 restrictions that affected income activities, delayed provision of school meals, insecurity, lack of water in schools, low teacher numbers in ECDE, and early marriages of school age girls.

Enrolment in the Cluster

Enrollment	Term I 2020			Term II 2021 (includes new students registered and drop-outs since Term I 2020)			Increase or Decrease Variation)	% Increase or decrease	% Boys Enrolment	% Girls Enrolment
	No Boys	No Girls	Total	No Boys	No Girls	Total				
ECD	49,418	41,892	91,310	46,982	38,834	85,816	-5,494	-6%	54%	46%
Primary	155,786	114,302	270,088	143,137	107,138	250,275	-19,813	-7%	57%	43%
Secondary	33,511	21,525	55,036	31,587	19,453	51,040	-3,996	-7%	61%	39%

Effects of COVID -19 Pandemic on schools

The COVID-19 pandemic led to closure of all schools. Despite the introduction of E-Learning provided by Kenya Institute of Curriculum Development (KICD) at all levels, participation was low due to lack of radio, lack of mobile phones, lack of internet/connectivity, lack of television and unawareness of existing e-learning platforms. However, in Ijara and Lagdera sub-counties, learners were provided with radios, TVs and mobile phones by parents, UNICEF and other partners. In Garissa County, provision of desks, facemasks, hand washing buckets, construction of extra classes in some schools as well as purchase of thermos guns for all primary and secondary schools by the Ministry of Education (MOE) was implemented. Timely disbursement of Free Primary Education (FPE), Free Day Secondary Education (FDSE), Transition Infrastructure Funds and Constituency Development Fund (CDF) and Economic Stimulus Project supported the mitigation COVID-19 pandemic effects in schools within the cluster. The education officials, teachers, learners and support staff have been trained on management of COVID-19 pandemic, Sexual and Gender Based Violence (SGBV) and teenage pregnancies in schools. Nonetheless, water shortages and a reliable supply of face masks in remote schools remains significant concern.

Effects of Short Rains on schools

In Garissa County, the short rains resulted in damaged walls, roofs, toilets, reading materials, doors and toilets in a total of 98 schools (36 EDCs, 51 primary and 11 secondary) such as Ijara girls secondary, Kalan Kal, Derow primary, Masalani primary and Hara primary schools. In Isiolo County, several schools such as Tanna primary, Konne, Eldera, Belgeshe, Bisanathi, Korbesanur and Rapsu had been closed due to insecurity around Isiolo-Garissa border, Isiolo-Wajir border and Isiolo-Meru border respectively. Seven schools in Garbatulla area namely closed due to insecurity. In Mandera County, 10 latrines and 31 classrooms were destroyed in 41 schools, with the majority in Mandera West sub-county.

School Feeding

Community School Meal Program (CSMP) and Regular Schools Meals Programme (RSMP) were the main school feeding programs for primary schools in the cluster. The food that was delivered to schools in term I 2020 in January 2020 was consumed up to 16th March when all institutions were closed following COVID 19 pandemic outbreak. The Ministry of Education also delivered food ration for the second term to respective the sub county stores and was later issued to pupils and guardians when the schools remained closed through November 2020. However, at the time of assessment, the school meal programme in public primary schools and ECD centres was delayed leading to low attendance, participation and retention.

Water, Sanitation and Hygiene

The ECD, primary and secondary schools in the cluster had inadequate toilets and handwashing facilities. Further, access to clean drinking water was curtailed by the below average short rains and lack of adequate water storage facilities. Most institutions relied on water bowzers due to long distances to permanent water sources. The ratio of latrine to pupils in primary schools was estimated at 1:70, while ECDE centres had no special latrines in place. In Garissa County, 189 schools have inadequate functional latrines, 169 schools have no hand-washing facilities, and 220 schools have no access to safe water. In Mandera County, there was a shortage of 1,394 latrines in primary schools, while 84 primary and 15 secondary schools were not within reach of permanent water sources, and 202 primary and 24 secondary schools lacked handwashing facilities. There were no adequate sanitary towels that were distributed to girls for use during the school's closure.

2.3 The Agro Pastoral Livelihood Cluster

2.3.1 Cluster Background Information

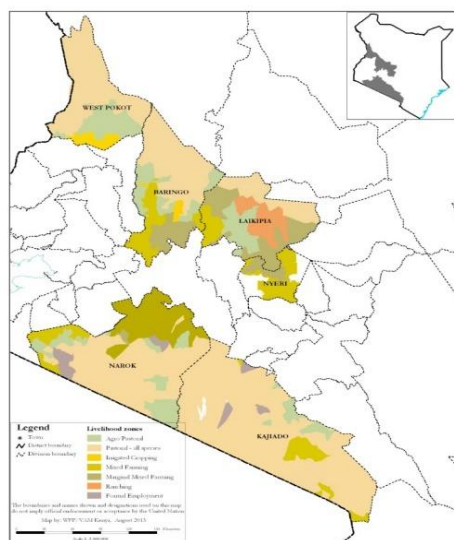


Figure 2.6: Agro pastoral cluster livelihood zones

The cluster comprises of West Pokot, Baringo, Nyeri (Kieni), Narok, Kajiado and Laikipia Counties and covers an area of 71,471.7 square kilometers. It has a population of 4,281,198 persons (KNBS 2019 census) and six main livelihood zones. The livelihood zones include Mixed Farming, Pastoral, Marginal Mixed Farming, Agro Pastoral, Formal Employment/tourism/business and irrigated crop livelihood zones with a population proportion of 31, 27, 20, 11, 10.7 and 0.7 percent respectively. Livestock and cash crop production are the leading sources of income accounting for 75 percent and 55 percent of the total household income in the cluster.

2.3.2 Current Drivers of Food Insecurity

Rainfall performance

The cluster experienced timely rainfall onset in the third dekad of October except for Kajiado and Nyeri Counties which recorded late onset. The seasonal amount received in the cluster was above normal, despite being characterized by poor temporal and uneven spatial distribution across the cluster. There was an early cessation of rainfall in the cluster apart from Laikipia County, whose rains ceased normally in the third dekad of December 2020, while Nyeri County experienced extended rains into January 2021.

Conflicts/ Insecurity

Resource based conflict were reported in parts of Baringo county namely Kapedo East and West sub-locations in Silale ward, Tiaty Sub-County, attracting a massive security operation in the areas to restore law and order. The conflict has led to food to market closure in the affected areas while movement of goods and transport services have come to a halt. The conflict has resulted in disruption of livelihood activities and displacement of populations while provision of health and education services has been affected as some schools have been shut down mainly in Silale ward. Insecurity associated with cattle rustling were also reported in Ol-

moran and Sipili Laikipia County. In Kajiado County, communities bordering game reserves in Entonet/Lenkism, Olongulului and Matapato South Wards reported wildlife invasion into their lands mainly from wild beasts, elephants, giraffes, zebras and antelopes, hindering them from accessing pasture and browse for their livestock. Destruction of crops by the wild animals was also reported in Kimana, Rombo and Kuku wards. Cases of human-wildlife conflict in Nyeri County were also experienced in Riiru area of Mweiga ward. A herd of about 300 cattle believed to originate from Laikipia County was spotted in Kieni East Sub County, Gakawa ward. Such movement are common in the region during dry spell and more of such in migrations are expected as the dry spell progresses, which will lead to competition over dwindling resources and resource-based conflicts.

Other shocks and hazards

The COVID-19 containment measures disrupted basic social services provision across the cluster, leading to a drop in the number of people seeking essential nutrition and health services. Visits to health facilities declined due for fear of contracting COVID - 19. Other platforms for service delivery such as health outreaches and households' visits by Community Health Volunteers (CHVs) were equally suspended. Livelihoods losses especially for casual labourers are yet to recover. Schools resumed by October for grade 4, standard eight and form four students while the rest resumed in January 2021. There was limited movement for both human and livestock which affected livestock productivity and marketing. Movement of goods and services was restricted thus affecting provision of various food commodities to the markets. The restrictions affected normal livestock migration for instance, pastoralists in West Pokot County were barred from crossing over to Uganda in search of pasture, where they could otherwise have moved during such times of the year.

Livestock diseases reported in the cluster include, Contagious Caprine Pleuropneumonia (CCPP) and *Pests des Petits Ruminants* (PPR), Lumpy Skin Disease (LSD) and Foot and Mouth Disease (FMD) in Baringo, West Pokot and Kajiado Counties while Heart water and Blue tongue were reported in Kajiado, Narok and Baringo Counties. Crop diseases cited were Fall Army Worm (FAW) in Kajiado and Narok Counties and Frost bite and Blight in potatoes and beans being a major threat in Nyeri County. Floods caused displacement of households and at least 700 hectares of farmland submerged in Baringo County. Desert locusts were reported in parts of West Pokot County which threatened crops and pasture lands.

2.3.3 Current Food Security Situation

The Integrated Food Security Phase Classification for the Agro Pastoral cluster is in Stressed (IPC Phase 2) except in the Mixed Farming livelihood zones in the cluster which are in Minimal (IPC Phase 1). Households within the cluster counties are currently holding food stocks of between 11.3 to 64 percent above the LTA except West Pokot County where household are holding food stock which is 85 percent below the LTA. Forage conditions in the cluster counties varied between good to fair and is expected to last for between 2-3 months. Livestock body condition for all species ranged from good to fair. Maize prices were within LTA retailing between Kshs. 31 to Kshs. 46 across the cluster except in Kajiado County where the average price of a kilo of maize was Kshs. 55 which was nine percent above the LTA. Goat prices in January ranged between four to 57 percent above the LTA across the cluster with Kajiado County recording goat prices which were 97 percent above the LTA. Favourable Terms of Trade were recorded across the cluster with a medium size goat fetching more cereals compared to LTA. For instance, in West Pokot and Kajiado counties, the Terms of Trade was 80 percent above average. Water consumption ranged between 8 – 25 litres per person per day across the

cluster except for Narok and Nyeri counties which recorded high water consumption rates of between 30-40 litres per person per day. A high proportion of households within the cluster counties recorded acceptable Food Consumption Score (FCS). Households in Baringo, Kajiado, Laikipia and Nyeri, the proportion of households employing crisis coping strategies ranged from between 27.4 to 61.1 percent. Baringo had highest proportion of household who were employing crisis coping strategies. Proportion of children under 5 years at risk of malnutrition based on Mid Upper Arm Circumference (MUAC) ranged between 1.2 and 10.4 percent except for Nyeri where acceptable levels were registered.

2.3.4 Food Security Trends

Indicator	SRA 2020	LRA 2020
% of maize stocks held by households	73%	236%
Livestock body condition (Cattle)	Fair-Good	Good
Water consumption (litres per person per day)	19-27	15-25
Price of maize (per kg)	41	47
Distance to grazing in km	2.5-5	2.9
Terms of trade (pastoral zone)	112	93
Coping strategy index	5	5.3
Food consumption score	Acceptable-85 Borderline-15 Poor-0	Acceptable-63 Borderline-34 Poor- 3

2.3.5 Impact of Drivers on Food and Nutrition Security

2.3.5.1 Crop production

Rain fed crop production

The cluster is mainly dependent on the long rains season for crop production except for Nyeri which is dependent on the Short rains. Crop production contributes 30 percent to food and about 40 percent to cash income for households. The main crops grown in the cluster include maize, beans, Irish potatoes and millet. The area planted under Irish potatoes, beans and maize was 85, 94 and 95 percent of the LTA. The decline in the area planted with Irish potato is attributed to the increase in area planted with maize and beans. Production of beans, Irish potatoes and maize was 71, 75 and 86 percent of the LTA. The decline in production is attributed to poor performance of short rains across the cluster. Fungal diseases in Kajiado South reduced potato production while in Narok county, approximately 5000 Ha of maize was slightly affected by fall armyworm. In Baringo County, the low acreage under rain fed crop production was attributed to farmers heeding to weather advisories that had forecasted that the short rains would be insufficient. The late harvesting of the long rains crop and some farmers observing closed season to break the Fall Armyworm (FAW) cycle also contributed to low acreage.

Rain fed crop production

Crop	Area planted during 2020 short rains season (Ha)	Long term average area planted during the short rains season (Ha)	2020 short rains season production	Long term average production during the short rains season
Maize	63,295	66,355	1,753,070	2,046,563

Crop	Area planted during 2020 short rains season (Ha)	Long term average area planted during the short rains season (Ha)	2020 short rains season production	Long term average production during the short rains season
Beans	41,909	44,360	324,146	454,106
Irish Potatoes	15,550	18,366	983,973	1,318,030

Irrigated crop production

Irrigation is mainly done in irrigation schemes and along the river valleys. The main crops grown under irrigation are cabbage, maize and tomatoes. Other crops grown under irrigation include, onions, kales and carrots. The area under irrigation for cabbage and maize was 94 and 96 percent respectively of the LTA, while that of tomato was 38 percent above the LTA which was attributed to farmers taking advantage of the expected good returns. The decrease in area under crops was due to destroyed irrigation infrastructure occasioned by landslides and floods notably in Weiwei and Kaminia irrigation schemes in West Pokot, coupled with reduced subsidized land preparation services by the West Pokot county government. Production for cabbages was 59 percent of the LTA while that of maize and tomato was 19 and 44 percent above the LTA. Improved tomato production was due to use of quality farm inputs (seeds and Agrochemicals) and the good prevailing market prices in Kajiado. Increase in maize production was as a result of adequate water for irrigation, increase in yield per unit area and decrease in pest infestation. Deliberate efforts done by the Baringo County Government, National Government and development partners have contributed to increase on the area under irrigation including Household irrigation for food and Nutrition security through projects such as Drought Resilience Sustainable Livelihood project (DRSLP), Kenya Climate Smart Agriculture Project (KCSAP), and Baringo County Resilient project. Besides delayed short rains onset and early cessation, other challenges encountered include unavailability of casual labour and reduced casual engagement hours occasioned by Covid-19 restrictions as observed in Nyeri.

Irrigated crop production

Crop	Area planted during 2020 short rains season (Ha)	Long term average area planted during the short rains season (Ha)	2020 short rains season production	Long term average production during the short rains season
Tomatoes	3062	2223	34888	24214
Maize	1480	1542	36980	31038
Cabbages	950	1010	35781	60275

Cereal Stocks

The total maize and sorghum stocks available in the cluster were 10 and 15 percent above the LTA. For maize the farmers, millers and traders held seven, 26 and 54 percent of stocks above the LTA respectively while for sorghum, farmers and traders held 10 and 17 percent of stocks above the LTA. The increase of stocks held by various actors is attributed to poor purchasing capacity of the households which resulted to low purchases of the above commodities. In Baringo county, the closure of schools due to Covid -19 affected stocks held by traders as schools were a major market for the traders. Maize stocks will last for 1-2 months in Baringo and West Pokot counties (as compared to 3-4 months), five months in Laikipia and one month in Kajiado and Nyeri counties.

Cereal stocks

	Maize		Sorghum	
	Current	LTA	Current	LTA
Farmers	1,593,461	1,487,219	8,920	8,046
Traders	378,305	245,701	12,078	10,246
Millers	45,832	36,368	-	-
food assistance	29,205	75,050	-	-
Total	2,046,803	1,844,338	20,998	18,292

2.3.5.2 Livestock Production

Livestock production contributes 22–35 percent to cash income in Mixed Farming livelihood zones, and 40-60 percent in the Marginal Mixed Farming, Pastoral and Agro Pastoral livelihood zones. The main livestock species kept in the cluster are cattle, sheep, goats, camels and poultry. The pasture condition was fair in the Pastoral and Marginal Mixed Farming livelihood zones and good to fair in the Agro Pastoral, Mixed Farming and Irrigated Cropping livelihood zones which was within normal seasonal range. The browse condition was good across all livelihood zones. The pasture is expected to last for 1-3 months in all the livelihood zones compared to the normal of 2-3 months while browse is expected to last 3-4 months compared with three months normally. The normal forage condition was attributed to average rainfall received at the end of December 2020 across the livelihood zones in addition to the off-season rains received in early January 2021. There was unlimited access to pasture and browse by livestock during the reporting season apart from cases of insecurity and conflicts over grazing space in parts of Laikipia county (Mukogodo), ethnic conflict among the Pokot and Marakwet in West Pokot County and persistent insecurity and tensions around Saimo Soi and Kapedo areas of Baringo County. Invasive plants such as *Ipomoea* and *Prosopis* in parts of Kajiado County and *Opuntia* and *Notonea petrea* in Laikipia and Nyeri Counties also affected access to forage. Tsetse fly infestation was witnessed in parts of Kajiado South, Kajiado East and Kajiado West sub counties with cases of human/wildlife/ livestock conflict reported in parts of Kajiado South and Kajiado Central sub counties.

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
Mixed Farming	Good	Good	3	3	Good	Good	3	3
Marginal Mixed Farming	Fair	Fair to good	2	3	Good	Good	3	3
Pastoral	Fair	Fair to good	2	2-3	Good	Good	3-4	3
Agro Pastoral	Good-Fair	Fair to good	1-2	2-3	Good-Fair	Good	3-4	3
Irrigated cropping	Good-Fair	Good	3	3	Good	Good	3	3

Pasture conservation status

There are initiatives of forage production and conservation as well as utilization of crop by-products by individual farmers across the livelihood zones. The cluster counties had 1,055 hay stores with a storage capacity of 2,239,500 bales but currently holding 1,398,450 bales. The average weight per bale of hay was 15 kilograms was sold at an average price of Kshs. of Kshs. 140 -240 per bale. Individual farmers were holding between 65 to 75 percent of the stored bales while individual institutions and farmer groups stored 25 percent of the bales.

