Technical Report for the Karamoja Development Partners Group

FOOD SECURITY, NUTRITION, AND CONFLICT ASSESSMENT IN KARAMOJA, UGANDA

Key trends one year after the end of COVID-19 restrictions

May 2022

This publication was produced at the request of the United States Agency for International Development (USAID). The authors of the report are Raphael Lotira Arasio and Mesfin Ayele.

Tufts University
FRIEDMAN SCHOOL OF NUTRITION SCIENCE AND POLICY
Feinstein International Center

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KARAMOJA RESILIENCE SUPPORT UNIT

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Implemented by: Feinstein International Center, Friedman School of Nutrition Science and Policy at Tufts University, P.O. Box 6934, Kampala, Uganda. Tel: +256 (0)41 4 691251.

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Cover photo: A woman collecting star grass seed pods in Karamoja for use as a wild food during hunger periods. Photo credit – Loupa Pius/Omo John Bosco.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

In mid-2020, the Karamoja Resilience Support Unit (KRSU) conducted a rapid assessment that described the impact of COVID-19 containment measures on rural livelihoods in Karamoja (Arasio et al. 2020[1]). The assessment also forecast how disease restrictions would affect livelihoods over the following six to eight months (into early 2021). The initial assessment examined household wellbeing during COVID-19 relative to a normal (good) and bad (drought) year in Karamoja's three main livelihood zones, represented by Amudat District (predominantly pastoralist but with some emerging crop production), Moroto District (predominantly agro-pastoralist), and Abim District (with high dependence on crop production, but also using livestock).

The initial impact assessment in 2020 found that COVID-19 containment measures were implemented in a context of pre-existing high levels of food insecurity and malnutrition. The measures were contributing to an already serious food security problem. This prediction and conclusion raised the need for the Karamoja Development Partners Group and other stakeholders in the region to closely monitor food security in Karamoja. As part of this effort, in mid-2021 KRSU undertook a follow-on assessment to determine whether—from the perspective of local communities—the COVID-19 impacts predicted in the original report had occurred.

This report presents the findings from the second assessment after the lifting of COVID-19 restrictions. The lifting of COVID-19 restrictions followed a poor harvest in 2020, making it difficult to disentangle the impacts of disease control from the effects of a poor harvest. Communities depicted the situation during COVID-19 as worse than a good agricultural year but not as bad as a drought year. Communities also identified insecurity, hunger, and farming constraints as their top concerns, with insecurity ranked as the most urgent problem. In general, COVID-19 containment alone did not cause these problems, but it did exacerbate already existing problems.

CONFLICT

Conflict and insecurity were increasing prior to COVID-19, were made worse by efforts to contain the pandemic, and remain—in the estimation of rural communities—the greatest threat to their welfare.

Insecurity due to livestock theft and raids was increasing in the three to five months before COVID-19 restrictions, i.e., between October 2019 and February 2020. The deteriorating security situation had multiple causes: the increased availability of guns, conflict between the Jie and Turkana in 2019, the inability of the security services to protect disarmed communities or recover stolen animals, and antagonism created by the indiscriminate impounding of animals from communities accused of raiding.

After March 2020, when COVID-19 measures started, there was a further increase in thefts and raids, reaching levels equivalent to about 50% of the levels seen in the period before disarmament. Particularly during COVID-19 measures in 2020, the contributing factors were: reduced presence of security personnel because of their involvement in COVID-19 response activities; COVID-19-related movement restrictions and health guidelines that prevented communities from recovering stolen livestock; and the disruptive impacts of the COVID-19 lockdown on livelihoods and incomes, providing incentives to raid.

Insecurity affected almost all livelihood activities. Livestock marketing was disrupted because people moving animals to town for sale were a major target. People could not safely travel to distant gardens to farm or access the bush to collect wild fruits, burn charcoal, or collect firewood for fear of being attacked. Those engaged in casual work were forced to work restricted hours because it was often unsafe to walk to and from town before 8 a.m. or after 8 p.m.

Despite the lifting of COVID-19 restrictions, conflict/insecurity remained high, and this was attributed to the following challenges:

- Communities object to the wholesale impounding of livestock by the security services, but it is unclear if community members were willing to risk retaliation by identifying the individuals within their community who are responsible for livestock raiding. They instead suggested a conversation with security agencies on how they can collaborate in preparedness and response to incidents of insecurity, i.e., civil-military cooperation.

- Communities describe Uganda People's Defence Force (UPDF) as *aryeng a lopeikopo*, literally meaning an army with one magazine (round) of ammunition, implying that their response mechanisms and strength are inadequate. The

[1] R. L. Arasio, A. Catley, M. Ayele, 2020, Rapid Assessment of COVID-19 Impacts in Karamoja, Uganda, Karamoja Resilience Support Unit (KRSU), USAID/Uganda, Kampala.

capacity of security agencies to respond to raids should therefore be strengthened and include the mapping of conflict hotspots, followed by the deployment/prepositioning of security personnel to those areas to facilitate swift response.

- The planning, execution, and duration of externally driven peace dialogue meetings have been "modernized" and are a complete departure from the traditional peace dialogues. As a result, the process is manipulated to provide free food and allowances for attendees who engage in general discussions and does not address the specific causes that provoke individual conflicts. Peace dialogue meetings should instead be specific to the causes of conflict in particular cases, rather than focusing on abstract discussions about peace. Communities said that priority should be given to addressing conflict corridors and hotspots and noted that conflicts varied locally and regionally in type and magnitude.

- Government and other development partners should provide training programs and funding to support alternative livelihoods for the unemployed youths who are largely responsible for livestock raiding and theft.

HUNGER AND FOOD SECURITY

Communities mentioned three main causes of the widespread hunger in 2021: a poor 2020 harvest, poor access to food in markets, and the loss of livestock due to disease and insecurity. The poor harvest in 2020 was the major cause in all districts. The harvest in 2019 was good, and many households went into the early months of COVID-19 with adequate stores of food from their own farms. The harvest of 2020, on the other hand, was poor because of COVID-19 restrictions, insecurity impacting negatively on farming, and desert locust invasions. As a result, many households came out of lockdown with insufficient home-produced food. Food insecurity in 2020/21 was also exacerbated by the presence of schoolchildren at home for periods longer than usual and the increased prices of food. Poor access to food in the market was mainly related to increased food prices amid low purchasing power. Loss of livestock to diseases and insecurity impacted Moroto District more than Amudat and Abim Districts. Food markets played an important role in supporting or undermining household food security during and immediately after the pandemic.

Households farm a variety of crops but prefer to buy maize. There is a strong inverse correlation between the demand for purchased maize and the availability of home-grown maize. People buy maize when they run out of their own. As in droughts, a greater proportion of the home production went to home consumption during COVID-19, but the amounts were insufficient and lasted only a few months—down from roughly eight months in a normal year to two to six months under COVID-19, and one to three months in a drought.