Hay conservation status

County	No. of Hay Stores	Storage Capacity(bales)	No. of Bales currently being held	Average Weight per bale (in Kgs)	Average price per bale (Kshs.)	Comments – E.g. percentage held by farmers and other Institutions
Baringo	31	1,162,500	923,500	15	200	75% by farmers 25% by other institutions
Kajiado	476	405,000	95,000	14	240	80% held by farmers
Laikipia	288	375,000	175,950	15	140	65% by individual farmers 35% by producer groups
Narok	260	297,000	204,000	15	200	75% by farmers 25% by other institutions
TOTAL	1055	2,2395,00	1,398,450	15	200	

Livestock body condition

The body condition for grazers (Sheep and Cattle) was fair – good in the Pastoral, Agro Pastoral and Marginal Mixed Farming livelihood zones compared to the normally good condition while for Mixed Farming and Irrigated Cropping livelihood zones livestock body condition was good. The fair to good livestock body condition was due to the fair forage condition and the longer than normal trekking distances to watering points. For Mixed Farming and Irrigated Cropping livelihood zones the good livestock body condition for all classes of livestock can be attributed to the availability of quality forage and water as well as normal trekking distances to watering points.

Livestock body condition

Livelihood zone	Cattle		Sheep		Goat		Camel	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Mixed farming	Good	Good	Good	Good	Good	Good	Good	Good
Marginal Mixed Farming	Fair	Good	Fair	Good	Fair	Good	Good	Good
Pastoral	Fair-Good	Fair to Good	Fair-Good	Good	Fair - Good	Good	Good	Good
Agro Pastoral	Fair-Good	Good	Good	Good	Good	Good	Good	Good
Irrigated cropping	Good	Good	Good	Good	Good	Good	N/A	N/A

The Tropical Livestock Units (TLUs)

The Tropical Livestock Units (TLUs) in majority of the livelihood zones were stable for both poor and middle-income households compared to the same period last year though lower than the LTA. This stability of TLUs in the mixed farming livelihood zone could be attributed to favourable weather conditions which enabled average forage regeneration. As compared to the

LTA there was a 14-50 and five-50 percent drop for TLUs for the poor and the medium income households respectively across all livelihood zones and this can be attributed to diminishing pasture land sizes, land demarcations and shift from keeping large herds to herding a few improved breeds among the households. Increased sale of livestock by poor income households over time to cater for increased cost of living especially purchase of food commodities and other domestic needs has also contributed to the decline in the number of TLUs among the households. Other factors such as frequent cases of cattle rustling in parts of West Pokot and Baringo counties contributed to the reduction in TLUs in the pastoral livelihood zones. The lower than normal TLUs imply that food security in a majority of the households is at risk.

Tropical livestock unit (TLU)

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Mixed farming zones	2-4	1-6	3-8	3-10
Marginal mixed farming	1-2	3	2	4
Pastoral	3-7	5-10	6-20	7-21
Agro Pastoral	3-6	4-7	5-16	6-21
Irrigated Cropping	3	5	6.2	6.5

Milk production, consumption and prices

Average milk production for the season under review decreased by 18.8, 79.1, 68.8 and 25 percent in Mixed farming zones, Pastoral, Agro Pastoral and irrigated crops respectively. This can be attributed to the fair condition of pasture and browse, the diminishing number of TLUs and land sizes, land demarcations and shift from keeping large herds to herding a few animals. COVID-19 impacted negatively on milk production because majority of the farmers could not afford feed supplements. Corresponding to the milk production, consumption declined by 14.2, 58.3, 50 and 20 percent in the Mixed Farming, Marginal Mixed Farming, Pastoral and Agro Pastoral livelihood zones respectively when compared with increased by over 50 percent in the Irrigated cropping livelihood zones. The decrease in milk consumption was associated to the depressed milk production levels due to low quality pasture, internal livestock migration in search of pasture and water. Milk prices were comparable to the LTA for Irrigated Cropping livelihood zone while for Pastoral and Marginal Mixed Farming livelihood zones milk prices were 40 and 33 percent higher than the LTA. In some parts of the Pastoral livelihood zone such as Naroosura, Ntuka and Maji moto (Narok South) a litre of milk was sold at Kshs. 90. For Agro Pastoral and Mixed Farming livelihoods the milk prices were lower than the LTA which can be explained as a result of the COVID -19 pandemic reducing household income forcing a drop-in milk price.

Milk production and consumption

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Kshs)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Mixed Farming zones	3-10	6-20	2-4	2-5	30-50	30-60
Marginal Mixed Farming	3-4	7	1-1.5	3	30-50	30
Pastoral	0.5-3	2-10	0.5-2.5	2-4	50-90	40-60
Agro Pastoral	1-4	4-12	1-3	2-3	30-60	40-60
Irrigated Cropping	6	8	5	2	50	50

Water for livestock

The common water sources of water for livestock were rivers, streams, water pans, dams, wells and springs. Trekking distances from grazing to water points increased by 25, 45.4 and 75 percent respectively in the Mixed Farming, Pastoral and Agro Pastoral Livelihood zones but remained stable in the Marginal Mixed Farming and Irrigated Cropping livelihood zones in comparison with the LTA. The increase in trekking distances is due to the fact that most water sources were not recharged to capacity due to the average to below normal 2020 Short rains and this has seen an increase in return trekking distances to water sources compared to normal

Livestock water

Livelihood zone	Return trekking distances-km		Expected duration to last (Months)	
	Current	Normal	Current	Normal
Mixed Farming zones	1-4	2	1-4	3-4
Marginal Mixed Farming	2-4	3	2-4	2
Pastoral	1-15	3 -8	1-4	2-3
Agro Pastoral	5-9	2-6	1-5-4	3-4
Irrigated Cropping	2	1-2	Throughout the year. Due to permanent rivers, shallow wells and springs.	Throughout the year

Apart from Pastoral and Agro Pastoral livelihood zones, watering frequency was within normal for all categories of livestock which was daily. In the Pastoral and Agro Pastoral livelihood zones watering frequency was below normal at 5 days and 2 days per week for cattle and camels respectively compared to daily normally due to the longer than normal trekking distances to the watering points from the grazing areas.

Watering frequency (Days per week)

Livelihood zone	Cattle		Camels		Sheep		Goats	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Mixed Farming	7	7	-	-	7	7	7	7
Marginal Mixed Farming	7	7	-	-	7	7	7	7
Pastoral	5	7	2	2	7	7	7	7
Agro Pastoral	5	7	2	2	7	7	7	7
Irrigated Cropping	7	7	-	-	7	7	7	7

There were no reported livestock out migrations across the livelihood zones apart from minimal livestock movements within the counties. However, insecurity and tensions between Baringo North with Tiaty and Tiaty with Turkana have caused households to move to the interior of their sub-counties. It is anticipated that between February and March, livestock are likely to move from Kinyach, Kolloa to Kalabata and Kerio valley areas as well as from Kapedo to Kasarani, Malaso areas in to Marakwet and West Pokot counties. Confirmed outbreak of Food and Mouth (FMD) disease was reported in Mutara, Rumuruti, Nanyuki ward and Chumvi while CCPP outbreak was reported in Sosian and Ngobit wards of Laikipia county. *Peste des Petits Ruminants* (PPR) disease was reported in Baringo, West Pokot and Kajiado counties. However livestock mortality rates are within normal ranges.

2.3.5.3 Market Performance

Market operations were largely normal but COVID-19 protocols on handwashing, social distancing and wearing of masks were not adequately adhered to. However, sub-optimal operations occasioned by COVID-19 restrictions were noted in West Pokot while major market disruptions were reported in Tiaty Sub county following the on-going conflict and security operations. Essential food stuffs traded during the 2020 Short rains season were beans, millet, sorghum, sweet potatoes, Irish potatoes, vegetables, tomatoes, rice, sugar, maize flour and green grams. Consequently, a significant proportion of the population (85 percent in the Pastoral and 40 percent in the Agro-pastoral livelihood zones) relied on markets for their supplies.

Supplies and Traded Volumes

Supply sources for food commodities in Narok County were from Kiambu, Makueni, Nakuru, Tanzania, Trans Mara West, Barakoi, Lolgorian, Kilgoris, Oloropil, Sogoo, Bomet, Kericho while livestock traded were sourced locally. On the other hand, there was a reduction in the traded volumes for food commodities occasioned by low production from the 2020 Short Rains, implementation of COVID-19 containment measures coupled with the increase in commodity prices across most markets. In addition, traded volumes for livestock in January 2021 was high as households sold more livestock to raise school fees in Kajiado but low in other areas for example West Pokot County as a result of COVID-19 restrictions.

Market prices

Maize price in the cluster was average to below average for all counties except in Kajiado County where prices were Kshs. 55 compared to the LTA of Kshs 50. The average prices ranged from Kshs. 32 per kilogram of maize in West Pokot to Kshs. 55 in Kajiado. The below average to average maize prices were attributed to good harvest from previous seasons and sustained supply of stock from neighboring counties and from the neighboring country of Uganda for the case of West Pokot. West Pokot and Laikipia counties did not have any variations in prices across the different livelihood zones. High prices were recorded in the Pastoral zones in Baringo as a result of market disruptions due to ethnic conflict in Tiaty Sub-county. Although prices are expected to continue rising across the cluster, the prices in Laikipia are expected to be below normal for the next three months.

Goat prices were above the LTA prices across the counties in the cluster as a result of good body condition and stable supplies to the market. However, in Tiaty Sub-county where market disruptions were reported prices were low and a medium size goat retailed at Kshs. 3,065 while the highest was in Kajiado at Kshs. 6,500 being 97 percent above the LTA of Kshs. 3,302. Variations across livelihood zones were also noted with the lowest price

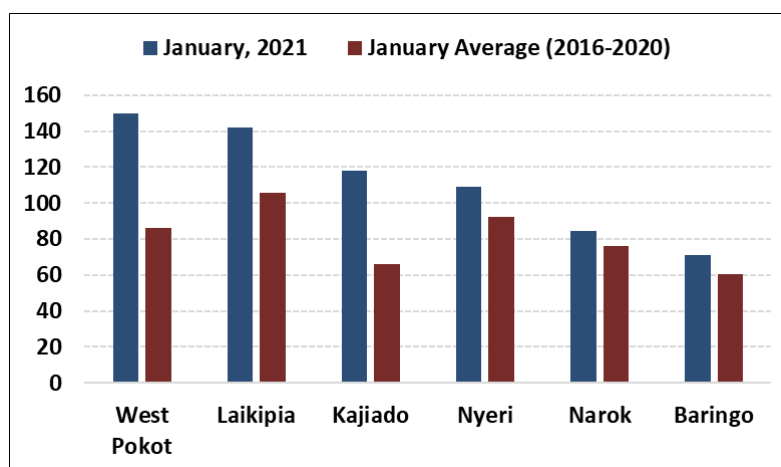


Figure 2.7: Comparative terms of trade

of Kshs. 2,598 reported in the Pastoral livelihood zone in Baringo while the highest price of Kshs. 7,600 was recorded in the Mixed Farming livelihood zone in Kajiado County. Generally, prices are expected to be stable and remain above the LTA in the next three across the cluster.

Terms of Trade

Terms of Trade were favorable compared to LTA across the cluster implying that households had higher purchasing power (Figure 2.7). Within the cluster, Laikipia County recorded the most favorable ToT where households were able to buy 142 kilograms of maize from the sale of a medium size goat compared to the LTA of 106 kilograms. Baringo on the other hand reported the least favorable ToT due to the low goat prices reported in the county. Only 71 kilograms of maize could be purchased with the proceeds from the sale of a medium size goat compared to the LTA of 60 kilograms in Baringo County. The terms of trade are expected to remain stable in Narok and Laikipia counties due to sustained high goat prices and stable maize price. The other counties within the cluster are expected to register a decline in ToTs in the next three months as a result of higher proportional increase in maize prices as compared to livestock prices.

2.3.5.4 Water Access and Availability

The main sources of water for domestic use are rivers and streams, pans/dams, boreholes, shallow wells and piped water system. Springs are also a major water source in the Mixed Farming areas. More than half of households have access to piped water systems. However, water rationing is severe due to illegal upstream abstraction for irrigation purposes. Rivers have average flows in Laikipia, West Pokot and Narok. However, River flows are very low in Kajiado and Baringo due to low rainfall amounts received during the 2020 short rains. Open water sources were fairly recharge to 50-60 percent of their capacities in Baringo, Narok and West Pokot and between 80 and 90 percent of their capacities in Laikipia and Nyeri. Open water sources were poorly recharged to about 20 percent of their capacities in Kajiado. Water pans and Dams are expected to last for 1-2 months in Baringo, West Pokot, Kajiado and Pastoral areas of Narok instead of the normal 3-4 months. However, water pans and dams are likely to last for 4-6 months in Laikipia, Nyeri and Mixed and Marginal Mixed areas of Narok. Over 90 percent of boreholes are operational in Laikipia, Baringo, West Pokot and Kajiado while 44 percent and 66 percent of boreholes are operational in Nyeri and Narok. Non-operational boreholes was due to normal electromechanical breakdowns, high electricity bills whereas a few other are yet to be equipped in Nyeri.

Return distances to water sources have remained normal at less than one kilometre in the Mixed farming areas of Laikipia, West Pokot, Nyeri and Narok and between 1-2 kilometres in the Marginal Mixed/ Agro-pastoral areas across the cluster. Return distances in the Pastoral areas average 4-6 kilometres except for Laikipia that average 2-3Km. Highest distances of up to 10Km were noted in Ndonyo Rasha and Naroosura/Majimoto Ward in Narok. Most households are able to collect water within 5-10 minutes except in Kajiado, Narok and West Pokot where households are waiting for 30 minutes to collect water. Highest waiting time of 1-2 hours was observed in the Pastoral areas of West Pokot.

Most households are relying on open water sources hence do not have to pay for water. However, few households are buying water at Kshs. 3-5 per 20 litres jerrycan across the cluster. Households with their individual connections to pipeline systems pay an average of Kshs. 200-300 maintenance fee monthly. Water vendors in parts of Nyeri Laikipia, Narok and isolated areas of Baringo, West Pokot, Kajiado are selling water at Kshs. 10-20 per 20 litres jerrycan.

Cost of water in the Pastoral areas of West Pokot have increased from the normal Kshs. 10-30 to current Kshs. 20-50 per 20 litres jerrycan.

Water consumption is normal with households in the Mixed and Marginal Mixed Farming livelihood zones consuming 30-40 litres per person per day (lppd) in Nyeri and Narok, 20-30 in the Mixed farming areas of Laikipia and Baringo. Most households in the Pastoral areas of Laikipia are consuming 15-20 lppd while those in the Pastoral Livelihood zones of West Pokot, Baringo and Kajiado are consuming 10-15lppd.

2.3.5.5 Food consumption

Food consumption gaps across the cluster counties, increased slightly in January 2021 compared to similar period in year 2020 and this was due to effects of COVID-19 containment measures which resulted to loss of income and livelihood activities. The cluster had about 72 percent of households in acceptable food consumption group in January 2021 compared to 76 percent in year 2020. The remaining 27 and one percent of households were in borderline and poor food consumption category. Moreover, Narok County had about 93 percent of households in acceptable food consumption category compared to 42, 69, 71, 76 and 78 percent in Nyeri, Laikipia, Kajiado, Baringo and West Pokot counties respectively. Conversely, only Narok, Kajiado and Laikipia counties had the households with poor food consumption score at 4.2, 2.2 and 1.1 percent respectively. The meal frequency for both under-fives and the general population was 1 – 3 meals in a day compared with the required 3 – 4 meals per day. Households consumed mainly vegetables, oil, legumes and pulses.

2.3.5.6 Coping Strategies

Coping strategy index across the cluster decreased across the five counties (West Pokot, Laikipia, Kajiado, Narok and Baringo) compared to the same period last year. Among the five counties, households in Baringo County applied highest coping strategies at 12.75, followed by Nyeri at 6.5, Kajiado at 5.3, Laikipia at 3.3, Narok at 2.8 and West Pokot at 1.07. This was attributed to near average rainfall received during the season, stable purchasing power, stable food prices and available household food stocks. Most households across the cluster employed consumption based coping strategies including using less preferred or less expensive food and taking credits from neighbours. In this cluster, households within the Pastoral and Marginal mixed livelihoods were applying stressed coping strategies compared to Mixed, Formal and Non-Formal Employment livelihood zones who are applied only minimal consumption based coping strategies.

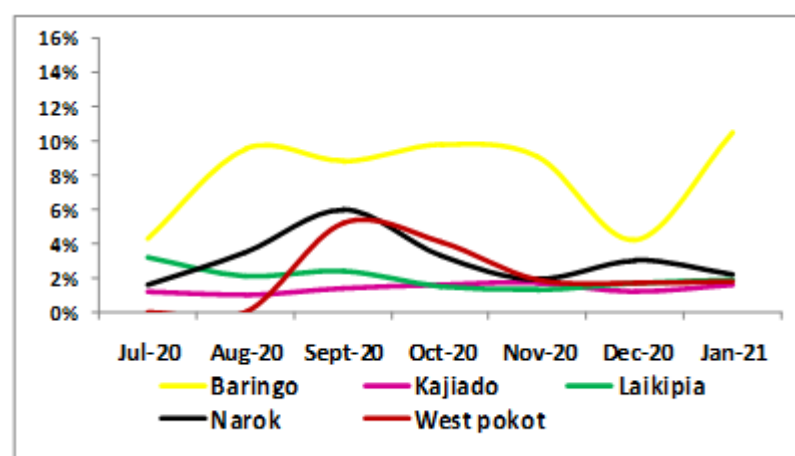


Figure 2.8: Trends of children under 5 years at risk of malnutrition

2.3.5.7 Health and Nutrition

Nutrition situation

West Pokot was classified at Phase 3 “Serious” while East Pokot (Tiaty East and West Sub Counties) in Baringo was classified at IPC Acute Malnutrition (AMN) Phase 4 “Critical”. The situation in West Pokot is attributed to lack of nutrition commodities

for management of malnutrition program, diseases such as the measles and Kalazaar outbreaks that are still active in the county. In Baringo County, the situation is attributed to low dietary intake due to limited access to food that is a result of inaccessibility to markets and high food prices due to Covid-19 effects and insecurity. The situation is further compounded by reduced milk availability and consumption. However, there was no data to classify Kajiado, Laikipia, Narok and Nyeri counties. The areas classified are likely to remain in the current phases during the projection period except West Pokot where the situation is expected to deteriorate to Critical due to lack of supplies for supplementary feeding program, dry spell, locust invasion and increasing measles cases. According to convergence of evidence of contributing factors, the nutrition situation is likely to remain the same with no significant changes expected.

The mid upper arm circumference for the children aged 0-59 months based on sentinel sites data indicates a stable nutrition situation across the cluster except in Baringo County where the proportion increased in January 2021 to 10.5 percent from 4.2 percent reported in December, 2020 (Figure 2.8). The data is not comparable to previous years as currently family MUAC is used.

Morbidity and Mortality

Morbidity trends for upper respiratory tract infections (URTIs), malaria and diarrhea were within the seasonal norms and generally below the trends reported in 2019. The reduction in diarrhea is linked to the heightened hand hygiene and hand sanitization during COVID 19 mitigation measures. The decrease in morbidity across the cluster is also attributed to restricted movement and also fear from the community which led to decrease in the hospital visits.

Measles outbreak that is still active was reported in West Pokot County (209 cases) and one death for the period July to December 2020. The increase in measles cases was attributed to stock out of measles vaccine, faulty KEPI fridges in 15 health facilities and long distances to the facility. Visceral leishmaniasis was reported in Baringo (15 confirmed cases) and West Pokot, 218 cases. The outbreak is still active in West Pokot. As at 8th February 2020, Kajiado, Nyeri and Laikipia counties reported high cases, 3210, 1129 and 1020 cases respectively while Narok, Baringo and West Pokot reported 483, 280 and 170 cases respectively. Under-five year old mortalities rates (U5MR) and crude mortality rate (CMR) between July and Dec 2020 were below the emergency thresholds across the cluster.

Health and nutrition Sector in COVID -19 context

During the period of analysis, July to December, 2020, there was minimal disruption of services due to COVID 19 as communities adapted to the new normal. Essential services trends indicate a normal trend however, the usual downward trend was noted in December. Outreaches were not ongoing across the cluster except in Baringo and West Pokot. In Baringo, the outreaches ended in December of 2020 while in West Pokot only 46 out of the mapped 103 sites continued with the outreaches. Malezi bora campaigns were not done in May however, some activities were done in November in the cluster. Programs at community level however were suspended such as community outreaches (hard to reach areas became more difficult to access), mother to mother support groups and community dialogue and action days and had not resumed. Community health volunteers were trained and encouraged to conduct home visits for health talks, assessment and monitoring of clients this was also faced with challenge of lack of

transport to visit households due to distance and resistance from households to usher in CHVs in their houses.

All Counties within the cluster have established a COVID-19 response team and coordination mechanisms for response and they have continued to hold virtual and face to face meetings while observing COVID 19 regulations. Online platforms played a big role in sharing information for faster coordination. Public health interventions that took place across the cluster included; training of health workers on COVID-19 at all levels, procurement and distribution of PPEs, procurement of IEC materials, provision of food/cash safety nets, non food items distribution, sensitization of community on COVID-19 including maternal infant and young child nutrition in emergencies through mass media, CHVs household visits and general food distribution to vulnerable households. forecasting on essential medicines and medical supplies (EMMS), counties partnered with other suppliers for the commodities that are available in KEMSA consistent supply of nutrition commodities, Iron and Folic Supplements, Vitamin A and dewormers.

Immunization and micronutrients supplementation

The proportion of children who were fully immunized in 2020 was above the national target across the cluster except in Narok and West Pokot Counties where the coverage was 72 and 58 percent respectively. The highest coverage was reported in Nyeri (Kieni) at 96 percent. Vitamin A supplementation for children aged 6—11 months is generally above 80 percent across the cluster. The coverage was highest in Kajiado, Laikipia and West Pokot at 160, 132 and 111 percent. The coverage for the children aged 12-59 months was generally low across the cluster except in Laikipia County where the coverage is 117 percent. The lowest coverage was reported in Narok and West Pokot which reported 15 and 28 percent respectively. Vitamin A coverage for 6-59 months was overall below the national target across the cluster. Narok, West Pokot and Baringo reported very low coverage of 21, 36 and 54 percent respectively. The low coverage for the Vitamin A was attributed to the closure of schools in March last year that led to disruption of Malezi bora activities.

Dietary intake and child care practices

Historical data from West Pokot County indicate a low exclusive breastfeeding rate at 39.9 percent below the National average of 61 percent. Continued breastfeeding to 2 years is equally poor at 52.8 percent. Sub optimal breastfeeding practices could be attribute to pre-lacteal feeds, socio-cultural practices, maternal workload and poor men involvement/support in breastfeeding. MIYCN Knowledge, Attitude and Practice (KAP) assessment, 2017 from West Pokot county, indicates that complementary feeding indicators are sub optimal with minimum dietary diversity, minimum meal frequency and minimum acceptable diet at 36.9 percent, 58 percent and 25 percent. Poor complementary feeding practices attributed to maternal workload, limited sources of income, low food variety. The proportion of households having acceptable food consumption was above 70 percent and highest in Narok at 93 percent. Meals consumed were 2-3 per day across the cluster but with limited dietary diversity. Milk consumption remained normal across the cluster except for a slight decrease noted in Kajiado and Baringo.

Water sanitation and hygiene

The proportion of households that treat drinking water was lowest in Tiaty Subcounties (East Pokot) in Baringo and West Pokot Counties at 4.4 and 10 percent respectively. In Kajiado and

Narok Counties water treatment is being done by 30.6 and 28 percent respectively. Hand washing at the four critical moments was which had been reported to be low in 2019 could have increased due to the on-going Covid 19 sensitization. Latrine coverage in the cluster was low across the counties except in Nyeri North where it stands at 99.5 percent. Latrine coverage in West Pokot, Narok and pastoral areas of Laikipia Counties was at 48, 52.4 and 58 percent respectively. The lowest latrine coverage in the cluster was reported in Baringo North and Tiaty where it was 3.14 and 42 percent respectively. Open defecation in such areas is still done and this contributes to the water contamination and subsequently, an increase in water related diseases.

2.3.5.8 Education

The enrolment status in this cluster indicates a decline in enrolment across all levels with ECD recording an 18% (Kajiado county had a 22% drop in ECD enrolment, while in Laikipia the decrease is as result of closure of four public ECD and 18 private ECD centers.) drop in enrolment, while Primary and Secondary education levels recorded an 8 % and 10% decline in enrolment respectively. It was however observed that there were 6% more girls enrolled in ECD enrolled in Baringo County compared to Term 1 2020. The factors that have contributed to the drop in enrolment include fear of contracting Covid 19, lack of school fees, lack of school meals program, circumcision of boys, pregnancies among school girls, charcoal burning, fishing, and motorbike businesses among others.

Enrolment rate

Enrollment	Term I 2020			Term II 2021 (includes new students registered and drop-outs since Term I 2020)			Increase or Decrease Variation	% Increase or decrease	% Boys Enrolment	% Girls Enrolment
	No Boys	No Girls	Total	No Boys	No Girls	Total				
ECD	167899	155354	323253	135841	128390	264231	-59022	-18%	52%	48%
Primary	447016	426328	873344	413893	387157	801050	-72294	-8%	51%	49%
Secondary	116990	116615	233605	107390	103466	210856	-22749	-10%	50%	50%

In Nyeri County, in addition to the unprecedented dropouts that were triggered by early pregnancies, a number of learners and parents adopted a wait and see attitude since a number of schools continued to register low turnout and only responded as the enrollment approached 100 percent.

Effect of Covid-19 in schools

In the counties within this cluster, out of the remaining learners who continued to stay at home when schools were partially reopened, only 10 percent in ECDE, 40 percent in primary schools and 65 percent in secondary schools continued accessing e-learning. The rest were engaged in various economic activities assigned to them by parents and guardians. Access to e-learning was largely inhibited by the knowledge gap on the part of users as well as connectivity challenges as well as lack in compatible gadgets to majority of learners, parents and guardians. The proportion of learners that could access e-learning provided by Kenya Institute of

Curriculum Development (KICD) was 20 percent in primary schools and between 20-24 percent in secondary schools. Among the schools that were used as quarantine centers, none reported any infrastructure damage. Furthermore, it was reported that food was poorly stored during prolonged closure by a majority of schools even though schools sold food-stuffs in stores in March to minimize losses. It was reported that approximately 500 girls in Kajiado County, had been confirmed pregnant, while absenteeism among boys was attributed to child labour, Boda-boda and sand businesses. A number of parents and guardians lost their livelihoods leading to job dismissals and collapse of businesses and therefore could not afford to pay school fees.

Effects of short rains in schools

In Baringo County there were several schools that were affected by floods resulting from short rains season including Ngambo primary and secondary school, Lake Bogoria Girls, Loruk primary and Day Mixed Secondary. Lake Baringo Secondary school was relocated to higher grounds. Some schools in Tiaty had their roofs blown off by winds. In Kajiado it was reported that Nine schools (3 in Loitokitok, 3 in central, 1 in North, and 2 in Mashuuru) had their toilets damaged with several sunken toilets. This threatened the re-opening of the schools as sanitation could be compromised. Similarly, in Laikipia, a total of 108 schools were damaged due to effects of heavy down pour/ flooding with reports of damaged walls, sunken toilets and damaged roofs as a result of the short rains. Moreover, in Narok it was reported that 24 ECD centers, 30 Primary and 10 Secondary schools experienced infrastructure damage including flooding/ submerged schools, sunken toilets, collapsed of walls and roofs as well as destruction reading materials which had an impact on school reopening.

School Meals Programme

Within this cluster there are several school feeding programs currently running, the majority of which are Home Grown Schools Meals (HGSM) and Regular meals program. In Nyeri county where Home Grown Schools Meals (HGSM) program is presently running, there has been a delay in the disbursement of food to the 52 schools that benefit from this program is yet to resume.

Similarly in West Pokot county where the Regular meals program is presently running, benefitting 184,102 students (92,313 boys, and 91,789 girls), there was delayed supply of food to schools impacting negatively on enrolment in this sector. In addition to this, there was no feeding program in place for ECDE learners.

In Kajiado county Home Grown School Meals (HGSM) was provided in 147 primary schools as of March 2020, for a total enrolment of 52,382 learners. This program leaves about 92,291 learners in need of food in schools. No school currently had a running school feeding program as reported at the time of assessment.

Baringo county benefits from two types of school meals: Home Grown School Meals Program (HGSM) and Regular School Meals Program (RSMP). A total of 28,582 (14,610 boys and 13,972 girls) are under RSMP. The HGSM program funds a total of 79,339 learners of whom 40,952 are boys while 38,387 are girls. A total of 107,921 students (55,562 boys and 52,359 girls) are under school feeding program while 39,286 students (20,696 boys and 18,590 girls) are not under any school feeding program. All ECDE learners are supported by the two school

feeding programs. However, by January 2021, funds for HGSMF had not been disbursed to schools.

2.4 The South Eastern Marginal Agricultural Livelihood Cluster

2.4.1 Cluster Background Information

The cluster comprises of five counties namely, Kitui, Makueni, Meru (North), Embu (Mbeere) and Tharaka-Nithi. It covers an area of 49,039.4km² and has an estimated population of 3,556,767 persons (KNBS 2019 census). The cluster has two major livelihood zones which are Marginal Mixed Farming livelihood zone representing 65 percent of the population, and Mixed Farming livelihood zone representing 26 percent of the population. The main sources of income for the cluster includes Crop production which accounts for 40 percent of the total household income, Livestock production accounting for 35 percent and Employment at 25 percent (Figure 2.9).

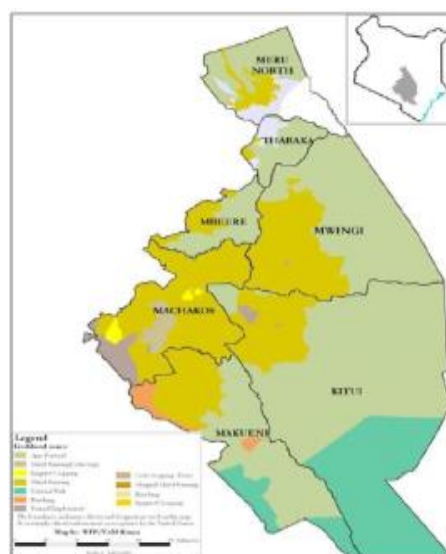


Figure 2.9: Southeastern marginal agricultural cluster livelihood zones

2.4.2 Current Drivers of Food Insecurity

Rainfall Performance

The onset of the short rains of October to December across the cluster was late in the second and third dekad of November for Kitui, Embu, Tharaka and Makueni Counties while Meru County also witnessed late onset in the third dekad of October compared to normal in the first dekad of October. The amount of rainfall was 51-90 percent of normal range in most parts of the cluster with exception of some pockets of Kibwezi West, East and Makueni and Kitui South Sub County that recorded 91-125 percent of normal rainfall. The rains were uneven in space and characterized by poor distribution in time across the cluster. Cessation was normal in the third dekad of December across the cluster.

Conflicts/Insecurity

Human-wildlife conflict was reported in Mea in Igembe North where herds of elephants destroyed crops at the farms. Internal and external migrations of livestock limited access to pasture and led to insecurity in the region. Due to lack of an electric fence in Lower Tsavo East border at Iviani, Kyuasini, Nthunguni and Athi Kamunyuni and Kyulu Park, several cases of human-wildlife conflict were reported, including the destruction of water tanks by elephants, death of farm animals, loss of human life and destruction of food crops. Human-wild life conflict was reported at Kaunguni where hyenas and lions had attacked livestock despite fencing of the Kyulu park and Ngiluni of Mtito Andei. Food crops were destroyed due to elephant's invasion and fatality was recorded. There were a few cases of human-wildlife conflict reported in the areas along Tsavo West National Park following the installation of an electric fence in Tsavo West wildlife corridor except at the Kenya Agriculture and Livestock Research Organization (KALRO) stretch. Cases of elephants and hyenas attacking about 85 goats, 47 sheep and 14 cattle were also reported in Kitui South and Mwingi North sub counties leading to loss of small stocks and injury to cattle.

COVID 19 Pandemic

Despite the gradual and partial easing of COVID 19 restrictions, poor households continue to face income deficits and constrained access to food due to decreased labour demand and income opportunities coupled with higher-than-normal food prices of some key staples. Stocks at the household level were dwindling as more households increasingly depend on market supplies. There has been a shortage of nutrition commodities required in the management of both severe acute malnutrition and moderate acute malnutrition due to importation restrictions occasioned by the COVID-19 pandemic. Poor healthcare-seeking behaviour due to COVID-19 stigma affected the uptake of services, especially in public health facilities. Reduced community health services were reported due to COVID-19. The pandemic affected nutritional screening coverage as fewer cases were screened due to lack of growth monitoring services for children less than five years in most health facilities. Stigma caused by COVID-19 pandemic among both the caregivers and health workers coupled by inadequate personal protective equipment (PPEs) was a major challenge affecting health services. The impact of the pandemic amidst other shocks will likely cause significant deterioration and erosion of livelihoods and productive assets, food security and nutrition of populations.

Desert Locust Invasion

Desert locust destroyed over 1,000 ha of millet, cow peas, green grams and maize in Mutha, Ikutha and Kanziko wards in Kitui South Sub County with about 400 households affected; 40 ha of crop land in Makueni Mixed Farming (crop/dairy/irrigation) and Mixed Farming (food crop/livestock) livelihood zones and about 350 hectares of maize and pearl millet in Tharaka.

Other Shocks and Hazards

Foot and Mouth Disease was reported in Meru North while Contagious Caprine Pleuropneumonia (CCPP) and Newcastle Disease (NCD) was reported in Embu County. During the period under review, Kalazar cases were reported in Mwingi North sub county. Lumpy skin disease (LSD), peste des petis ruminants (PPR), contagious caprine pleuropneumonia (CCPP), trypanosomiasis and foot and mouth disease (FMD) were reported in Kitui county leading closure of livestock markets. Quelea quelea birds invasion resulted to damage of large acreage of millet, sorghum and green grams in Kitui, Tharaka Nithi and Makueni county.