Shortfalls in home crop production are reflected in increased demand for purchased maize. Though not as high as in drought years (when increases of 200–265% above normal occur), during the pandemic demand for purchased maize was elevated by 75–90% and persisted for a protracted period. At the same time, the availability of maize in the market decreased on average by 48%. This decrease was generally attributed to movement restrictions, the attendant bribes to the police at the roadblocks, and the poor harvest in 2020.

COVID-19 restrictions also led to an abnormal increase in maize prices and extended the period during which prices were high. There was an increase in the number of months with price increases of 100% or more from an average of 3 months in a good year to 4.6 months in a drought year and to 6.6 months during COVID-19.

These findings—a combination of reduced home production, increased demand for purchased maize, the reduced availability of marketed food, and abnormal price increases—all suggest a major food crisis during and immediately after COVID-19 restrictions.

NUTRITION

The duration of reported child malnutrition varies by year (normal, drought, and COVID-19) and by district. Moroto District recorded a consistently higher duration of child malnutrition in a normal year, drought year, and during COVID-19, whereas Amudat and Abim Districts recorded a consistently lower duration of malnutrition. Amudat District has a large livestock population to supply milk and sale animals and Abim District has diverse crop resources, all of which reduce the prevalence of malnutrition. Generally, the duration of child malnutrition was much longer and more severe in a drought year than during COVID-19, as was the number of children affected. During a moderate drought (e.g., 1998), about 53% of children were malnourished, more than double what was experienced during COVID-19 (21.4%).

For pastoralist and agro-pastoralist communities in Amudat and Moroto Districts, the most important food for children is animal milk. For farming communities in Abim District, the priority foods include groundnuts, simsim, millet, and sunflower in descending order. Groundnuts, the most important food, is regarded as "milk for children." Groundnuts are served to children as paste, or fried, or as paste mixed with porridge.

There is an inverse relationship between groundnuts availability and perceived child malnutrition. Malnutrition peaks when there are no stocks of groundnuts. For instance, in a normal year, malnutrition peaks in May/June (two months) when groundnut stocks are at zero. No cases of malnutrition are seen between July–December–April when groundnuts are available.

In the pastoral Amudat District, cow milk availability and child malnutrition are inversely related. Generally, as cow milk availability increases, child malnutrition drops. Irrespective of the year, child malnutrition peaks in January and February. Child malnutrition lasts for two months between January and February in a normal year, for nine months between September and May in a drought year, and lasted five months between November and March in the COVID-19 year. The longer the period of cow milk availability, the shorter the period of reported child malnutrition. For example, milk availability in a normal (good) year is for ten months (between March and December), which reduces the period of child malnutrition to two months (January and February).

Communities (both humorously and sometimes despairingly) provided descriptions of a malnourished child that were similar to symptoms described in the literature on nutrition and health. Some of the potentially important determinants of child nutrition mentioned by communities include the number and variety of meals consumed per day, the quantity of food served, and the availability of own-produced foods.

These findings suggest that rural households in Karamoja adequately understand the determinants of good child nutrition: providing sufficient amounts of different kinds of food, with an emphasis on home-produced products. They also correctly identify the generally accepted signs of child malnutrition and understand the role of high-protein foods such as milk and peanuts in child health. **It would appear that parents in Karamoja know what to do to feed their children a healthy diet and that the principal impediment to improved child nutrition is not ignorance or misinformation but rather a lack of the necessary resources.**

INTRODUCTION

In mid-2020, the Karamoja Resilience Support Unit (KRSU) conducted a rapid assessment that described the impacts, conditions, and issues associated with COVID-19 restrictions and containment measures in Karamoja (Arasio et al. 2020). The assessment also forecast how these impacts would affect livelihoods over the following six to eight months (into early 2021) and indicated priority areas for livelihood support to more-vulnerable households.

The assessment prioritized the views and perspectives of community members and made frequent use of small-size focus group discussions (FGDs) and adapted participatory methods. The assessment covered Karamoja's main livelihood zones, represented by Amudat District (predominantly pastoralist but with some emerging crop production), Moroto District (predominantly agro-pastoralist), and Abim District (with high dependence on crop production, but also using livestock).

The assessment showed clear evidence of the main immediate and likely long-term impacts of COVID-19, with emphasis on livelihoods and food security impacts. COVID-19 restrictions were implemented in a context of pre-existing high levels of food insecurity and malnutrition, and were causing immediate and serious livelihood impacts, a serious decline in food security and livelihood systems, an emerging food security crisis, and increasing child malnutrition. Specific problems related to COVID-19 included:

- Market closures, restricted travel (including cross-border movements and the related economic activities), rising travel costs, reduced access to food, and rising costs of food and other basic commodities;
- Reduced access to agricultural inputs and livestock services;
- Constraints to land preparation and crop planting that resulted in an estimated 45% net reduction in the area of land cultivated compared to a normal year, with an expected corresponding impact on harvests and associated impacts on food security, hunger, and nutrition;
- Reduced livestock production due to disease outbreaks,[2] reduced access to and increased costs of veterinary care, the reintroduction of "protected kraals" in some areas, and increased livestock raiding;
- Losses of livestock to a resurgence of raids and the re-introduction of the protected kraal system, leading to reduced milk availability and fewer animals for sale;
- Dramatic declines in income from diversified livelihood activities, which was especially important for poorer households and poorer women. When reduced purchasing power was combined with rising food and commodity prices, the net result was worsening food insecurity and hunger. Low purchasing power also resulted from a net decrease in livestock prices of 32%, taking account of seasonal changes in a normal year.

Overall, COVID-19 containment measures resulted in a worsening and serious food security problem in Karamoja. This food security problem was predicted to evolve into an area-wide food security crisis in the following months if COVID-19 restrictions and containment measures continued, and if the resultant impacts and crisis were not addressed.[3] Food security and human nutrition in Karamoja were likely to decline further, especially at the start of the dry season from around November 2020. This was likely to be aggravated by a poor harvest in 2020, the expected reduced availability of livestock milk in the dry season, and a reduction in livestock production due to possible restrictions on livestock mobility in the dry season.

This prediction raised the need for the Karamoja Development Partners Group and other stakeholders in the region to closely monitor the food security situation in Karamoja. Monitoring would include tracking food and

[2] Losses of livestock due to increased mortality from disease—communities reported an average increase in livestock disease incidence of 70%, taking account of typical seasonal variations.