2.4.3 Current Food Security Situation

The cluster was classified under the stressed phase (IPC Phase 2) of the acute food insecurity classification, except for Nyeri County and parts of the mixed farming zone in Kitui which were classified to be in None/Minimal (IPC Phase 1). The poor short rains performance across the cluster, led to below normal crop production and poor recharge of water sources except in Tharaka Nithi and Meru Counties, where the situation was better. Livestock productivity was within the norm, with milk production slightly increasing in Meru County. There were below normal household stocks in the cluster, where COVID-19 pandemic control measures affected availability and access of food commodity at household and market levels. Households categorized in the acceptable food consumption score constituted 83.5 percent, with 16.2 and 0.3 percent in borderline and poor respectively. Pasture and browse condition were fair to good. Maize prices were generally above long-term average (LTA) in the cluster, with goat price being in the normal range and the terms of trade being slightly above normal. The mean coping strategy index for the cluster was high compared to the previous season, indicating that households were having more stress in accessing food while morbidity cases for all the diseases decreased significantly compared to the previous year. The proportion of children under-five

years at risk of malnutrition based on mid upper arm circumference (MUAC) ranged between one to seven percent across the cluster.

2.4.4 Food Security Trends

Indicator	Long Rains, July 2020	Short Rains, February 2021
Percentage of maize stocks held by households	92 of LTA	63
Livestock body condition (Cattle)	Fair-Good	Fair-Good
Water consumption (litres per person per day)	20-40 l/p/p/d	19-30
Price of maize (per kg)	Ksh.31-35	Ksh.35
Distance to grazing in km	1-6	4-9
Terms of trade (pastoral zone)	140	124
Coping strategy index	4.7	5.0
Food consumption score	Acceptable-83.8 Borderline-15.6 Poor- 0.7	Acceptable-83.5 Borderline-16.2 Poor-0.3

2.4.5 Impacts of Drivers on Food and Nutrition Security

2.4.5.1 Crop Production

The short rains season is more reliable for crop production and account for 60 percent of annual crop production. The main crop grown in the cluster were maize, green grams and cowpeas. Other crops were beans, sorghum and pearl millet.

Rain fed crop production

The area under maize, green grams and cow peas was 83, 79 and 78 percent of the LTA respectively. The reduction in acreage was attributed to uncertainty of rains performance as per Kenya Metrological Department forecast of below average to poor rainfall, increased acreage on Muguka crop in Mbeere North sub-county also resulted in reduced acreage under food crops. Limited access to farm inputs as result of reduced income associated with COVID 19 and high cost of inputs also contributed to decline in acreage.

The production of maize, green grams and cowpeas is projected to be 77, 66 and 72 percent of the LTA. The decline in production is mainly attributed to depressed rainfall especially during the grain filling stage and reduced acreage under the crops. Moreover, dessert locusts also damaged 350 ha of maize and pearl millet in Tharaka county, 1,000 ha of millet, cow peas, green grams and maize in in Kitui and 40 ha of crops in Makueni. Quelea quelea invasion was experienced in Marginal Mixed livelihood zone in Makueni. Approximately 214 ha of millet and 700 ha acres of sorghum and 830 ha acres of green grams was damaged affecting about 1,358 households. Wildlife conflicts in parts of Meru North resulted in destruction of approximately 250 ha of sorghum.

Rain-fed crop production

Crop	Area planted during 2020 short rains season (Ha)	Long term average area planted during the short rains season (Ha)	2020 short rains season production (90 kg bags) Projected	Long term average production during the short rains season (90 kg bags)
Maize	173,451	211,137	1,259,815	1,629,262
Green grams	101,872	129,295	406,325	614,065
Cow peas	56,910	72,622	226,310	316,200

Irrigated Crop Production

The main crops grown under irrigation are watermelons, tomatoes and kales. Other crops include bananas, papaya, green maize, and onions. The area planted under watermelons, tomatoes and kales increased by 46, 40 and 55 percent above LTA. This was attributed to sensitization campaigns done by County Governments to grow more horticultural crops especially County Government of Kitui where farmers were provided with certified seeds and fertilizers. The production of watermelon, Kales and Tomatoes is projected to be 347, 136 and 111 percent of the LTA respectively. The increased production of irrigated crops is attributed to increased area planted and improve husbandry practices. Increased availability of family labour as a result of prolonged closure of learning institutions due to the COVID-19 also impacted positively on production.

Irrigated crop production

Crop	Area planted during the 2020 short rains season (ha)	Long term average (3 years) area planted during short rains season (ha)	2020 short rains season production (90 kg bags/MT) Projected	Long term average (3 years) production during the short rains season (90 kg bags/MT)
Watermelons	2830	500	27450	7910
Tomatoes	2032	1445	30990	27937
Kales	1366	878	26049	19142

Cereal stocks

The main cereal stocks in the cluster were maize, sorghum and green grams. Other cereals stocked in small quantities were rice, beans and millet. Sorghum, green grams and millet are mainly for sale and only consumed to a small extent. There was a drop in the quantity of stocks for all three staple commodities. The total maize stock in the cluster was 59 percent of the LTA and stocks held by households and traders was 63 and 50 percent of LTA respectively. Maize stock with millers was 33 percent above the LTA. The low household maize stock was attributed to poor performance of short rain. Low demand for maize was experienced in markets across the cluster due to weak purchasing power associated with low income due to COVID 19 restrictions. Sorghum with household was 60 percent of the LTA while traders had 56 percent above the LTA (Table 4). Traders in Tharaka are stocking sorghum in anticipation of increased market from EBL and East Africa Malting Company.

Green grams stock with household and traders was 54 and 62 percent of the LTA. The carryover stocks at household level from the previous season are minimal as most households either sold or have since consumed. The available maize stocks at household level is likely to last for 1-2 months across the livelihood zones compared to normal 2-4 months. The food stocks are expected to increase from February as harvesting continues.

Cereal stocks

Commodity	Maize		Sorghum		Green gram	
	Current	LTA	Current	LTA	Current	LTA
Farmers	154,306	244,373	62,453	103,999	76,812	141,618
Traders	148,929	295,372	32,466	20,777	44,225	70,876
Millers	26,175	19,680	405	500	0	0
Total	329,410	559,425	95,324	125,276	121,037	212,494

2.4.5.2 Livestock Production

Livestock production contributes 23-60 percent to cash income in the marginal mixed farming areas, while in mixed farming livelihood zones, livestock contributes 15-45 percent to cash income. Livestock production also contributes 15-26 percent to cash income in rain fed agriculture and agro pastoral livelihood zones. The main livestock species kept in the cluster include cattle (both dairy and local), sheep, goats, poultry and bees.

Pasture and browse situation

The pasture and browse situation were good to fair in all the livelihood zones in the cluster which was within the normal seasonal range. The good to fair forage condition was attributed to the good rainfall performance of the previous long rains and the 2020 short rains which boosted regeneration of pasture and browse. The available pasture is expected to last for between 1-4 months in the mixed farming livelihood zone compared with 3-4 months normally, two months in the rain fed agriculture compared to three months normally and one month compared to two months normally in the agro pastoral livelihood zones. Browse is expected to last for between 1 -5 months in all the livelihood zones compared to 2-4 months normally. Access to pasture and browse was unlimited in all the livelihood zones except in the agro-pastoral areas of Meru County due to insecurity.

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
	Curr ent	Nor mal	Curr ent	Nor mal		Curr ent	Nor mal	Curr ent	Nor mal	
Mixed Farming	Good	Good	1-4	3-4	None	Fair-Good	Good	1.5-3	2-3	None
Marginal Mixed Farming	Good-poor	Good	0.5-3	1-3	None	Fair-Good	Good	1.5-3	2-4	
Rain fed	Good	Good	2	3	None	Good	Good	4-5	2-3	None
Agro-pastoral	Good	Good	1	2	Wildlife, livestock Conflict, insecurity	Good	Good	2	2	Conflict/in security
Mixed farming-livestock and food crop	Good	Good	3	3	None	Good	Good	3	3	None
Mixed farming-coffee/dairy	Good	Good	3	3	None	Good	Good	3	3	None

Pasture conservation

In Embu County, individual farmers baled hay and stored it in individual hay barns and grain stores. NDMA supported the construction of hay barns that could store up to 100 hays bales each in Kiambere ward of Mbeere South. In Meru North, large scale farmers in Buuri Sub-county undertook commercial pasture production. In Tharaka Nithi County, county government and other partners (CARITAS, KENDATT, Upper-Tana and NDMA) supported pasture production and storage through provision of seed and other farm inputs, capacity

building of farmers and construction of storage structures. Currently there are 1,037 hay stores in the cluster with a storage capacity of 79,140 bales but currently holding 19,230 bales. The cost of a bale ranged between Kshs. 200-300 depending on the season. The average weight per bale is 12 – 20 kilograms. The utilization of hay is currently low due to availability of natural pastures and crop residues. However, the demand for hay is expected to increase by end of February as natural pasture and crop residues get depleted.

Livestock body condition

The livestock body condition for all livestock species in all the livelihood zones was ranging from fair to good which is normal at this particular time of the year. The good livestock body condition was attributed to good forage condition and availability of water.

Livestock Body Condition

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normally	Current	Normally	Current	Normally
Marginal Mixed zone	Fair - Good	Good-Excellent	Fair-Excellent	Good	Good	Good-Excellent
Mixed farming	Fair-Good	Good	Fair-Good	Good	Good	Good
Mixed Farming (livestock/ food crop)	Fair-Good	Good	Good	Good	Good	Good
Mixed Farming (coffee /dairy)	Good	Good	Good	Good	Good	Good
Rain-fed	Good	Good	Good	Good	Good	Good
Agro-pastoral	Good	Good	Good	Good	Good	Good

Tropical Livestock Units (TLUs) and Birth Rates

The Tropical Livestock Units (TLUs) for poor households declined by 37, 50, 40 and 66 percent in marginal mixed farming, mixed farming, rain-fed and agro-pastoral livelihood zones respectively but remained stable in the mixed farming (livestock/ food crop) and mixed farming (coffee /dairy) livelihood zones when compared to LTA. The decline in TLUs in some of the livelihood zones was due to allocation of more land to crop production that reduced the availability of pastures. Among the middle-income households, the number of TLUs increased by 37 and 8 percent in the marginal mixed farming, mixed farming and rain fed livelihood zones but remained stable in agro-pastoral, mixed farming (livestock/ food crop) and mixed farming (coffee /dairy) livelihood zones when compared to LTA. The increase in TLUs was realized because of the favourable weather that enabled the farmers to maintain the stocking rates as per land availability. The good forage situation prevailing from the effects of long rains and near average 2020 short rains season meant low livestock off take by households while some farmers bought young stock hence the increase in TLUs. Births were normal across all livestock species in the county but with a marginal increase in kidding and lambing for goats and sheep due to favourable weather conditions.

Tropical Livestock Units (TLUs)

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Mixed Farming	1-4	1-7	1->10	2-6
Marginal Mixed Farming	<1-3	1-7	5-8	4-8
Mixed farming coffee/dairy	1	1	7.2	7
Mixed farming crop/livestock	2.1	2	5.1	5
Rain-fed	1-2	2-3	3-8	4-8
Agro-pastoral	1-2	4-5	>10	>10

Milk production, consumption and prices

Milk production at household level increased by 16, 20, 33, 25 and by over 100 percent, when compared to LTA in Mixed Farming Coffee/Dairy and Mixed farming livestock and food crop zones of Makueni County, Rain Fed Agriculture and Agro-pastoral zone of Meru County and Marginal Mixed Farming livelihood zones of Kitui and Makueni Counties respectively. The increase in milk was attributed to improved dairy management, availability of pasture and water.

The increased milk production led to increase in milk consumption of 23, 20, 40 and 25 percent in Mixed Farming, Mixed farming coffee/dairy, Mixed farming crop/livestock and Rain-Fed Agriculture livestock zones respectively when compared to the LTA. However, milk consumption declined by 7 percent in the Marginal Mixed Farming Livelihood zone and Agro Pastoral Livelihood zone (Ndubai and Rikiau of Igembe Central and Ntululi in Tigania West when compared to normal. The increase in milk consumption was due to increased production of milk as a result of the 2020 Short rains which rejuvenated forage and recharge water sources. The prolonged closure of schools due to COVID-19 increased consumption of milk at the household level.

A decrease in milk production in the affected areas led to increased milk prices coupled with the high demand. Milk prices increased by 9 and 10 percent in Mixed Farming of Kitui County and Rain-Fed Agriculture livelihood zone in Tharaka Nithi respectively when compared to the LTA. In the Mixed farming coffee/dairy and Mixed Farming crop/livestock livelihood zone milk prices decreased by 20 and 17 percent respectively while it remained stable in the Marginal Mixed Farming and the Agro Pastoral Livelihood zone when compared with LTA. The decrease in milk prices is attributed increased availability of both cow and goat milk at the household.

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
Mixed Farming	1 -5	1-5	0.3-2	1 – 2	40 - 80	50-60
Marginal Mixed Farming	0.6 - 4.5	1 -2	0.3 -2.5	1-3	40 -60	40 -60
Mixed Farming Coffee/Dairy	1.4	1.2	0.9	0.75	40	50
Mixed farming livestock and food crop	1.2	1	0.7	0.5	50	60
Rain Fed Agriculture	<1	1 – 2	1 -2	2	50 - 60	50
Agro pastoral	2-3	2	1	1	50	50

Water for livestock

The current water sources for livestock across livelihood zones were boreholes, seasonal rivers, dams, shallow wells, water pans, earth dams and streams. The return trekking distances from grazing areas to water points were normal in Mixed Farming (Livestock/Food crop) of Makueni County and Mixed farming Zones in Kitui County and Meru County and Rain-Fed zones of Tharaka Nithi in comparison with the LTA. However, return trekking distances slightly increased by 11, 38 and 42 percent above the LTA in the Mixed Farming, Marginal Mixed Farming and Mixed Farming Coffee/Dairy of Makueni County respectively. The return trekking distances increased by 38 percent in Marginal Mixed Farming zones of Embu, Tharaka Nithi and Kitui County and by over 100 percent the Rain-Fed livelihood zone of Tharaka Nithi and Meru County. The decline in return trekking distances is attributed to recharge of water sources and improved pasture condition around the water points. Increased

of trekking distances in some of the Marginal Mixed livelihood zone is due to poor performance of the short rains. The water frequency for all livestock species was daily in all livelihood zones except some Marginal Mixed Farming and Agro-Pastoral livelihood zone where the cattle and goats were watered on alternate days and camels after every five days as a result of poor distribution of 2020 short rains leading to drying up of some of the water points.

Water for livestock

Livelihood zone	Return trekking distances (Km)		Expected duration to last (Months)		Watering frequency (days)	
	Current	Normal	Current	Normal	Current	Normal
Mixed Farming	1-4	1 -4	1-3	2-3	Daily	Daily
Marginal Mixed Farming	2-6	3-10	2-4	2-3	Daily	Daily
Mixed farming coffee/dairy	<1	1	2	2	Daily	Daily
Mixed farming crop/livestock	1	1	2	2	Daily	Daily
Rain-fed	4	1-2	2	2	Daily	Daily
Agro-pastoral Zones	7	>7	1	1	Daily	Daily

Livestock migration, diseases and mortality rates

Foot and Mouth Disease (FMD), Lumpy Skin Disease (LSD) Contagious Caprine Pleuropneumonia (CCPP) and Newcastle Disease (NCD), peste des petis ruminants (PPR) were reported in Embu, Meru North, Tharaka Nithi and Kitui Counties. Newcastle and Infectious coryza disease outbreaks were reported in Makueni which resulted to poultry deaths. Livestock mortalities were normal across the livelihood zones. Ring vaccination campaigns were done and still going on in selected areas. Outbreak of diseases caused market closure and restricted livestock movement in Meru which negatively impacted on livestock sales and income. Livestock migration patterns were normal across the counties in the cluster. In Meru North migrations of livestock within the county was experienced during the short rains due to poor performance of the short rains resulting in depleted pasture and browse. The migrations were earlier than normal and resulted in tension over resources with the host communities, insecurity, environmental degradation, crop damage, and livestock pests and diseases transmission.

2.4.5.3 Market Performance

The major food commodities and livestock markets in the cluster were operating optimally and were well provisioned with a range of food commodities and livestock species included goats, sheep, cattle, and poultry.

Food supplies and traded volumes

Food commodities were sourced locally and from Trans-Nzoia, Busia, Kajiado, Nyahururu, and Kinangop. Supply sources for livestock were external from Isiolo, Garissa, Tana River supplemented with inter-county trade. Traded volumes for livestock were low as a consequence of minimal stress which would otherwise compel households to sell. On the other hand, volumes traded for food commodities was near normal to normal across the counties in the cluster save for Tharaka Nithi where they were low due to the reduced number of traders importing goods from Ethiopia. On the contrary, in Meru and Tharaka Nithi low volumes were due to loss of livelihood and income as a result of COVID-19 pandemic-related lockdowns and movement restrictions.

Market Prices

Prices for maize were stable across the cluster from the month of October to January which was attributed to availability of maize across the region and the beginning of the harvesting period hence replenishing the household stocks. The average price of maize per kilogram within the cluster ranged from Kshs. 32 in Meru being nine percent below long-term average to Kshs. 37 in Makueni county. The low maize price in the county was attributed to the replenishment of the household stocks from Short rains season harvesting which had commenced at the time of the assessment. It is expected that the maize prices will remain below long-term average up to the end of harvesting in February across the cluster and remain stable for 2-3 months. Goat prices remained stable and above the long-term average in all the counties within the cluster due to good livestock body conditions and high demand in the market. The market prices for a medium sized goat ranged from Kshs. 3,500 in Kitui to Ksh. 5,500 in Embu county. The prices are likely to remain above long-term average across the cluster for 2-3 months due to availability of good forage.

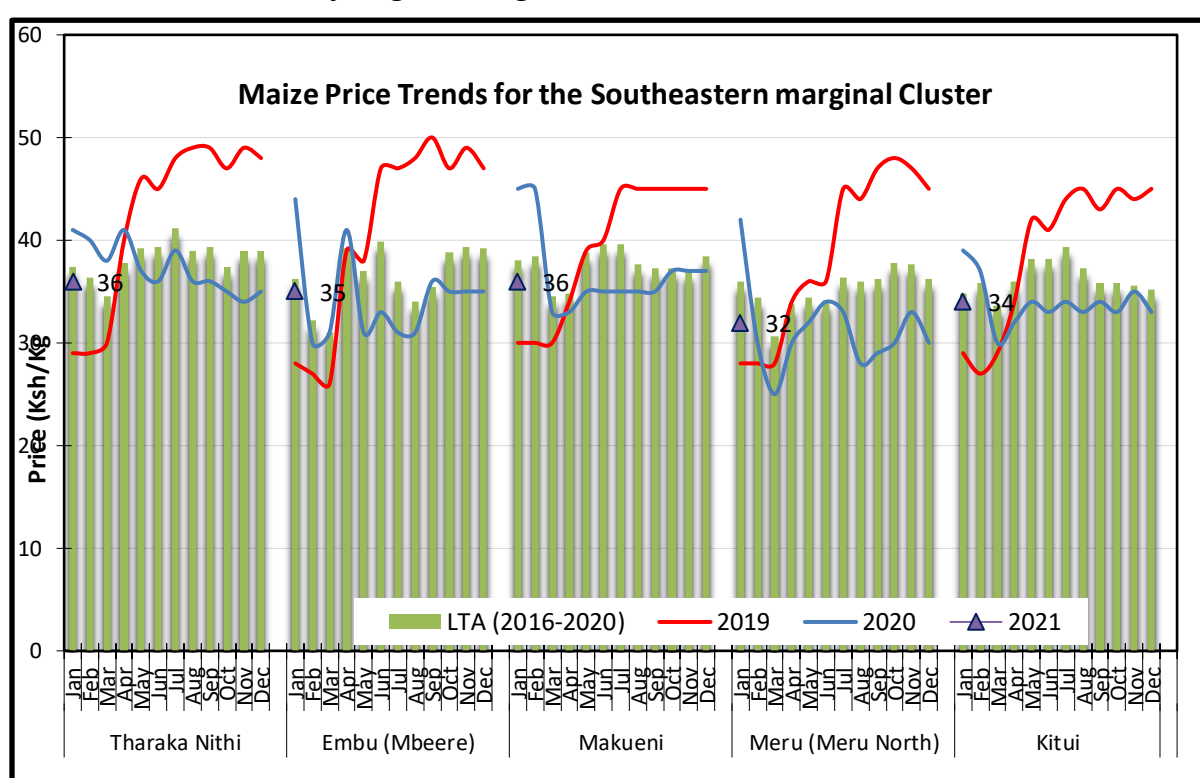


Figure 2.10: Comparative maize price trends in the cluster

2.4.5.4 Water Access and Availability

The major sources of domestic water use in the cluster are boreholes, rivers, pans/dams, rock catchment, shallow wells, springs and piped water systems. Recharge to surface water sources ranged between 50-90 percent in Tharaka Nithi, Embu, Kitui and Makueni except in Meru where recharge was 20-60 percent. The current distances to water sources ranged between one to three kilometres, which was within the normal ranges. However, in the marginal mixed farming livelihood zones in Kitui and Embu and Agropastoral livelihood zone in Meru, the distances was within the normal range of 2-8 kilometres. The waiting time at the source in the cluster was within the normal range at 10-50 minutes, except in mixed farming livelihood zone in Meru, where waiting time was less than five minutes.

Water consumption was 15-20 litres per person per day compared to the normal of 20-30 litres per person per day, except in Agropastoral livelihood zone in Meru, where households consumed normally 10-15 litres per person per day. In mixed farming and mixed farming coffee/dairy in Kitui, Embu and Makueni respectively, households consumed 30-50 litres per person per day which was normal. The cost of water was within the normal ranges of Ksh.2-5 per 20 litre jerrican except in marginal mixed farming in Embu and Tharaka Nithi where the cost was normally Ksh.10-20 per 20 litre jerrican. The cost of water from vendors was normal retailing at Ksh. 20-30 shillings per 20 litres jerrican in the cluster except in Meru where vendors sold water at Ksh.50 per 20 litres jerrican. Water treatment across the cluster remains low. Latrine coverage in the cluster ranged 85-95 percent.

2.4.5.5 Food Consumption

Approximately 83.5 percent of households in the cluster had acceptable food consumption, 16.2 percent borderline, and 0.3 percent having poor food consumption. Incomes from the sale of mangoes, livestock, and livestock products coupled with minimal early-maturing crop yields realized from short rain season, did contribute to an increase of the proportion of households with acceptable food consumption in the cluster. Moreover, favourable terms of trade resulted to improved household food availability and improved dietary diversity. Majority of households in the cluster counties were consuming a normal of 2-3 meals per day which consisted 2-4 food groups mainly cereals, pulses, vegetables and fruits.

2.2.5.6 Coping Strategies

The cluster had a mean reduced coping strategy (rCSI) of 5.0 in January 2021 from 3.3 in similar period in year 2020. Additionally, Makueni and Meru counties had a high rCSI of 8.0 and 7.8 compared to 1.3, 3.8 and 3.9 in Tharaka Nithi, Embu and Kitui Counties respectively. The strategies employed included obtaining of goods on credit and reliance on less preferred and less expensive food. In Kitui reliance on less preferred or less expensive food and reduced portion size of meals were the most frequent coping mechanisms adopted by households to access food or money to buy food across the livelihood zones. Households in marginal mixed farming livelihood zones employed more coping mechanisms compared to those in mixed farming livelihood zone.

2.4.5.7 Health and Nutrition

Nutrition situation

As per the IPC Acute Malnutrition classification protocol, all analysis area except Kitui were did not meet minimum evidence requirement for phase classification. Kitui County sentinel site data met the requisite threshold leading to the classification of the County as being in Acceptable level (IPC Phase 1) with a GAM by

MUAC of 0.7%. The proportion of children aged 6-59 months with MUAC less than 125mm reduced across the cluster between November and December an indication of improvement of

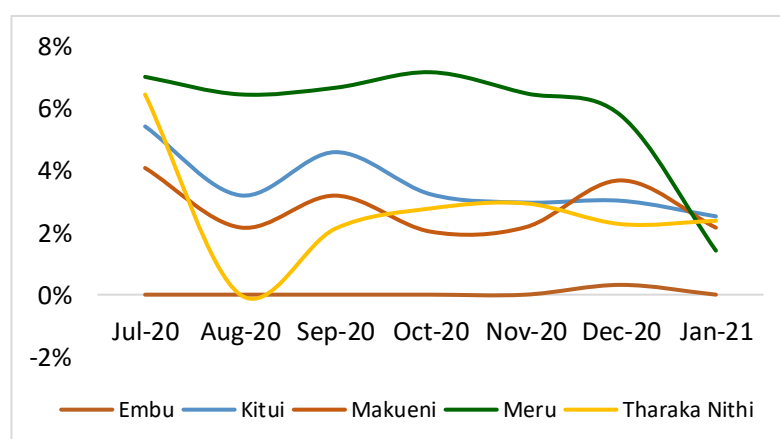


Figure 2.11: Proportion of children 6-59 with MUAC < 125mm

nutrition situation. It is projected that the situation will remain stable between March and April 2021.

Integrated Management of Acute Malnutrition (IMAM)

The admission trends for both OTP and SFP programs in the cluster areas show decreasing trends during the area of analysis. Kitui, Mbeere, Tharaka Nithi, and Makueni showed generally stable or increasing trends of admissions to the OTP program while Meru reported an increase. There was a general decline in the IMAM programme performance in 2020 compared to 2019 as per sphere standards. This was attributed to low turnout of clients in health facilities due to repeated health worker strikes and fear of COVID 19 pandemic. In addition to the affected services coupled with inadequate nutrition supplies during the period, the number of defaulters increased while the number of children discharged as cured reduced. Further, the number of children who died while in programme increased especially in Makueni and Kitui.

Morbidity and mortality

Diarrhea and URTI was on declining trend in 2020 due to the improved WASH interventions employed by Ministry of Health to prevent the spread of COVID 19. There were few cases of Malaria recorded across the cluster. No disease outbreaks was reported during the period under review. Generally, morbidity trends are on the decline due to COVID 19 anxiety, containment measures and health worker industrial action across the cluster.

Effects of COVID-19 pandemic on essential services

Covid-19 pandemic has affected health seeking behavior among members across the cluster. A total of 3319 cases had been reported in the five counties in the cluster. COVID 19 pandemic continue to affect the health seeking behavior. Being an emergency COVID 19 response was given a priority where health care resources were reallocated to cater for COVID 19 response activities.

Immunization and Vitamin A Supplementation

Immunization coverage improved across the cluster in 2020 compared to 2019. Analysis indicates that for all the antigens in Kitui and Embu counties surpassed 80% with Makueni having below 80% but with a slight improvement from 2019 data. Fully immunized cases show the greatest improvement in all analysis areas with Kitui (102.7%), Embu (86.7%), Makueni (70.6%) and Meru (71.5%) from 86.1%, 84.9%, 64.2% and 66.1% respectively. Improved immunization coverage is attributed accelerated child health services across the cluster to boost immunity of under-fives as a COVID-19 mitigation measure. This was done as health facility in-reach campaigns observing COVID-19 protocols. In addition, availability of antigens during the period under review was a major contributing factor to the increase. There was a great improvement in Vitamin A Supplementation among the two cohorts comparing 2019 and 2020 second semesters. This could be attributed to Malezi bora activities done using the door to door strategy by use of CHVs across the cluster. However, Meru and Tharaka Nithi coverage for 6-59 months' children was 58.6 and 29.8 percent respectively, which could be as a result of data quality issues experienced during the health workers industrial action and reduced attendance to static health facilities.

Child care practices

Most counties in the cluster shows increasing trends on knowledge, attitude and practices on child care with Kitui County having 32.8 percent and 22 percent of the children meeting the recommended minimum dietary diversity and minimum acceptable diet respectively. Exclusive breast feeding and minimum meal frequency for children 6-23 months was at 75.6 and 79.9 percent respectively which is above the national rate of 61 percent in Kitui County. The data

obtained from RMNCAH score card shows that 83 and 84 percent males and females were exclusively breast for six months during the time under review in Meru North while in Mbeere, it was at 89 percent overall.

Water Sanitation and Hygiene

The main sources of water for the cluster was surface water, roof catchment and piped water. Water treatment before consumption was low across the cluster with Meru North (47%) and Tharaka (42%). The hand washing facilities were installed and placed in most public and private places across the cluster as part of COVID-19 Infection Prevention and Control measures. Additionally, hand washing practices is high in Kitui, frequent and regular hand washing has improved due to COVID 19 prevention and control measures. Latrine coverage in all the counties within the cluster was notably high above 80%, this was attributed to the community led total sanitation (CLTS) initiatives in the counties. The improved Water, Sanitation and Hygiene (WASH) practices can be attributed to reduction in WASH related diseases including diarrhea diseases.

2.4.5.8 Education

Enrolment

There was a notable decrease in enrolment of 3% at primary and an increase of 2% at secondary levels of education within the cluster. ECD enrolment on the other hand remained relatively stable when compared to term I 2020. Gender parity in ECD centers was achieved with 50% girls enrolled in these centers compared to boys. It was however noted that in Primary schools there were slightly more boys

Enrolment rates

	Term I 2020			Term II 2021 (includes new students registered and drop-outs since Term I 2020)			Increase or Decrease Variation)	% Increase or decrease	% Boys Enrolment	% Girls Enrolment
Enrollment	No Boys	No Girls	Total	No Boys	No Girls	Total				
ECD	72443	71604	144047	73117	71188	144305	258	0%	50%	50%
Primary	413801	396574	810375	398525	388477	787002	-23373	-3%	51%	49%
Secondary	146601	150094	296695	146385	157500	303885	7190	2%	49%	51%

A total of 23,373 primary school learners were not enrolled in schools within the counties since re-opening of schools. Low enrolment was attributed to early pregnancies among girls, drug and substance abuse, poverty leading to child labour as a result of prolonged stay at home due to COVID-19 pandemic. Kitui county recorded 1,057 and 627 early pregnancy cases in secondary and primary school levels respectively while cases of circumcision of girls was reported in Tigania west. Meru county reported a high drop in enrolment for boys at 4304 pupils which was largely attributed to by child labour in miraa farms and boda boda business done to sustain household food requirement. The drop in enrolment for girls by 4123 was attributed to pregnancy cases, fear of COVID19, migration out of the region and relocation or transfer to school out of the county.

Effects of COVID-19

E-learning at the three levels of education was low at 0-5, 10 and 40 percent for ECD, Primary and Secondary schools respectively attributed to lack of radios, mobile phones, internet/connectivity, television and unawareness of existing e-learning platforms. Measures of containing covid-19 included increased hand wash facilities, provision of masks and availability of thermo guns in most schools. There were also 51 reported cases of pregnancies of school girls due to sexual assault. Challenges in implementing MOE Covid-19 school re-opening guidelines included, inadequate food, financial constraints, lack of adequate face masks, inadequate hand washing facilities and inadequate school infrastructure. Reports from Kitui county indicated that the COVID-19 preparedness and mitigation measures resulted to loss of livelihoods as most of private school teachers were sent home on unpaid leave and 26 private schools were closed permanently.

Effect of short rains

There was notable damage to schools in this cluster as a direct result of the short rains. In Meru County it was reported that during the short rains some schools were damaged. This damage included sunken pit latrines in ECD centres, 65 primary schools and 37 secondary schools in the region. The poor condition of latrines is likely to increase cases of open defaecation if the latrines are not constructed and create a health hazard within the schools. In addition to this, in Embu county, only 11 schools (8 primary and 3 secondary) were affected by short rains resulting in sunken toilets, collapse of mud walls and blown off or leaking roofs.

School Meals Programme

Most school meal programs were not running and were experiencing delays with adverse effects on learners. About 62,987 pupils (31,965 boys and 31,022 girls) were in need of a school meal programme. Home Grown School Meal (HGSM) funds had not been disbursed to schools over the last two years and had negative impact on enrolment and retention of learners. Within Kitui county, only 76 schools in Kitui West and Lower Yatta sub counties were reported to be implementing home grown school meals (HGSM) program with about 14,405 beneficiaries, while in Makueni county a number of schools (217 out of 902) were under the Home Grown School Meals Programme (HGSM). However, the programme had not been funded for two financial years. Most learners carried lunch from home. In other schools, parents had made a common lunch arrangement with the school after placing contributions.

Inter-sector links

Interventions in WASH included supplying water tanks and general compliance in COVID-19 containment measures within some counties. However, challenges included limited access to safe water dignity kits for girls. Tharaka Nithi county received below normal short rain which contributed to increased recharge of water sources and water harvesting at home and in school. Some of the schools do not have sufficient water due to lack of or inadequate storage facilities. For schools with insufficient water storage, provision of school meals programme is negatively impacted. Sanitation and hygiene conditions is also a major challenge in school with inadequate functional latrine, no hand washing facilities and no access to safe water. Menstrual support/dignity kits (sanitary pads) were provided in 2020 to girls by Government, Private sector, NGO and well-wishers. On the other hand, Meru county received below normal short rains which contributed to increased recharge of water sources and water harvesting at home and in school

All schools sampled in Makueni county during assessment complied with the recommended Covid-19 containment measures with well-spaced, easily accessible well distributed hand washing facilities within the institution. During the period under review, the school going girls

did not receive sanitary pads from the schools. This came out clearly especially in the focus group discussions. Hand washing facilities were available in all schools Kitui county however, there were 699 schools with inadequate functional latrines and 608 schools with no access to safe water. Moreover, heavy rains caused damage to latrines in about 46 schools (39 primary schools and seven secondary schools). The coverage of deworming of pupils and communicable disease prevention programmes were low within the county. Most schools in Embu county Mbeere south had no access to safe drinking water, however, the schools were provided with storage tanks to mitigate the effects of COVID 19 pandemic through hand washing after the end of short rains season. About 51 (21 ECDE, 21 primary and 9 secondary) schools had no access to safe water within 100 metres (Table 22). The menstrual support or dignity kits for girls were distributed in primary schools in March 2020 through government support. Lack of sanitary towels for vulnerable girls affected their attendance, retention and completion of schools thereby increasing the rate of absenteeism, poor performance and low self-esteem.