[3] Impacts and crisis addressed possibly through: a) policy interventions that enable selected market activity (safe and enhanced economic activity) and travel and that encourage markets, rural production, and urban jobs to function in the COVID-19 context; b) policy interventions that will enable resumption of selected or adapted activities by implementing partners; c) policy support that considers the need for livestock production and mobility in the next dry season, and the need to enable cross-border movements and economic activities; d) consideration of new programs and repurposing of existing programs to support food security and livelihoods with activities that are specifically adapted to the COVID-19 context, especially those that aim to address both immediate household food needs and to protect and build assets.

commodity prices, livestock mortality and production, areas of land cultivated and harvests relative to a normal year, among others. In addition, KRSU proposed a follow-on assessment in the same locations as the impact assessment. The follow-on assessment aimed to:

- Establish any changes in community prioritization of COVID-19 impacts and concerns in mid-2021 relative to mid-2020;
- One year after the initial assessment, assess whether the predicted COVID-19 impacts and concerns about food security, nutrition, and conflict materialized, taking account of seasonality and considering a normal (good) and bad (drought) year;
- Assess, from the community perspective, the policy and programming interventions as well as community response measures/mechanisms that contributed to the status or changes in the COVID-19 impacts during the year;
- Use a predictive model to estimate the one-year impact (2020 to 2021 to 2022) of COVID-19 restrictions and containment measures on household food security and nutrition relative to a normal (good) and bad (drought) year, as well as at different points in the year.

DESIGN AND METHODS

AN OVERVIEW OF THE ASSESSMENT DESIGN AND METHODS

This follow-on assessment was conducted in the same districts as in the 2020 assessment: Amudat, Abim, and Moroto. Data were collected for 13 days in each district. In total, the assessment covered 13 sub-counties, 57 villages, and 529 participants (190 men, 339 women). Details per district are shown below.

Amudat District:

- Sub-counties visited and number of villages per sub-county: 3 sub-counties, 20 villages (Loroo sub-county: 9; Karita sub-county: 2; Amudat sub-county: 9);
- Total number of people interviewed disaggregated by gender: 199 participants (72 men and 127 women).

Abim District:

- Sub-counties visited and number of villages per sub-county: 7 sub-counties, 21 villages (Magamaga sub-county: 2; Alerek sub-county: 2; Awac sub-county: 4; Lotuke sub-county: 2; Morulem sub-county: 5; Abim sub-county: 2; Nyakwae sub-county: 4);
- Total number of people interviewed disaggregated by gender: 208 participants (79 men and 129 women).

Moroto District:

- Sub-counties visited and number of villages per sub-county: 3 sub-counties, 16 villages (Nadunget sub-county: 11; Rupa sub-county: 4; Tapac sub-county: 1);
- Total number of people interviewed disaggregated by gender: 122 participants (39 men and 83 women).

Similar methods as in the 2020 assessment were used. This involved use of small-size focus group discussions (FGDs) (one FGD per village) and adapted participatory methods to elicit the views and perspectives of community members. Details of the specific methods used are described in the sections of the assessment (report) where they were applied. The specific methods include proportional piling, monthly calendar, and Likert-type scale rating. Semi-structured interviews (SSIs) were used together with each of these methods to do further probing. Price data for the specific aspects of interest were also collected.

COMMUNITY UNDERSTANDING OF A GOOD (NORMAL) AND A BAD (DROUGHT) YEAR

a. Community definition and characterization of a good (normal) and a bad (drought) year

Based on their experiences, communities defined a good and a bad (drought) year as follows:

- A good year was characterized by: good rains, good harvest, selling of fewer animals because of good harvest (enough food from the harvest), many traditional marriages/weddings, a lot of brewing for income and traditional ceremonies, many initiation ceremonies (*Asapan*), many elders' feasts (*Ngakiriketa*), plenty of milk/butter/ghee, a lot of white ants, presence of peace, animals are healthy, enough pasture for animals;
- A bad (drought) year was characterized by: little or no rain, very poor or no harvest, continuous migrations for food and pasture, selling many animals to buy food (because of hunger), people relying on food relief, high prevalence of livestock diseases, livestock deaths due to drought and livestock diseases, scarcity of water and pasture for livestock, loss of human lives due to hunger, malnutrition in children and adults, domestic violence due to lack of food (including divorces/separations), no or fewer marriages.

Communities recalled a good or a bad year with reference to the specific aspect being examined, e.g., harvest. To minimize recall bias, they were asked to refer to recent years, e.g., 5–20 years ago. They were also asked to compare the levels of the aspects being assessed (e.g., harvest) between the following years: a good/normal year, a bad year (especially drought year), and the COVID-19 year (2020/2021).

b. Community knowledge and experiences regarding the impact of a good/normal and drought year

Researchers observed the following about the community's experiences (with regard to the impact) and knowledge of good/normal and drought years. This information is important or relevant to future studies that aim to compare aspects or issues between good/normal and bad (drought) years retrospectively:

- For some drought years, the impact was uniform across a district while for others the impact varied across locations in a district. Variations across locations in a district were mainly noted in Abim

District, where microclimates seem to exist because of the mountainous landscape. In this regard, a year could display an extremely bad situation (termed as a bad year) in one location but a moderately good situation (termed as a good year) in another location. Here, it was therefore difficult to generalize and make reference to year X as a bad (drought) year and year Y as a good year for the whole assessment area. Rather, an area-specific approach was used with reference to a good or a bad (drought) year. In Abim District, the only bad (drought) year that uniformly impacted the whole district was the drought of 1979/80, perhaps because of its severity. The subsequent drought years seem to vary in terms of impact between locations.

- Variation in the impact or characteristics of a certain year (a good or a bad year) across locations accounted for differences in the naming of a certain year between locations.

- Communities vividly recalled or gave more detailed accounts of bad years than of good years. This was evidenced by a name given to every bad (drought) year, but not to every good year.

- The use of the words "a bad year" in a general sense can attract mixed interpretations, because a year could be bad because of floods or drought or insecurity or livestock diseases, etc. To avoid confusion, the assessment team used drought years as examples of bad years. Drought was also chosen on the basis that it is one of the most common disasters in Karamoja sub-region. Similarly, the use of a good year in a general sense can be misleading if you do not refer to a particular aspect, e.g., harvest because some good years (e.g., with good rain) can be good for livestock but bad for crops. For instance, the year 2020 was good in terms of rain but bad for crops because of floods and desert locust invasion.

- The frequency or occurrence of bad (drought) years seems to be increasing compared to good years.

In this report, the terms "a good year" and "a normal year" are used interchangeably.

ASSESSMENT OF PRICE CHANGES OVER TIME

Price changes between good and drought years were only compared for recent years, because prices increase over time. If the COVID-19 year is compared to very old normal or drought years, the large differences in prices will confound the impact of long-term inflationary trends with the impact of COVID-19.

FINDINGS

GENERAL CHANGES IN THE COVID-19 IMPACTS AND CONCERNS

Figure 1 shows local priorities and concerns over time, from the start of COVID-19 restrictions in March 2020 to the point of the follow-on assessment in March-June 2021.

- In all three livelihood zones, insecurity and hunger continued to be important concerns but with an increase in insecurity over time; hunger decreased in Moroto and Abim and was unchanged in Amudat.
- In Amudat and Abim, there was a marked increase in concerns about education and the problem of teenage pregnancies.
- In all three livelihood zones, human and livestock disease continued to be concerns but with decreasing importance.
- Concerns about crop farming were also important, with increasing concern in Moroto compared to Amudat and Abim.

Figure 1a. Community concerns over time in Moroto.

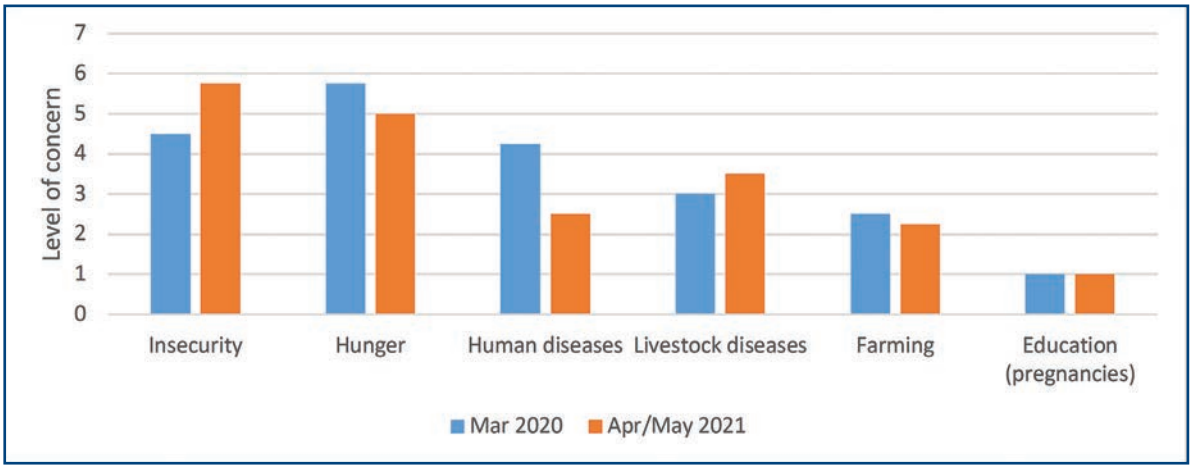


Figure 1b. Community concerns over time in Amudat.

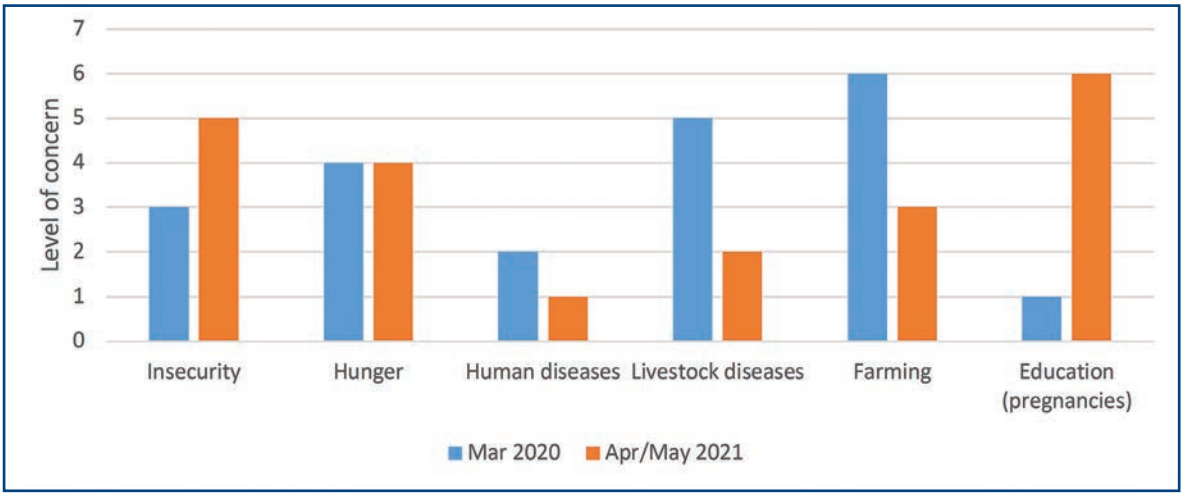
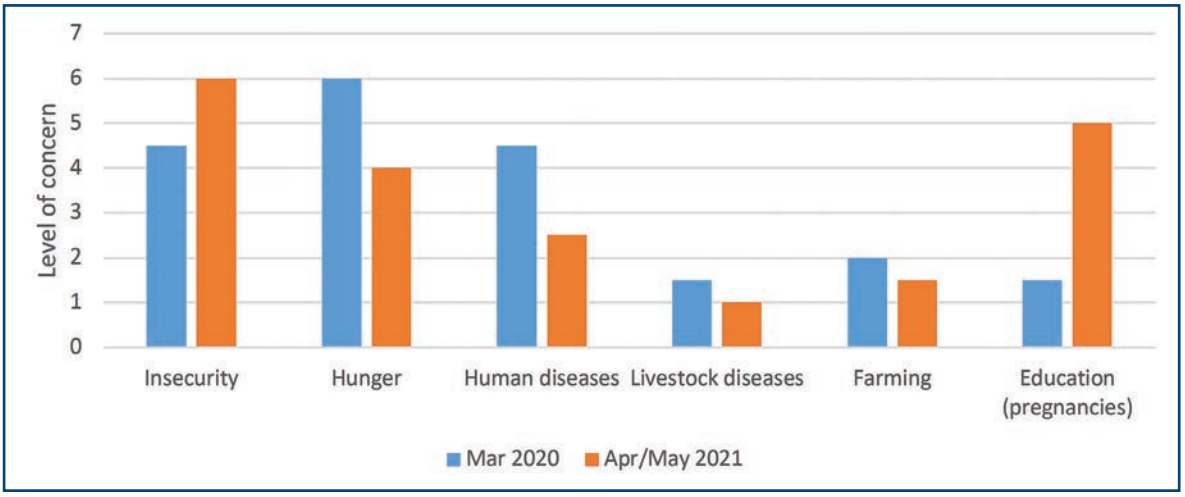


Figure 1c. Community concerns over time in Abim.



Note: Level of concern scale derived from average ranks of concerns during focus group discussions (FGDs): Moroto n = 4, Amudat n = 1, Abim n = 2. n = the number of FGDs per location

CONFLICT

The COVID-19 assessment report in mid-2020 described increases in insecurity due to livestock theft and raids in the three to five months before COVID-19 restrictions, i.e., between October 2019 and February 2020. After March 2020, when COVID-19 measures started, there was a further increase in thefts and raids, reaching levels equivalent to about 50% of the levels seen in the period before disarmament.[4] Particularly during COVID-19 measures in 2020, the contributing factors were: reduced presence of security personnel because of their involvement in COVID-19 response activities; COVID-19-related movement restrictions and health guidelines that prevented communities from recovering stolen livestock; and the disruptive impacts of COVID-19 lockdown on livelihoods and incomes, providing incentives to raid.