2.5 The Coastal Marginal Agricultural Livelihood Cluster

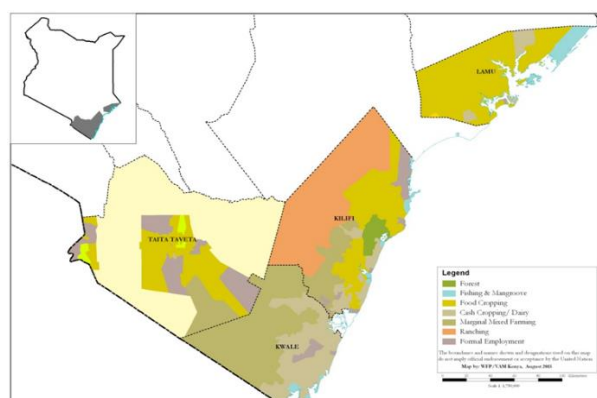


Figure 2.12: Coast marginal agricultural cluster livelihood

2.5.1 Cluster Background

The cluster is located along the coastal strip of Kenya. It covers an estimated area of about 45,172.7 square kilometers, with a population of 2,805,201 persons, and consists of Lamu, Kwale, Taita Taveta and Kilifi Counties. Major livelihood zones in the cluster include Mixed Farming (60 percent of the population), Trade/Business/Formal employment/Casual labour that accounts for 21 percent, Marginal Mixed Farming (11 percent) and others make up for eight percent

of the population. Livestock production contributes 40 percent of the cash income while crop production and waged labour account for 30 percent of the total household income

2.5.2 Current Drivers of Food Insecurity

Rainfall Performance

The short rain of October to December 2020 started late across the cluster in the first dekad of November compared to the normal onset in the first dekad of October. The amounts realized in most parts of cluster ranged from 91 to 110 percent of normal with exception of Lamu and pockets of Kilifi County (South, North and Magarini) that received between 51-75 percent of the normal rainfall. Lamu East recorded the lowest percentage with 26-50 percent of normal. Temporal distribution was poor while distribution in space was uneven across the cluster. Early cessation was noted in Lamu County in the second dekad of December compared to third dekad of December. Cessation was normal in Kilifi and Kwale counties while late cessation was noted in Taita Taveta County.

Conflict/ Insecurity

Resource based conflict over rangelands due influx in Lamu County in areas of Pangani, Lumshi, Witu, Bahari and Mkunumbi Wards between farmers and pastoralists were reported during the period under review. Human wildlife conflict over crops destruction was also reported, thus reducing expected yield.

COVID-19 pandemic

The pandemic affected agricultural activities by limiting free movement and interaction among farmers. Transportation of commodities from and to the market centers was also affected and this in turn raised the prices of farm inputs. In the livestock sector, control measures against the spreads of Covid-19 impacted on control of livestock diseases. The prices of veterinary drugs increased, and most farmers could not afford effective treatment cost of their livestock. Extension officers have also been restricted to individual farm visits and reduced farmer trainings in order minimize incidences of spreading infections among community members. In the health front, the pandemic impacted the continuity of essential health and nutrition services through Static health facility and lack of outreach services. Proportion of households accessing health services have gone down. The pandemic also affected consumption patterns of households as sources of livelihoods were affected.

2.5.3 Current Food Security Situation

The overall phase classification for the counties within the cluster is Stressed phase (IPC Phase 2) except Taita Taveta County which is Minimal (IPC Phase 1). Food stocks held by households in this cluster were 22.4 -95 percent above the LTA. Pasture condition was good to fair across the cluster save for Livestock Farming Livelihood Zone in Kwale County and Fisheries/Mangrove Livelihood Zone in Lamu County which had fair to poor condition. Browse was good across all the Livelihood Zone in the Clusters. Livestock body condition was good to fair for all species across the Livelihood zones within the cluster save for Fisheries/Mangrove Livelihood Zone in Lamu County where body condition for all species was fair to poor. Maize prices within the cluster counties were stable and below LTA by 4-10 percent except for Kwale County which recorded prices that was 63 percent above LTA. Goat market prices across the cluster counties ranged between 17-23.9 percent above LTA save for Kwale County where price remained within LTA. Favourable terms of trade were witnessed across the cluster with the sale of a medium sized goat being exchanged for cereals that weighed more compared to LTA by 17-34 percent except in Kwale County where TOT was below LTA by 39 percent. Water consumption ranged between 10-60 litres per person per day across the cluster. High proportion of households within the cluster Livelihood Zone recorded acceptable food consumption scores. However, Lunga Lunga sub-county in Kwale County and mixed farming Livelihood Zone in Lamu County recorded high proportions of households with poor food consumption of 67.7 percent and 80 percent respectively. Reduced coping strategies for Kilifi and Taita taveta Counties were within acceptable ranges of 0.46 and 2.53 respectively. However Kwale and Lamu Counties employed high coping strategies of 11.8 and 10 respectively. Prevalence of children at risk of being malnourished in Kilifi County was 92 percent below LTA while for Lamu, it was 40 percent above LTA.

2.5.4 Food Security trends

	Long rains July 2020	Short rains February 2021
% of maize stocks held by households	87%	77%
Livestock body condition (Cattle)	Good	Fair-Good
Water consumption (litres per person per day	30-50	43
Price of maize (per kg)	46	45
Distance to grazing in km	1-4	3-8
Terms of trade (pastoral zone)	97	102
Coping strategy index	10	9

Food consumption score	Acceptable -71 Borderline - 25 Poor - 4	Acceptable - 74 Borderline - 20 Poor - 6
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2.5.5 Impact of Drivers on Food and Nutrition Security

2.5.5.1 Crop production

The Coast Marginal Agriculture experiences bimodal rainfall. The Short rains play a critical role in crop production in the cluster. Although most of the Counties in the cluster are dependent on long rains for crop production, Taita Taveta County is dependent on the short rains for crop production. The main crops grown in the cluster are maize, green grams and cowpeas. Crop production contributes to between 10 to 20 percent of cash income in the cluster.

Rain fed production

The area planted in 2020 short rains season with maize was six percent lower than the long term average (LTA) in the cluster, Area under Cowpeas reduced significantly by 63 percent, while the area under green grams reduced by 10 percent. The decline can be mainly attributed to late onset of the short rains, poor distribution and below normal rains which led to crop failure in most parts of the cluster. The greatest decline was in Kilifi and this was occasioned by below normal rainfall. Late land preparation was also cited as a reason why the area under the main crops declined in the Cluster. In Kwale for instance frequent tractor breakdowns under the county government subsidy programme coupled with inadequate number of oxen ploughs to meet demand for land preparations were some of the attributing factors to the decrease in acreage planted. Production of the main crops across the cluster was predicted to fall by 46 percent, 16 percent and 39 percent for Maize, Cowpeas and green grams respectively of their LTA and this can be attributed to below normal rainfall. Maize plants tasselled but failed to cob in most parts of the cluster attributing to the below long term average yields.

Rain fed crop production

Crop	Area planted during 2020 Short rains season (Ha)	Long Term Average (5 year) area planted during the Short rains season (Ha)	2020 Short rains season production(90 kg bags)/Tons Projected/Actual	Long Term Average (5 year) production during the Short rains season (90 kg bags)/Tons
Maize	45,292	47,941	125,368	232,385
Cowpeas	5,493	15,044	204,677	245,070
Green grams	5,987	6,682	34,053	56,038
Total	56,772	69,667	364,098	533,493

Irrigated crop production

On irrigated cropping the cluster has a range of crops grown under irrigation across the various Counties, the main crops grown under irrigation include green Maize, Bananas, Watermelons, Amaranthus, Tomatoes, Okra, French Beans and Kales. The overall area for all the crops under irrigation reduced by 13 percent of LTA and the overall production was to reduce by eight percent of LTA. In Kwale the main crops under irrigation were tomatoes, okra and kales during the season. The area under the three crops in Kwale increased by 12 percent, eight percent and 125 percent compared to the long term average. The increase was as a result of creation of new irrigation sites at various points in the county. For instance, tomato production in particular had support from NARIG project that promoted tomatoes value chain amongst other value chains. In the programme, farmers were awarded grants to engage in tomato production under

irrigation. Subsequently, production went up by three percent for tomatoes, 37 percent for okra and 50 percent for kales. Other factors that led to the increase in production were use of certified seeds, fungicides and pesticides against diseases and pests.

Area planted and production under Irrigated Crop Production

Crop	Area planted during the 2020 short rains season (ha)	Long term average (3 years)	2020 short rains season production (90 kg bags/MT) Projected/Actual	Long term average (3 years) production during the short rains season (90 kg bags/MT)
Bananas	2,040	1,989	75,400	69,800
Maize	1,155	1,138	24,350	23,898
Tomatoes	172	274	18736	19194
Watermelon	400	1000	2400	6000

Cereal stocks

The stocks held by Households in the cluster were 31 percent below LTA and this is because farmers had depleted their stocks as there was increased household members as a result of children not going to school due to covid-19. and also poor harvests from the short rains. The stocks held by traders and millers were 20 and 32 percent higher than their LTA as most households were depending on Markets and slow uptake as closure of schools also affected the traders. But specific Counties had different stocks for instance in Kilifi the Cluster scenario was different from the County Scenario as the maize stocks held by all actors was 30 percent above the LTA, while held by farmers, millers and traders was 26, 33 and 44 percent above the LTA respectively There are slightly higher stocks held by farmers compared to a similar period last year. The stocks held at the cluster will last for about one to two month compared to a normal of three months. For some traders, continuous holding of stocks affected their businesses with some being pushed out of business due to low purchasing power of the consumers. This was attributed to lose of income due to covid-19

Cereal Commodity Stocks in the Cluster

Commodity	Maize		Rice		Sorghum		Green gram	
	Current	LTA	Current	LTA	Current	LTA	Current	LTA
Farmers	328,943	477,957	2,156	2,209	2,268	3,013	18,045	11,835
Traders	296,715	246,548	33,933	33,496	3,903	3,096	27,185	21,267
Millers	7,965	6,033	0	0	0	0	0	0
Food Assistance	0	0	5	0	0	0	0	0
NCPB	1,000	54,354	5	0	0	0	0	0
Total	634,623	784,892	36,098	35,705	6,171	6,109	45,230	33,102

2.5.5.2 Livestock Production

The main livestock types in the cluster are cattle, sheep, goats, and poultry. Livestock production contributes 70-80 and 25-50 percent to cash income in the Mixed Farming and, Marginal Mixed Farming and Fisheries Mangrove Livelihood Zones respectively.

Forage condition

The pasture condition was good to fair in the Mixed Farming, Marginal Mixed Farming and Agro Pastoral Livelihood Zones compared to good to fair which is normal whereas in the Livestock Farming and Fisheries Mangroves the pasture condition was fair to poor compared to good to fair normally. The fair to poor pasture conditions is attributed to depressed and erratic 2020 short rains which resulted to poor regeneration of pastures. The browse condition was good to fair across all livelihood zones which is normal.

The available pastures are expected to last for one to three months compared to a normal of two to four months in Agro Pastoral, Marginal Mixed Farming and Mixed Farming Livelihood Zones compared to a normal of two to four months. In the Livestock Pastoral and Fisheries Mangroves Livelihood Zones, the pastures are expected to last for one month compared to a normal of two to four months normally. The browse is expected to last for one to three months across all livelihood zones compared to a normal of one to four months except in Fisheries Mangroves where browse is expected to last for one month compared to a normal of four months. Access to pasture and browse in the Mixed Farming Zone of Lamu County was limited by insecurity and conflict between crop and livestock farmers. Wildlife-livestock conflict and bush encroachment which reduced grazing area was reported in Kilifi County

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	
Mixed farming	Good-Fair	Good-Fair	2-3	3-4	Land enclosures Insecurity /conflicts	Good-Fair	Good-Fair	2-3	3-4	Land enclosures Insecurity /conflicts
Marginal Mixed Farming	Fair	Good	1.5	2	None	Good	Good	1.5	1	None
Livestock farming	Fair-Poor	Fair	1	2	None	Good	Good	2.5	3	None
Agro pastoral	Good-Fair	Good-Fair	1.5-2	2-4	Insecurity/conflicts	Good	Good	1.5-2	1-4	Insecurity/conflicts
Fisheries Mangroves	Poor	Good-Fair	1	4	Insecurity/conflicts	Fair-Poor	Good	1	4	Ocean

Hay conservation status

Pasture conservation was reported in only two counties in the cluster. The current pasture conservation status in both Taita Taveta and Kilifi Counties involves a few farmers and large scale farms such as Kilifi plantations, Sumra dairies and Mjanaheri in Kilifi County. There is need to promote and support pasture growing, harvesting and conservation. The two counties have 71 hay stores with a storage capacity of approximately 73,700 bales but currently 14,500 bales of hay are being held and traded at an average price of kshs.200-300 per bale.

Livestock body condition

Livestock body condition of all livestock types across the livelihood zones was good to fair compared to good normally. This was attributed below average rains which led to below average regeneration of pastures and increased trekking distances to water sources. The trend of livestock body condition will be expected to worsen in the next two to three months due to decline in forage condition and increasing distances to water sources.

Livestock body condition

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normally	Current	Normally	Current	Normally
Mixed farming	Good-Fair	Good	Good-Fair	Good	Good-Fair	Good
Marginal Mixed farming	Fair	Good	Good	Good	Fair	Good
Livestock farming	Good-Fair	Good	Good	Good	Good	Good
Agro pastoral	Good-Fair	Good	Good-Fair	Good	Good-Fair	Good

Milk production, consumption and prices

Milk production per household was below the LTA by 5.2, 66.7, 16.7 and 40 percent in Mixed Farming, Fishing Mangroves, Livestock Farming and Agro Pastoral Livelihood Zones respectively and stable in Marginal Mixed Farming Livelihood Zone. This was attributed to tsetse fly infestation and livestock diseases, poor regeneration of pastures and outward migration of livestock especially in Lamu County. Milk consumption per household in Mixed Farming and Marginal Mixed Farming Livelihood Zones was above the LTA by 8.7 and 100 percent respectively and this was due to most household members remained at home due to COVID-19 outbreak mitigation measures laid by Ministry Of Health. The milk prices were normal in the Marginal Mixed Farming Livelihood Zones during the period under review. Milk prices were below the LTA in the Livestock Farming Livelihood Zones by 9.1 percent. In Mixed Farming, Fishing Mangroves and Agro Pastoral Livelihood Zones the milk prices were above the LTA by 45.5, 66.7, and 20 percent respectively due to increased demand and limited supply for the commodity amongst the households.

Milk production

Livelihood zone	Milk Production		Milk consumption (Litres)per Household		Prices (Ksh)/Litre/	
	Current	LTA	Current	LTA	Current	LTA
Mixed farming	0.5-5	0.8-5	0.5-2	0.3-2	60-80	50-60
Marginal mixed	2	2	2	1	40	40
Livestock farming	2-3	2-4	1	1-1.5	40-60	50-60
Fishing mangrove	0.1	0.3	0.2	0.3	100	60
Agro pastoral	1.5-3	2.5-5	1-2	1-2	40-80	40-60

Water for livestock

The sources of water for livestock are water pans, shallow wells boreholes, rivers streams, earth dams, natural ponds, swamps and rivers. The average return trekking return distances from

grazing areas to main water sources were below normal by 25 and 16.7 percent in Marginal Mixed Farming and Livestock Farming Livelihood Zones due to recharge of open water sources near grazing areas. The current average return trekking distance to water sources was 25 percent above LTA in Mixed Farming and Fishing Mangrove Livelihood Zones. This was attributed to reduced water volumes in open water sources. The available water was projected to last approximately two to three months which is within the LTA. Livestock watering frequency was normal with livestock having access to water on daily basis in all livelihood zones.

Water for livestock

Livelihood zone	Return distances (km)		Expected duration to last (months)	
	Current	Normal	Current	Normal
Mixed Farming	2-3	1-3	2-3	2-4
Marginal Mixed Farming	3	4	2.5	2
Livestock farming	2-6	2-6	2-3	2-3
Agro pastoral	5-12	2-15	2	3

Livestock migration, diseases and mortality rate

There was limited out migration of livestock reported across the cluster apart from intra sub-county livestock movement. However, influx of livestock from Tana River into Lamu County was reported. In Kwale county there was migration of livestock from Ngombeni ward into Tanzania and Vanga to Lunga Lunga Sub County. The current livestock migration is caused by unavailability of pastures, browse and water in the affected areas. There were no reported cases of notifiable diseases. However, cases of Lumpy Skin Disease (LSD), Foot and Mouth Disease (FMD) and Contagious Caprine Pleuropneumonia (CCPP), Contagious Bovine Pleuro Pneumonia (CBPP), East Coast Fever (ECF) were reported across the cluster. No significant mortalities were recorded across the cluster except at Patte Island (Lamu) where death of 50 cattle due to shortage of pastures and water and chicken deaths due to Newcastle disease. COVID-19 restrictions have been relaxed; however, suspension of mass vaccination activities to avoid aggregating the farmers in common sites used for vaccination is still in force limiting disease surveillance and control in the county.

2.5.5.3 Market Performance

All the markets were functioning normally and were well provisioned with essential food commodities. The most commonly traded food commodities included: maize, beans, green grams, maize flour, sugar, cowpeas, rice and the readily available livestock species in the market were cattle, sheep, goat and poultry.