As shown in Figure 1, communities describe increasing insecurity as a major concern, and therefore the assessment team spent time examining the problem of insecurity and livestock raiding in more detail. The report highlights characteristics of the resurging conflict more than ten years post-disarmament and after a period of relative peace. It describes the causes of conflict—both new and longstanding—community-level responses, and the community's priority suggestions to external actors on how they can intervene to mitigate the resurging conflict. The report further shows that at certain points in time the factors contributing to conflict are a combination of both new time-specific factors and longstanding factors. This finding should be taken into consideration when assessing and responding to the conflict situation in Karamoja.

CHARACTERISTICS OF THE RESURGING CONFLICT IN KARAMOJA

During the last year, numerous features and impacts epitomized the resurging conflict as described below. These features relate to:

- The types of insecurity;
- Impact of insecurity on livelihood activities;
- Threat to life and household property;
- Change of tactics by raiders/thieves;
- Abuse of good will and hospitality of other communities;
- Emerging early warning signs/indicators of insecurity;
- Attempts to destroy evidence of stolen/raided animals.

Forms of insecurity: four forms of insecurity were reported. These were livestock raids/theft, burglary (housebreaks) in towns, road ambushes, and unexplained killings in towns.

Impact on livelihood activities: insecurity affected almost all livelihood activities in the assessment areas, e.g., farming, livestock marketing and trade, milk production and availability, and alternative livelihood activities. The impacts of rising livestock raids/theft on livelihoods were as follows:

- Livestock marketing and trade—people moving animals to town for sale were a major target.
- Farming—people could not access distant gardens. In Abim District, thieves also stole cassava in the gardens.
- Diversified livelihoods—people could not access the bush to collect wild fruits, burn charcoal, or collect firewood for fear of being attacked. This lack of access deprived them of income from charcoal and firewood. The number of hours spent in town on casual work and, in turn, income from this source reduced as people had to walk to town as late as 8 a.m. and return to the villages as early as 4 p.m.[5] In most places, insecurity started at around 8 p.m.

Threat to life and property: armed thieves stole food from granaries, stole small stock such as chickens, and stole household items such as saucepans; the thefts included parading women at night outside their homes and stripping them of bead ware, skirts, and bedsheets. Thieves also demanded for money, including money from village savings and loans associations (VSLAs). Raiders burnt homes, even if people and property (as animals and food) were inside, in cases where it was difficult for them to gain entry, e.g., in Lopur village in Nadunget sub-county, Moroto District. In Abim District, raiders from the neighboring community attacked at night and threatened to burn the houses (with people inside) if the owners did

[4] A major Government of Uganda disarmament program took place in Karamoja between 2001 and 2008.

[5] During the recent 10 years of peace, the working day was from 6 a.m. to 6 p.m.

not surrender the keys for the chains used to tie animals to large poles. Tying animals to these poles is a strategy to minimize losses to theft/raids.

Intelligence-based[6] change of tactics by raiders/thieves: well-grounded intelligence guided the activities of raiders/thieves. For example, they burnt grass around the villages and livestock camps that they intended to raid. The burning forced people to move animals to other locations with enough pasture, not knowing that they were falling into a trap set by the raiders.

Informants explained that youths who execute raids in villages, and robberies in towns such as Moroto, hide with their firearms in those towns because it is then not easy to detect and suspect them. This partly explains why insecurity in towns like Moroto starts as early as 8 p.m.[7]

Raiders monitor the movements and conduct of security personnel, including their alcohol consumption habits, and attack a protected kraal when the security personnel are drunk. After the attack, the raiders scatter in different directions to frustrate recovery efforts, making it difficult to effectively follow their footmarks.

Abuse of hospitality of other communities: in the whole of Karamoja sub-region, it is only Abim and Karenga Districts' communities that do not counter-raid their aggressors. They instead accommodate them, especially in the dry season when they come for food and pasture for livestock.

Emerging early warning signs/indicators of insecurity: as mentioned by a community in Moroto District, one of the early warning signs of impending insecurity is when youths who usually trade in local brew disappear.[8] Their disappearance means that they are busy elsewhere, i.e., planning or executing raids or robberies. A Pokot community in Amudat District also revealed that they start sensing insecurity when they see that Karimojong communities close to Pokot mobile livestock camps have abandoned charcoal burning suddenly, yet no alternative livelihood activity can be seen. Another indicator of insecurity is when warriors are seen drinking beer in the villages instead of local brew; they buy the beer using proceeds from robberies and raids.

Attempts to destroy evidence of raided/stolen animals: raided/stolen animals were sold either alive or slaughtered in the bush. The meat was transported to town centers such as Moroto on bicycles, on motorbikes, and on foot. This was done to destroy evidence of stolen/raided animals and was said to explain the influx and abundance of cheap meat in Moroto town, alleged by communities to be from animals dying from disease. Communities expressed the need for security agencies to investigate this emerging trend and tactic. This tactic also doubles as an emerging indicator of livestock raids/theft.

CAUSES OF RESURGING CONFLICT

Communities described the main causes of the resurging conflict in terms of new causes and pre-existing factors that worsened during COVID-19. These are described below.

a) New causes include:

- The Kobebe incident of 2019 between the Jie and the Turkana communities and the consequent spread of retaliatory attacks;
- Factors related to the impact of COVID-19 restrictions and containment measures from March 2020;
- Moroto Prison break in September 2020;
- Factors related to the elections of 2021;
- Local defense units' (LDUs) desertion of duty in 2021.

b) Pre-existing (pre-COVID-19) or longstanding factors worsened during COVID-19. Longstanding factors include weaknesses in the interventions and approaches by government and other peace actors, and weaknesses and gaps in policy, legislation, and institutions.

Communities also explained that some of these factors are crosscutting while others vary by location/transhumance corridor and require corridor-specific interventions and dialogue. It is also worth noting that the pre-existing (pre-COVID-19) factors are more numerous than those that are specific to the COVID-19 situation or the elections of 2021, which raises questions about past approaches and interventions to conflict. In addition, there has been a substantial investment in peace and security in the last 10 years of peace (2010–2019). Yet there has also been persistent or resurgent conflict. Given that, the following questions arise:

- Is peace really in the hearts and minds of those in Karamoja or is it externally driven? If

[6] The raiders seem to have more effective intelligence networks and systems than the security agencies.

[7] The youths use the guns hidden in towns to carry out criminal activities in those towns as early as 8 p.m.

[8] They usually carry local brew on bicycles from Moroto town to the villages.

Karamoja communities are committed to peace, what are the signs of this commitment? What issues or concerns disrupt this commitment, and why did people rearm after disarmament?

- Are aid or government interventions really addressing conflict in Karamoja? To what extent are these interventions informed by a proper understanding of the prevailing root causes and underlying factors? Whose knowledge, ideas, and opinion matters or counts in the design of conflict-related interventions? Is evidence from research or impact evaluations being used to inform interventions?

- How (in terms of approach) are we doing what we are doing? What is the basis?

- How do communities view external conflict interventions? How appropriate and effective are the various external interventions and approaches to peace and security? Are there good or promising approaches that could be replicated? What is working and why, and what is not working and why?