Supplies and traded volumes

Most of the food commodities in the markets were locally sourced through own production and also externally from across the Republic of Tanzania and Uganda. Traded volumes were high due to relaxation of COVID-19 containment measures that eased movement of goods coupled with improved road access to markets but the volume of livestock in Kwale was low due to the low prices occasioned by closure of some slaughter houses following the outbreak of foot and mouth disease (FMD) in Puma, Mwereni and Ndarava wards.

Market Prices

Significantly high staple food prices were reported in Lamu attributed to high transportation costs as fewer traders were dealing with food commodities with approximately 35 percent of population in the cluster relying on markets for supplies. Maize prices varied across counties within the cluster but generally were below the long term averages in Kilifi and Lamu counties. The decline in prices in Kilifi were as attributed to households' preferences for other foods during the festivities. Exceptionally higher than average prices were recorded in Kwale where a kilogramme of maize retailed at Ksh. 62 compared to the long term average of Ksh. 39. The increase in prices in Kwale was attributed to dwindling households' stocks. Price variations were significant in Lamu county where highest price was Ksh. 50 in Hindi whereas the lowest price was Ksh. 25 in Mpektoni due to low demand and high supply of the commodity from outside the county. Maize prices are expected to increase across the counties in the cluster. Goat prices were above long-term average in Kilifi, Lamu and Taita Taveta and just above the LTA in Kwale County. In absolute terms, the lowest goat prices were recorded in Kwale county at Ksh. 3, 367 while the highest non aggregated prices were reported in Kiunga at Kshs. 6,000 for a medium-size goat. Across the cluster, goat prices are expected to increase as a result of good body condition with less distress sales.

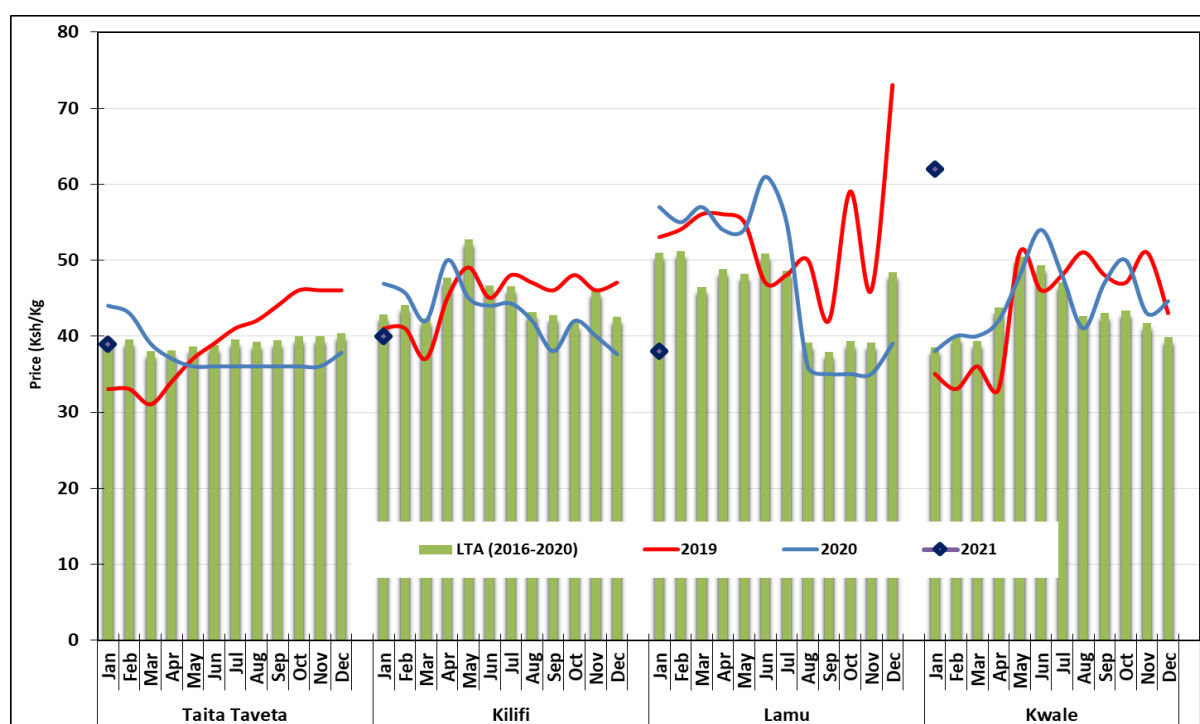


Figure 2.13: Comparative maize price trends in the cluster

2.5.5.4 Water Access and Availability

The major sources of water for domestic use are pans/dams, rivers, shallow wells, traditional river wells, natural ponds, boreholes and piped water systems. The recharge of water sources range between 60-90 percent in Kwale, Kilifi and Taita Taveta except in Lamu and mixed farming in Kilifi, where recharge range 40-50 percent. The current distances to water sources ranged between 1-3 kilometres, which was within the normal of 1-5 kilometres. However, in Mixed farming (Food crops and livestock) in Taita Taveta, Marginal Mixed Farming and Ranching in Kilifi and Livestock farming in Kwale, the distances ranged between 3-10 kilometres compared to the normal of 1-5 kilometres. The waiting time at the source was within the normal range of 5-20 minutes except in the mixed farming, households waited for 30-60

minutes compared to normally 10-20 minutes. However, in and fishing/mangrove in Lamu, households waited for 60-120 minutes mainly due to congestion at desalination plants. The cost of water was within normal range of Ksh.2-5 per 20 litres jerry can except in Lamu was normal at Ksh.5-10 per 20 litres jerry can. However, in fishing/Mangrove livelihood zone, the cost of 20 litres jerry can was normally Ksh.10-50. The cost for vendors was Ksh.10-30 in Taita Taveta, Ksh.50-100 in Lamu while in Pumwani and Bofu area in Magarini sub-county in Kilifi, vendors sold water at Ksh.20-50 per 20 litres jerry can. Water consumption ranged between 10-20 litres per person per day in Lamu and Taita Taveta compared to normal of 15-25 litres per person per day. However, in Island of Patte of Mtagawana and Bahamisiin Lamu, households consumed 5-10 litres per person per day due to saline water from shallow wells as well as Djabias have dried up. In Kilifi and Kwale, consumption of water was 30-60 litres per person per day compared to 40-80 litres per person per day. Latrine coverage in the cluster range 65-95 percent.

2.5.5.5 Food Consumption

Food consumption patterns across the cluster counties for January 2021 in comparison with similar period in year 2020 worsened except for Kwale and Taita-Taveta counties. On average, 69 percent of households had acceptable food consumption score in January 2021 compared to 84 percent in year 2020. The remaining 20 and 12 percent of the households had borderline and poor food consumption score respectively. The decline in food consumption patterns was mainly attributed to reduced income and food stocks at household level coupled with low purchasing power and loss of livelihood activities owing to COVID 19 restrictions. Lamu County had the highest number of households with poor food consumption score at 33 percent compared to 11.4 and two percent in Kwale and Kilifi counties respectively. Conversely, about 99 percent of households in Taita-Taveta county were in acceptable food consumption category compared to 88, 81 and eight percent in Kilifi, Kwale and Lamu counties respectively. Households in Taita-Taveta County were consuming about five meals per day compared to 2-3 meals in Lamu County. The meals consisted mainly of cereals, pulses, vegetables and fruits.

2.5.5.6 Coping Strategies

Coping strategy index across the cluster increased across the four counties compared to the same period last year. Among the four counties, households in Kwale applied highest coping strategies at 12.41, followed by Lamu at 8.4, Kilifi at 2.0 and Taita Taveta at 0.46. Household in Lamu and Taita Taveta counties applied stressed coping strategies as same time last year. This was attributed to depressed rainfall received during the season, lower purchasing power, increased food prices and depletion of household food stocks. Most households across the cluster employed consumption based coping strategies including borrowing food, rely on help and reducing meals, using less preferred or less expensive food and taking credits from neighbours. The meal frequency for both under-fives and the general population was 1 – 2 meals in a day compared with the required 3 – 4 meals per day. In this cluster, households within the Livestock Farming applied crisis and stressed coping strategies compared to Agro-Pastoral and Mixed livelihood zones who applied only stressed coping strategies.

2.5.5.7 Health and Nutrition

Nutrition Situation

All analysis areas under the Coastal Marginal Agriculture cluster failed to meet the minimum evidence requirement for IPC acute malnutrition phase classification. The situation is projected

to deteriorate due to worsening of Moderate Acute Malnutrition to Severe Acute Malnutrition occasioned by stock outs of commodities for MAM program, dwindling household food stocks and poor rainfall performance. For Lamu and Kwale Counties, the SAM and MAM admission trends are expected to remain stable in the period of projection. Generally, Lamu and Kwale areas of analysis indicate a decrease in both SAM and MAM admissions in 2020 compared to 2018 and 2019 and this could be attributed to reduced hospital visits and growth monitoring services due to Covid-19 pandemic. Routine growth monitoring and consequently screening for malnutrition was disrupted. Majority of the children captured for SAM and MAM were through community outreach referrals which was also halted during the COVID-19 situation. The health care workers strike has affected health seeking behavior and in turn also affected the programs. High numbers of clients have not been receiving commodities due to lack of personnel at the facilities.

The SAM admissions indicate an increasing trend across the cluster from July to October 2020. This could be related it to the resumption of facility visits by the mothers and caregivers which was affected by COVID-19 in the first half of the year, growth monitoring to children taken to facilities for immunization and Vitamin A Supplementation and few facility outreaches. A drop in number of admissions is however reported in the month of November which could be contributed to by the effect of health workers strike which continues onto January and February. In addition, there was improved Food Consumption score as reported through the NDMA bulletin for Taita Taveta, in which 66 per cent of households sampled reported to still be holding food stocks from the previous seasons. In Kilifi, households still having carry-over stocks from the long rains harvest as well as intensified nutritional promotion intervention by health-nutrition department and other partners could be attributed to this decline.

Morbidity and mortality

No disease outbreak was reported across the cluster in the period of analysis. Routine data from the District Health Information System indicated that the main child illnesses affecting children below five years include Upper Respiratory Tract Infections (URTI) and diarrhea, Malaria. In Kwale County, skin conditions were reported, mainly affecting children in livestock zones. Historical trend analysis of URTI and diarrhea revealed a decreasing trend from September to December 2020, attributed to the covid-19 pandemic which affected health seeking behavior leading to reduced hospital visits due to community fear and stigma. For Taita Taveta, malaria has had a declining trend from July which stabilizes around October, November, and December. This could be attributed to the steady supply of mosquito nets to the ANC mothers and children below five years. Improved hand hygiene and latrine coverage from the previous season, supply of aqua tabs for water treatment also noted in in some areas of Taita Taveta. A different scenario was noted in Kilifi, where malaria cases were recorded compared to the same period the previous year. This may be attributed to poor access to preventive interventions like LLITNs, as well as limited access to health facilities. Diarrhea cases remained low throughout the period, both among children below five years and the general population, showing a 38% decrease compared to the same period the previous year. Some communities reported an upsurge in Non-communicable diseases like hypertension and diabetes, and some noted that scabies was rampant, especially in areas like Ganze and Chonyi. Year 2020 recorded less cases compared to 2019 across the sector. Morbidity trends in the coast cluster are likely to be on a reducing trend for the next three months, following the improved hygiene practices as part of COVID 19 control measures.

Health and Nutrition Sector in COVID -19 Context

The COVID-19 pandemic has affected the entire cluster. It has adversely affected continuity of essential health and nutrition services as integrated outreach services and campaigns which have been stopped following the government restrictive measures. Services are majorly available at static health facilities in which all infection prevention and control (IPC) guidelines are strictly followed. Proportion of households accessing health services went down. In Kwale, the high risk/vulnerable people e.g diabetic, asthmatic, heart conditions and HIV/TB patients were adversely affected. However more awareness campaigns to the public and health care workers review for resumption of some services with precautions was done which explains the increase of the percentage of children assessed from July towards December, as seen in improved immunization and Vitamin A coverage from July to December 2020. The attendance at the outpatient department declined tremendously since the reporting of Covid 19 cases in March 2020 compared to normal times however from mid of 2020 access was steadily improving owing to ongoing awareness. The Health departments in the cluster have continued to put in strategies to ensure continuity of health service delivery and access of services by the community in the context of covid-19.

The CHVs in Kwale were sensitized on Home-based Isolation and Care (HBIC) so that they can do follow up on COVID 19 clients. Albeit partially, outreaches in Kilifi County resumed in some areas, with strict adherence to COVID-19 regulations. Community health volunteers were also able to offer their services to the community, amid challenges of shortage of PPEs like masks and sanitizers.

Immunization and micronutrient supplementation

The immunization coverage across the cluster was above 70 percent for FIC in Lamu, Taita Taveta and Kilifi, with Taita taveta recording the highest rate at 97.1 percent. FIC coverage below 70 percent was recorded Kwale County. A coverage of 70 percent and above for OPV 3 was maintained across the cluster. Vitamin A supplementation performance was lower in the first semester, January to June, compared to second semester, July to December. The low coverage in semester one could be attributed to the suspension of *malezi bora* campaigns due to Covid-19 pandemic, which was later conducted in July and not May as in routine.

The COVID-19 effect was however felt in Kwale County which had a significant decline in vitamin A supplementation when compared to same period in 2019. The current health workers strike situation, FIC for 2020 was 66 percent which was a drop compared to 82 percent in 2019.

COVID-19 affected the normal supplementation and immunization at facility level but however through the involvement of the CHEWs and CHVs however some ways like house-to-house supplementation, sensitization and referrals for those due for such service to visit health facilities was explored to try in reaching out and improve both the Vitamin A and immunization (FIC, OPV and Measles) coverage. The coverage is expected to maintain at above 80 percent with ways explored like *Malezi Bora* in May to improve the 12-59 months VAS. Immunization coverage is expected to remain stable as the county continues to implement strategies to ensure continuity of health services in context of Covid -19. However, if health workers strike is not resolved, the coverage is expected to decline.

Dietary intake and child care practices

Breastfeeding practices improved across the sector according to routine KHIS data. In Lamu County, 80 percent of children are exclusively breastfed for the first six months of life in 2020. This is an improvement from 75.2 percent in 2019 and 59 percent in 2018, whereas in Kilifi, - routine surveillance data from the KHIS currently rate exclusive breastfeeding at 89.9 percent, an improvement from 2019 (85.5 percent) and 2018 (77.3 percent). The improvement is

attributed to the Health and nutrition counseling sessions ongoing in communities in Health facilities and at community level through Baby friendly community initiative through which CHVs are empowered to support and offer counseling to caregivers. This shows a good improvement in infant feeding practices and is expected to impact positively on acute malnutrition in the cluster.

Milk consumption

Milk production was normal in the mixed farming livelihood zone, but lower than normal in the livestock farming livelihood zone for Kwale. Similarly, Taita Taveta reported a stable trend compared to previous months. This is due to the horticulture dairy/ livelihood zone which contributed to the rise with 4.6 liters per household. However, production was below average compared to normal at this time of the year for Lamu. The trends decreased because of the outward migration of livestock. The current average milk consumption in Agro pastoral zone is one litres per day compared to two litres normally. Covid-19 mitigation measures have also affected collection and transportation of milk at household thus prices are very high.

Complementary feeding

Complementary feeding practices are likely to be affected due to reduction of food, dietary diversity, and income at household level as household continue to employ both moderate and stressed based coping strategies across in Lamu and Kilifi. In Lamu, most of the households reported consuming one-two meal on average, from cereal food group only. Children took two-three meals which were cereal based with limited access to vegetables, pulses and animal products including milk and meat.

Dietary diversity amongst children was somewhat affected by the COVID-19 pandemic as some perishable foods that were sourced from upcountry were not easily accessible when the restriction of movement into and out of the county was put in place in Kwale. Some measures put in place to address this included increased sensitization on establishment of kitchen gardens and encouraging community members to embrace locally available foods as alternatives to the inaccessible ones. The situation is likely to improve in the next three months. This is due to the food support measures in place and parents being at home hence improving time allocated to childcare.

Taita Taveta County is classified under Minimal (IPC Phase I) food security phase classification, implying most of the households can meet their food needs without employing severe coping strategies. The ability of most households meeting the mean food consumption score was recorded at a stable trend of 75 in November compared to 74 of the previous months. The mean FCS score was high in the mixed farming with irrigated cropping/ livestock livelihood zone at 94 followed by mixed farming: horticulture/dairy livelihood zone at 69 and mixed farming; food crop/livestock livelihood zone at 63. Most of the households as reported in the NDMA Bulletins were able to consume at least maize, pulses and vegetables, while at least 65 percent were able to include fleshy foods like meat and fish at least once weekly.

Latrine coverage

The highest latrine coverage in the region is in Taita Taveta at 95.4 percent in all sub-counties being above 90 percent. The coverage in the other counties is at an average of 70 percent. In Lamu, 11 percent of populations which do not have latrines and use open defecation especially in Agro pastoral areas and mixed farming areas. Kwale has low latrine coverage especially in livestock livelihood zones.

Handwashing at 4 critical times

Hand washing facilities at community level in some areas were not available. Amidst challenges of shortage of water in Kilifi County, COVID-19 has brought with it an improvement in hand washing within the communities and utilization of hand washing facilities. The improvement was also experienced in Taita Taveta County. In Lamu, awareness creation on hand washing at critical times is ongoing in all livelihoods.

2.5.5.8 Education

Enrolment

The total numbers of children enrolled in schools within this cluster are shown in the table below:

Enrolment rate

	Term I 2020			Term II 2021 (includes new students registered and drop-outs since Term I 2020)			Increase or Decrease Variation)	% Increase or decrease	% Boys Enrolment	% Girls Enrolment
Enrolment	Nº Boys	Nº Girls	Total	Nº Boys	Nº Girls	Total				
ECD	67,573	62,899	130472	60,635	56,853	117488	-12984	-10	52	48
Primary	288,169	279,662	567831	276,542	257,224	533766	-34065	-6	51	49
Secondary	71,339	67,818	139157	63,121	61,889	125010	-14147	-10	51	49

There was a general decline in enrolment across the three levels of education within this cluster. ECDE enrolment in this cluster decreased by 11.4 percent for boys and 10.6 percent girls while in primary schools, enrolment decreased by 4.2 percent boys and 8.7 percent for girls. In secondary schools boys enrolment decreased by 13 percent and girls enrolment by 9.5 percent. It was observed that there was an almost equal gender difference of one percent in primary and secondary schools. This gender parity index shows that the cluster achieved equality of access in education between males and female learners.

The decrease in enrolment across all counties within all the three learning levels can be attributed to: transfers, fear of contracting Covid-19, lack of feeding programme in the school, migration, pregnancies and early marriages.

Effects of COVID-19 on Schools

Within this cluster the covid-19 pandemic occasioned prolonged closure of learning institutions which negatively impacted learning by children across the three levels of schooling leading to a drop in enrollment for both gender across all livelihood zones of the county. In Kilifi county ECD had the least number of learners accessing e-learning at 0-20 percent. Other than Malindi, Kaloleni and Rabai sub counties, higher level of e-learning access, 40-60 percent was reported. This difference could be attributed to the relative proximity to urban centres and parents' ability to purchase gargets for their children. Covid-19 has also negatively affected the income at household level a number of parents and guardians were rendered jobless.

Child protection cases reported during the pro-longed closure included child labour and physical violence among boys, while cases of early pregnancy were reported among primary and secondary school going girls.

In Taita Taveta within the three livelihood zones, availability of smart phones, televisions for e-learning is assured. However, the low response to e-learning for ECDE, primary and secondary learners was as a result of lack of seriousness and negative attitude of parents towards education in these livelihood zones.

Effects of Short Rains in schools

The short rains did not have major impact in all the counties with minimal damage to infrastructure within the schools. There were no reported cases of IDPs across the county.

School Meals Programme

In Taita Taveta schools operate different school feeding programs. 41,554 of the learners in the county are under the home grown school meals programs in Voi, Mwatate and Taveta sub counties which accounts for 69 percent of the learner population. However, it was noted that in Lamu. Schools that are not benefitting from HGSM program have a high rate of school dropout and absenteeism. Only 20 percent (23 public primary schools) of the learners have a school feeding program when compared to 112 (80%) public primary schools.

Inter-sector links

In Lamu the Ministry of education rolled out a Programme known as ESP where all public schools were to benefit from desks and lockers. These desks were produced at a total cost of 2500 for primary schools and 3800 for secondary schools. It was further reported in Taita Taveta, that schools across the county have adequate supply of water from source and only a few isolated households cannot access clean water especially in the livestock zones. The NG-CDF has also partnered with the schools to put up collapsed and sunken toilets and cracked walls of classrooms. The Ministry of interior and coordination of National Government has supported the schools with ensuring 100 percent transition and adherence to ministry of health protocol.

Water and sanitation

In Taita Taveta there was notable improved hygiene in most schools with the presence of functional latrines and access to hand washing facilities in most of the schools. Moreover, in Kwale, it was reported that 90 ECDE centres, 75 primary schools and 10 secondary schools did not have adequate functional latrines. In addition, 25 primary schools in the county did not have hand washing facilities while the number of schools with no access to safe water was reported at 30 ECDEs, 63 primary schools and 15 secondary schools.

Health and Nutrition

In Taita Taveta Schools across the county have ensured the health of the learners is looked in to through provision of balanced diet in the meals program. The ministry of Health through their programs like Malezi bora has continued supporting the learners in ECDE in the provision of Vitamin A supplements and school deworming program. Public health has also continued to provide water purifying tablets e.g. Aqua tabs to schools to ensure clean water for drinking.

3.0 Food Security Prognosis

3.1 Assumptions

The following assumptions are expected to drive the most likely food security outcomes during the March to August 2021 period;

- According to the Greater Horn of Africa Climate Outlook Forum (GHACOF) consensus forecast, the 2021 March to May long rains are expected to be above average in western Kenya. However, according to the USGS/CPC forecasts, the long rains are likely to be below average with 10-50 mm deficits across eastern Kenya driven by diminishing La Niña conditions, warm western Pacific Ocean gradients, and a neutral Indian Ocean Dipole (IOD).
- The arrival of about one million doses of AstraZeneca-Oxford COVID-19 vaccine in early March marks the beginning of the vaccination exercise that aims to target 45 million Kenyans. However, COVID-19 related restrictions are likely to remain in place through the scenario period despite the vaccine's availability due to a likely low administration rate due to prioritization of vaccinating medical workers, logistical and uptake constraints.
- According to the Ministry of Agriculture, the 2021 long rains production is likely to be above average in the high and medium rainfall areas of western Kenya and Rift Valley driven by above average rains. Crop production however is expected to be moderately below average in the marginal agricultural areas of eastern Kenya due to the below average rains expected.
- The current below average forage and water resources in pastoral areas are expected to improve slightly but remain below average following the March to May long rains that will only partially regenerate these resources and will be short-lived with accelerated depletion driven by forecasted above-average temperatures.
- Livestock birth rates are expected to be below average especially in the pastoral areas from late March to late April. This follows poor rangeland conditions during the 2020 October to December short rains season that drove below average conception during this period. As a result of this and persistent below average rangeland resources, milk availability is expected to be below average at household level throughout the scenario period.
- Desert locust swarms are no longer arriving in Kenya however, immature swarms persist in northern and central Kenya. These swarms are however smaller and less numerous than those of 2020. It is anticipated that the showers that occurred in late February will drive hatching of eggs in late March. Nevertheless, the desert locust surveillance and control measures in place are likely to limit their damage to between minor and moderate as they are sufficiently funded through March with additional funding being sourced to support the efforts through September.
- According to FEWS NET technical price projections, maize grain prices in the Nairobi urban reference market are expected to range from 3,100-4,100 KES and be within average in February before rising to 6-19 percent above the five-year average with the anticipation of below average production following the below average March to May long rains. Bean prices are expected to range from 8,000 – 9,400 KES and be 16-24 percent above the five-year average through the scenario period driven by low carryover stocks from 2020 resulting in limited supply in the markets.

- Goat prices are expected to trend downwards and drop to below average levels particularly in Marsabit, Turkana, Garissa and Wajir counties. Across the rest of the pastoral counties, goat prices remain high and are likely to decline but remain at least average through May and decline thereafter as livestock body conditions deteriorate further through September.
- According to the IPC AMN carried out in February, acute malnutrition among children under five years of age is expected to vary across the country influenced by improved food and milk access and during the March to May long rains season and increased food access during the long rains harvest. However, increases in the prevalence of diseases and low milk availability will drive an increase in malnutrition. Across the pastoral areas deteriorations are expected within the same phases and ‘Critical’ levels are expected except in West Pokot and Tana River where ‘Serious’ levels are expected and in Moyale and Saku sub counties of Marsabit where ‘Alert’ levels are expected. In the marginal areas, Kitui is expected to deteriorate from ‘Acceptable’ to ‘Alert’ as food availability declines.

3.2 Food security Prognosis (March - August 2021)

Most Likely Food Security Outcomes

Pastoral areas

The deteriorating forage and water resources will likely keep livestock in the dry season grazing areas up to late-April after the start of the March to May long rains reducing household milk availability and consumption and reducing livestock sale value as their body conditions continue to deteriorate. In these dry-season grazing areas, intensification of resource-based conflicts and livestock disease outbreaks is expected as overcrowding and competition for resources persists. The conflicts and diseases will likely result in quarantines, disrupt markets and other livelihood activities and result in the loss of property and insecurity. From late-April and early-March, the below average long rains will partially regenerate forage resources and will also result in the hatching of previously laid desert locust eggs into nymphs that will likely cause moderate destruction of forage. Despite below average regeneration, the increased forage and water resources will improve livestock body conditions and productivity albeit short-lived, over the long rains season and through late June. Reduction in forage and water resources will drive early livestock migration to dry season grazing areas which will reduce milk availability at household level and drive an increase in acute malnutrition in children under five years of age but remain within ‘Critical’ (GAM MUAC 15 – 29.9 percent) across all pastoral areas apart from Moyale and Saku sub counties in Marsabit which will be ‘Alert’ (GAM MUAC 5-9.9 percent) and West Pokot which will be in ‘Serious’ (GAM MUAC 10 – 14.9 percent). The early migration is likely to increase herding labor opportunities but reduce household milk availability and sales while livestock body conditions deteriorate reducing livestock sale value and household income. COVID-19 impacts and restrictions will likely continue reducing the non-livestock income-earning opportunities such as casual wage labor, petty trade and remittances and households are likely to intensify dependence on livelihood coping strategies indicative of Crisis such as accelerated depletion of assets, withdraw children from school, and reduce expenses on health. Turkana, Marsabit, Isiolo, Wajir, Mandera, Garissa, Tana River and Samburu will have area-level classifications of Crisis (IPC Phase 3) while a small proportion of households in these counties will have large food consumption gaps that they will mitigate by employing emergency livelihood coping strategies and asset depletion and will be in Emergency (IPC Phase 4).

Marginal Areas

Stressed (IPC Phase 2) outcomes will likely persist through June across the marginal areas as below average household short rains food stocks dwindle through March forcing households to obtain their food commodities from the markets. Consequently, staple food prices are set to increase as the demand increases for use as food and seed for planting. Household income is expected to be constrained by the below average March to May long rains that will reduce casual wage labor income-earning opportunities and by the ongoing COVID-19 pandemic that has reduced other non-farm income earning opportunities. At the same time desert locust breeding is set to intensify with the start of the rains and the hatching of the locusts will coincide with the emergence of crops resulting in a significant threat to crop production. Reduced income -earning opportunities due to below average cropping activities over the March to May long rains season households will force households to expand other income sources like charcoal and firewood sales and petty trade. However, sources like non-farm casual labor and remittances are likely to remain below average affected significantly by the COVID-19 pandemic which will force households to apply coping mechanisms to meet their food needs. Food consumption will reduce at household level increasing malnutrition rates among children that are under five years of age. In May, some relief will come in the form of short cycle crops for a short- period. In July, the long rains harvest will become available and will be below average improving household income, food availability and food consumption for a limited time through the end of August. However, it is expected that poor households will deplete their food stocks earlier than normal and return to market dependency despite above average staple food prices and below average household income levels and face increasing food insecurity. Acute malnutrition will also likely increase from ‘Acceptable’ (GAM MUAC <5) to ‘Alert’ (GAM MUAC 5 – 9.9 percent) in Kitui and other counties as milk consumption and dietary diversity decreases. Households will increasingly livelihood coping strategies indicative of both Stressed and Crisis such as purchasing food on credit, sell more animals than usual, sell productive assets, consume seed stocks and reduce expenses on health. Stressed outcomes will prevail but at least 20 percent of households will be in Crisis (IPC Phase 3) in parts of Kitui, Meru (Meru North), Makueni, Tharaka Nithi (Tharaka), and Embu (Mbeere) counties. However, parts of Nyeri, Kitui, Meru, Taita Taveta and Kilifi will remain in Minimal (IPC Phase 1).

4.0 Proposed Sectoral Interventions

Options for response

The tables below contain priority response options by sector. Immediate interventions to mitigate food insecurity should be complemented by medium to long-term interventions that build the resilience of vulnerable communities

4.1 Agriculture Sector: Priority Interventions (March – August 2021)

Interventions	Counties	Cost Kshs (Millions)
Pests and disease control, Provision of farm inputs such as seeds, fertilizers and subsidized mechanical services including post harvesting management.	Baringo, West Pokot, Laikipia, Kajiado, Narok Nyeri, Taita Taveta, Lamu, Kwale, Kilifi, Wajir, Garissa, Isiolo, Tana River, Mandera, Marsabit, Turkana, Samburu, Meru, Kitui, Makuen, Embu, Tharaka Nithi	1178
Promoting irrigation and expansion of irrigated agriculture	Baringo, West Pokot, Nyeri Isiolo, Turkana, Kilifi, Makueni, Meru, Embu, Taita Taveta, Laikipia, Nyeri and Tharaka, Marsabit	5155
Total		6,333

4.2 Livestock Sector: Priority Interventions (March – August 2021)

Interventions	Counties	Cost Kshs (Millions)
Vaccination, surveillance, treatment, capacity building pasture production, livestock feeds, breed improvement reseedling of degraded lands, restocking, livestock insurance, commercial livestock offtake	Baringo, Laikipia, Kajiado, Narok, Taita Taveta, Kilifi, Lamu, Kwale, Wajir, Garissa, Isiolo, Tana River, Mandera, Wajir, Garissa, Isiolo, Tana River, Marsabit, Kitui	5,000
Covid-19 control measures face masks, water tanks and hand washing points, sanitizers	Embu, Garissa, Isiolo, Kajiado, Kilifi, Kitui, Kwale Laikipia, Lamu, Makueni, Mandera Marsabit, Meru, Nyeri, Narok, Taita Taveta, Samburu, Tana River, Tharaka Nithi, west pokot, Wajir, Turkana and Baringo	1,000
Provision of water for livestock	Marsabit, Wajir, Garissa, Mandera and Turkana	1,660
Total		7,660

4.3 Water Sector: Priority Interventions (March – August 2021)

Interventions	Counties	Cost Kshs (Millions)
Repair, rehabilitation, extension and maintenance of water structures and systems	Turkana, Marsabit and Samburu, Wajir, Mandera, Isiolo, Garissa, Tana river, Baringo, West Pokot, Kitui	6000
Promotion of rain water harvesting and technology	Baringo, West Pokot, Laikipia, Kajiado, Narok Nyeri, Taita Taveta, Lamu, Kwale, Kilifi, Wajir, Garissa, Isiolo, Tana River, Mandera, Marsabit, Turkana, Samburu, Meru, Kitui, Makueni, Embu, Tharaka Nithi	2000
Covid 19 response	Kitui, Lamu, Nyeri, Taita Taveta, Tharaka Nithi.	1300
Total		9,300

4.4 Health and Nutrition Sector: Priority Interventions (March – August 2021)

Interventions	Counties	Cost Kshs (Millions)
Implementation of high impact nutrition interventions and Scale up nutrition services to all areas	Kitui, Embu, Meru North, Tharaka Nithi, Baringo, Turkana, Kilifi, Nyeri, Taita taveta, Kitui, Makueni, Narok, Kwale, Kilifi, Lamu, West Pokot	4,500
Nutritional surveillance, coordination and capacity strengthening	Turkana, Marsabit, Wajir, Mandera, Meru, Tana River, Garissa, Kajiado, Isiolo, Samburu and West Pokot	500
Close monitoring of the effects of COVID-19 on continuity of essential services and livelihoods as cases continue to rise to mitigate its effect on food and nutrition situation	Kitui, Embu, Meru North, Tharaka Nithi, Baringo, Turkana, Kilifi, Nyeri, Taita Taveta, Kitui, Makueni, Narok, Kwale, Kilifi, Lamu, West Pokot	1000
Total		6,000

4.5 Education Sector: Priority Interventions (March – August 2021)

Interventions	Counties	Cost Kshs (Millions)
School meals programme, water provision, establishment and construction of new school, recruitment of additional ECDE teachers and E-learning, provision of food for fees.	Isiolo, Garissa, Kilifi, Tana River, Mandera, Wajir, Turkana, Samburu, Marsabit, Kwale, Lamu, Taita Taveta, Embu, Nyeri, Kitui, Tharaka, Baringo, West Pokot, Kajiado and Narok	5,500
Implementation of covid-19 protocols, Supply of Masks, soaps, Sanitizers	Kitui, Embu, Meru North, Tharaka Nithi, Baringo, Turkana, Kilifi, Nyeri, Taita taveta, Kitui, Makueni, Narok, Kwale, Kilifi, Lamu, Wajir, Garissa, Mandera, Isiolo, Marsabit, Narok, Kajiado, West Pokot	1,200
Provision of water tanks and promotion of water harvesting in schools	Isiolo, Garissa, Kilifi, Tana River, Mandera, Wajir, Turkana, Samburu, Marsabit, Kwale, Lamu, Taita Taveta, Embu, Nyeri, Kitui, Tharaka, Baringo, West Pokot, Kajiado and Narok	1,500
Total		8,200

4.6 Peace and Security Sector: Priority Interventions (March – August 2021)

Interventions	Counties	Cost Kshs (Millions)
Peace building initiatives to resolve conflict over resources and monitoring of potential conflict locations and support to response	Marsabit, Turkana, Mandera, Garissa, Isiolo, Wajir, West Pokot, Baringo and Meru	3,500
Total		3,500