- Is there a regional strategy for peace in Karamoja? If "yes," does it include measures and responses for each phase of the conflict cycle, e.g., alert, alarm, emergency, recovery, and normalcy?

- Are the peace efforts by implementing partners coordinated?

Below is a detailed description of the different root causes, drivers, and escalating factors.

a. Factors related to COVID-19 lockdown and restrictions:

- Hunger—resulting from the poor harvest in 2020, loss of income from various sources (livestock-based, crop-based, and diversified/alternative livelihood activities), and closure of livestock and food markets. Lack of food compelled people, especially youths, to steal or raid animals to get money to buy food.

- Efforts to replace livestock lost to raids and livestock diseases—raiding/theft that escalated during COVID-19 and increased livestock mortality, due to a rise in disease incidence, led to the loss of many animals and so a loss of a livelihood for many families. There was then pressure to replace the raided/stolen or dead animals. The most painful loss reportedly related to oxen for ploughing, trade animals lost by livestock traders,[9] and milking animals.

- Thieves taking advantage of curfew hours—commonly observed in and around major towns such as Moroto. Due to curfew, most people were indoors by 8 p.m., making it easier for thieves to move around unobserved. Worse still, during curfew hours fewer security personnel were deployed, and their movements were well monitored by thieves. It was then much easier for thieves to plan when and where to attack.

- Closure of markets/market days—people from different places and communities, especially traders, were used to meeting and intermingling in marketplaces. This played an important role in peaceful co-existence. In and outside the markets, people avoided conflict because of the risk that any incident of insecurity would result in them being blocked from visiting certain markets or escalate to retaliatory attacks.

- High demand for livestock leading to bush marketing of livestock during COVID-19—animals (including raided animals) were sold in the bush, loaded into trucks, and moved to markets outside the Karamoja sub-region. Stolen/raided animals were more difficult to track and recover compared to when local markets were open.

- Increasing need for rearmament for self-defense and retaliatory raids but lack of income—one major source of income for the purchase of guns and ammunition was the sale of livestock. Due to the closure of livestock markets, youths resorted to robberies in towns and villages to get money to buy guns and ammunition.

- Closure of schools during COVID-19—idle schoolboys were involved in raids.

b. Factors related to the elections in 2021 and the Moroto Prison break in September 2020:

- Recently elected leaders were blamed for not responding to raids affecting communities that are within their jurisdiction, but who did not vote for them.

- Security personnel, including local defense units (LDUs), were moved from rural locations to

[9] Livestock traders resorted to raiding/stealing to replace the lost animals.

major towns to monitor and secure political events, which created a capacity gap that raiders took advantage of.

- A predictable trend where in every election, the government reluctantly responds to raids/theft for fear of losing votes. This trend repeated itself in the election of 2021. Raiders have recognized this pattern and took advantage of it: they escalate raids/theft at the time of the elections because they know they will not be pursued.

- Moroto Prison break: prisoners escaped with guns and ammunition from Moroto Prison, and it was suspected that these weapons were used in livestock raids/theft in the villages and robberies in towns.

c. Pre-existing (pre-COVID-19) factors:

i. Weaknesses in external interventions and approaches to peace and security—some interventions and approaches by government and non-governmental organizations (NGOs) were seen by informants as providing fertile ground for the escalation of conflict or impacted negatively on sustained peace. According to informants, these approaches attract resentment and vengeance. Examples are detailed below.

- ***Indiscriminate impounding of animals and using them to compensate the raided community.***

This practice occurs when security agencies impound the animals of a whole village/livestock camp that is suspected of raiding, and animals are taken regardless of whether a family was involved in the raid or not. An example of an innocent family would be one that does not have youths who can either raid or follow animals, but whose animals have been impounded by security agencies.

Consequently, those who lose animals innocently to the compensation system plan to recover or replace their animals through retaliatory raids. Additionally, there are claims of unexplained disappearance of some impounded animals in the military camps, especially good-quality bulls. Despite the fact that many animals are recovered, relatively few end up back with the compensated community. So, the "compensated" community feels frustrated and cheated. It retaliates by raiding, thereby creating a vicious and endless cycle of unproductive and dangerous raids. It also leads to or escalates intra- and inter-family feuds between the innocent and the wrongdoers.

Despite their criticism of the compensation approach, it was not clear from communities whether they are ready to expose the raiders so that specific families and perpetrators can be targeted by security agencies. This unwillingness could be because of a tradition of secrecy, illustrated by an age-old maxim *kimuk ekile*, which literally means "Do not disclose a man." Additionally, those exposing wrongdoers would be targeted and sometimes killed by the exposed. Nonetheless, communities suggested that before animals are confiscated for compensation of victims, there should be a proper investigation and dialogue between them and security agencies.

- ***Peace dialogue meetings.***
  - Numerous financially motivated requests from local leaders and/or peace committees for support to dialogue meetings—this support is to cover expenses such as transport (car hire and fuel), food, refreshments, and per diems, among others. Although these requests might reflect a demand-driven process, there is a need to interrogate the sincerity of these requests[10] and the potential impact on peace building. There are concerns that such requests entrench an overdependence on external support and effectively undermine community and government contributions. Urgent requests are also submitted when there are certain pressures at play, e.g., an urgent need to share scarce resources in specific and limited locations in the dry season, or an impending disarmament. Pastoralists are usually reluctant to talk about peace in the wet season, as everyone has plenty of pasture and water. Understanding the seasonality of potential or genuine pressures would help to effectively predict, plan, and preposition adequate resources for dialogue meetings.

  - Some peace dialogue meetings appear to be externally driven. As a result, the

[10] Including interrogating community's honest demand for peace.

discussions and resolutions are undermined by unserious, light-hearted, and dishonest submissions.

- As revealed by some community members, peace dialogue meetings do not address the specific root causes and underlying drivers of conflict. A lot of time is spent on rhetoric, and unfocused and circular discussions.

- A long chain of unimplemented resolutions from peace dialogue meetings—meeting after meeting does not allow time for implementation of resolutions.

- The planning, execution, and duration of externally supported peace dialogue meetings has been "modernized" and is a complete departure from the traditional peace dialogues. As communities stated, "poor-quality meetings result in poor-quality and unimplementable resolutions."

- Duplication or poor coordination of dialogue meetings.

- ***Protected kraal system***—this system has been associated with loss of animals to diseases due to overcrowding. It has also been associated with reduced livestock production and productivity, and unexplained disappearance of animals in the protected kraals. To minimize these losses, some people preferred to keep animals in their own homes and as a result became a target of raiders/thieves.

- ***Inadequate programming for peace and development following disarmament***—the transition to and focus on peace building and conflict resolution was inadequate. In addition, communities regarded some of the post-disarmament programs/interventions as not adequately thought-out in terms of the principle of "do no harm." An example is the provision of business loans to youths without adequate training on how to use their loans, how to manage the businesses started with the loans, and how to effectively handle defaulting on loans. The pressure to repay loans amid the collapse of business[11] forced the youths to raid or steal animals. Other weaknesses in programming include short-term peace projects and a poor link between peace programs and other related programs such as livelihoods.

- ***Poor functionality and low capacities of peace and security structures at the different levels, including community-level peace structures such as peace committees.***

- ***Disarmament—less informed by lessons learned (successes and failures) from the previous disarmament.***

- ***Weaknesses in the preparedness and response by security agencies, as well as concerns over their impartiality.***
  - This issue partly relates to limited capacities and actions of security agencies in terms of numbers and transport. For instance, a community in Abim District reported the presence of five LDUs per parish and expressed the need to increase the number per parish to ten. As reported by the community, the whole Awac sub-county in Abim District has only four security personnel.

  - There are also claims of imbalanced response to raids, with some communities being favored, and the unexplained disappearance of impounded animals in the military barracks.

  - Security forces take a long time to respond to a raid or theft, although communities have also been blamed for delays in relaying information about raids. The slow response to attacks and inefficient tracking and recovery of stolen animals have made communities lose faith and trust in security forces. Overall, communities continue speculating why insecurity is increasing under the watch and presence of government or security agencies.

  - The raiders seem to have a higher level

[11] For instance, loss of trade animals to diseases and raids.

of intelligence than the security agencies and use that information to plan and execute successful raids. For instance, they profile the security officers in a certain military camp according to their origin, i.e., whether they are from a courageous or brave and sharp-shooting community and how many they are. They also take advantage of the alcohol consumption (especially hard liquor) habits of some of the security personnel.

- Communities describe UPDF as *aryeng a lopeikopo*, literally meaning an army with one magazine (round) of ammunition, implying that their response mechanisms and strength are inadequate.

- There is the belief that the security agencies can be compromised (through bribes) to release wrongdoers, especially through political leaders.

- Publicized military operations alert the youths so they relocate from the villages to the bush, where they continue to plan and execute livestock raids and theft.

- There has recently been swapping of Karimojong LDUs with those from other regions of Uganda, which communities regard as semi-skilled and less courageous in fighting compared to Karimojong LDUs.

- The Karamoja LDUs deserted their duty due to motivational issues.

ii. Communities opportunistically taking advantage of the weaknesses in external peace and security interventions. Below are examples of different interventions and the ways communities have manipulated these interventions.

- ***Impounding animals and using them to compensate the raided community***—in this arrangement, raided communities exaggerate the number of animals taken. When asked to identify their impounded animals, they lie and point to good-quality animals that do not belong to them.

- ***Externally supported peace dialogue meetings.***
  - Some communities ask for peace meetings to conceal plans by their youths to go raiding or to appear peaceful so that they are not suspected or so that raided animals are not pursued.

  - Some youths revealed that they attend peace dialogue meetings to "fatten"[12] and accumulate cash[13] to support raiding expeditions.

  - An abrupt demand for a peace meeting with a neighboring community could be driven by an impending punitive government action such as disarmament. This is to deceive the government so as to slow down disarmament, which might turn out to be forceful if communities do not comply.

  - Temporary alliances that appear to be attempts to make peace but in fact are used to consolidate support to raid other communities.

  - Community members sometimes scramble to participate in peace meetings organized by NGOs and government to get an allowance.

iii. Policy and institutional weaknesses (gaps):

- Limited utilization, non-compliance, or gaps in existing community-level agreements. The Nabilatuk and Moruitit resolutions have generated mixed reactions about their effectiveness. For instance, with regard to the Nabilatuk resolution, some communities feel that there is limited commitment to the guidelines and compliance with provisions in the resolution while others have raised the need for its review.

- Lack of a regional strategy (framework) for peace building and conflict resolution.

[12] Because food is provided.

[13] Because allowances are paid.

- Lack of a peace docket/desk and budget for peace building in the local government.

iv. Alternative livelihood options—some communities are reported to continue raiding because they have numerous livelihood options such as farming that they can rely on in the absence of livestock (e.g., if raided). Such communities rarely yield to pressure to make peace.

v. Benefits associated with raids:[14]

- Successful raids in which raided/stolen animals are not pursued and recovered.

- Compensation given for false or exaggerated claims of raided/stolen animals.

- Proceeds from raids are used to acquire assets such as mobile phones and motorbikes for transport and rental premises.

- Commercialization of raiding, with multiple perpetrators and beneficiaries, and with some communities reported to be more advanced in this practice than others. There are claims that the following are involved in fuelling and benefiting from raids:

  - LDUs participate in raids, provide ammunition, and guide raiders to locations or homes with animals; some impounded animals disappear from military camps.

  - Community leaders are given a share of raided animals to protect the raiders. There are also claims of some leaders facilitating raids.

  - Peace committee members guide or protect raiders using intelligence information they get from security agencies, and in return they are given a share of raided animals.

  - Livestock traders are involved directly in raids or buy raided animals, which are loaded onto trucks and sent to markets outside Karamoja; they give advances to youths to raid and pay the remaining balance after the raid.

  - School boys use proceeds of raiding to pay school fees.

  - Merchants use the proceeds of raiding to start or build businesses or buy rental properties.

  - Idle youths (described as the "enemy within") use phone calls to guide their peers from the neighboring communities to locations or homes with animals. They also guide the escaping raiders to avoid ambushes by security personnel and community members. They use proceeds from raids to buy mobile phones, alcohol, and similar items.

vi. The role of weapons and other tools in conflict:

- On the one hand, mobile phones and motorbikes are used to coordinate raids and, on the other hand, they are used to coordinate the recovery of raided animals. Motorbike operators, even when operating in their home villages, drop people and goods during daytime as they spy for animals. At night, they drop raiders or thieves where they have spotted animals.

- Increasing amounts of small arms and ammunition are available from external sources, allegedly from South Sudan through northern Uganda and Turkana in Kenya. However, internal sources are often overlooked; some of these sources include weapons from the Moroto Prison break in September 2020 and LDU deserters who disappeared with guns.

vii. Deep-rooted cultural loyalties, hatred, and ethnic division:

- There is unwillingness to expose the perpetrators and beneficiaries of raids, especially if they are their own relatives (*Kimuk ekile*), combined with the fear of being targeted if you reveal a thief/raider.

- Perpetrators do not admit to involvement in a raid even when there is evidence (*alaerer*).

[14] These encourage more raids/theft.

- Rituals (*ngimunyenin*) are used to escape or minimize being hurt by those being attacked or by the security agencies.

- Longstanding inter-community hatred arising from past atrocities exists, leaving communities thinking more of revenge than of embracing and sustaining peace. During revenge, they cite an old adage, *echo ngataruk*, which means that vultures need some special diet, i.e., human flesh.

- The Ngikarimojong do not fully accept the Abim community (Labwor) as part of their community or part of Karamoja sub-region. They refer to them as Acholi. This exacerbates the border conflict between Abim and Kotido Districts.

viii. Responding to livelihood pressures:

- Animals lost to raids and diseases are replaced.

- School boys have perfected the practice of going for raids to get animals to sell to pay school fees. This was reported to be common in Kotido District and increases when schools have closed.

- Idle youth[15] resort to livestock raids or theft.

ix. The role of community and political leaders in conflict:

- Leaders are not seen to openly condemn the rising conflict or raiding by their own communities and do not engage fully in conflict resolution. Political leaders also do not openly criticize the inappropriate practice by security agencies, such as confiscating animals indiscriminately to compensate victims and the disappearance of some impounded animals from the military barracks. These deficiencies incline communities to feel that leaders are aiding raids.

- There are claims that some leaders incite their communities to raid while others facilitate raids.

- The leaders in the region are not united and take sides with their respective communities. For example, some peace dialogue meetings do not take place because of disagreements between leaders.

- Political leaders pressure security agencies to release wrongdoers from their areas of jurisdiction so as to maintain political support.

x. The role of climate variability and climate change in conflict:

- Because of climate variability in the Karamoja sub-region, seasonal movements to neighboring communities for pasture and water are inevitable. These movements have been associated with vulnerability to raids. For example, as elaborated by a Pokot community member in a focus group discussion (FGD), *"When we migrate to Nabilatuk and Nakapiripirit Districts in search of pasture and water in the dry season or during drought, it is like driving animals into the mouth of a lion (a Karimojong)"* (FGD, Naloit village, Loroo sub-county, 4.7.2021). However, FGD respondents in other districts also reported cases where proximity encourages peaceful co-existence between communities. For instance, raids between Kotido and Abim Districts reduce in the dry season when the Jie migrate to Abim for livestock grazing, while they increase in the wet season when the Jie return to their home district.

xi. Weaknesses in the functionality of or changes in the traditional peace/conflict resolution mechanisms and the emerging community lifestyles:

- There is waning strength and respect for traditional institutions and leadership structures.

- New lifestyles/habits, such as the increasing consumption of hard liquor, both fuels raids and makes communities vulnerable to raids. Youths steal or raid to get money to drink alcohol. A community in Abim District admitted that they were becoming more vulnerable to raids because of their habit of overconsuming local hard liquor, as it affects their vigilance and response efforts.

[15] Including schoolboys when schools are closed because of COVID-19.

xii. The role of intermarriages and visitors in conflict. Intermarriages between the Abim community and the Jie are common and are expected to create and enforce peaceful co-existence between the two communities. However, the Abim community reported that when their Jie relatives (especially nephews) come for a visit, they spy locations or homes with animals and steal on their way back home or guide raiders to those locations or homes.

xiii. The enemy within. There are reports of local youths[16] spying for and conniving with raiders through phone calls. They direct the raiders to where and when to attack after ascertaining that the situation is favorable, for example when the locals are drunk and cannot respond well to a raid/theft. As people are pursuing raided/stolen animals, they also guide raiders on the safest routes to follow. The youths involved in these deals keep changing their residence to make tracking difficult and are seen to disappear from the village immediately after a raid/theft. They later connect with raiders to share the loot, either in the form of animals or cash from the sale of raided/stolen animals. Some communities in Abim District revealed that they know the suspects and plan to take action against them. Some of the local suspects allegedly reside in Kotido town and are seen to accumulate assets within a short time, but they do not have a known and genuine source of income. They are said to collude and coordinate with Jie youths to raid Abim communities for commercial purposes.

    Attacks within and around Moroto town are planned and executed by youths from the local community (Matheniko). Those selling local *waragi* (hard liquor) during the daytime on motorbikes come back at night to ask for or steal money from their customers. When they bring *waragi*, they spy and then direct raiders or thieves to locations with animals. They also collude in the raids or theft with friends from the neighboring communities and share the loot.

xiv. People burning charcoal along the livestock migration routes are suspected to be spying for raiders.

RESPONDING TO CONFLICT

Due to the multiplicity of causes of conflict, an effective response would require a multifaceted model, approach, and strategy, with clear and distinct roles and responsibilities pursued by the different actors/stakeholders. The strategy should have measures and responses (cross-cutting and corridor specific) for each phase of the conflict cycle (alert, alarm, emergency, recovery, and normal).

Community-level response mechanisms

Community-level response mechanisms include:

- Community alert/vigilance systems. As mentioned by a community in Abim District, people in the neighboring villages are informed through phone calls in case of a raid or an impending raid. Hunters also alert the community when they find footprints of raiders in the bush.

- Use of bows and arrows for self-defense. Communities have resorted to or increased the use of bows and arrows to defend themselves from thieves/raiders.

- Security patrols. There are combined security patrols involving community youths and the security personnel.

- Using big padlocks and chains to tie animals to larger poles to minimize losses to raids/theft. This is practiced only in Abim District.

- Mobilizing motorbikes and cash to facilitate recovery of raided/stolen animals or thwart an impending raid. This practice is common in Amudat District. In the event of a raid, families whose animals have been raided, together with the rest of the community and community leaders, mobilize motorbikes and cash to support efforts to link with local and neighboring security agencies to intercept and recover raided animals. The cash is used to fuel motorbikes, for telephone airtime, and for supporting the youths and LDUs who are pursuing animals.

Community suggestions to external agencies

When asked what could be done by external agencies to mitigate the escalating conflict, communities suggested the following:

[16] The idle youths include those who do not have a source of livelihood, drug abusers, and school dropouts.

- Community-led inter- and intra-community peace meetings. Peace dialogue meetings should be specific to the main causes of conflict in particular cases, rather than focusing on abstract discussions about peace. Action points from a dialogue meeting should also be specific to the case at hand, taking on one problem at a time. Communities said that priority should be given to addressing conflict corridors and hotspots and noted that conflicts varied locally and regionally in type and magnitude.

- Disarmament. Special attention should be given to the question of why communities rearmed after the first disarmament. For disarmament to succeed, the government must guarantee the protection of lives and property.

- Strengthen capacity of security agencies to respond to raids. The capacity of security agencies to respond to raids should be strengthened and include the mapping of conflict hotspots, followed by the deployment/prepositioning of security personnel to those areas to facilitate swift response. Communities also suggested a conversation with security agencies on how they can collaborate in preparedness and response to incidents of insecurity, i.e., civil-military cooperation.

- Government and other development partners should support alternative livelihoods such as livestock trade for youths through group grants and loans, including restocking families who have lost livestock to raids, diseases, drought, and other disasters. Compulsory education for Karimojong children was also suggested but communities were concerned that it must be carefully designed so not to affect labor for pastoral livestock production.

TRENDS IN CONFLICT DURING COVID-19 RELATIVE TO A NORMAL/GOOD YEAR

In Abim District (Bulla village, Nyakwae sub-county) during COVID-19, insecurity rose from August 2020 to February/March 2021. This increase was mainly driven by the increased demand from the bush sales of livestock occasioned by market closures during COVID-19 and the effect of the elections of 2021. During COVID-19, insecurity rose to 75% of the level before disarmament. No insecurity was reported in a good year (e.g., 2013). See Table 1. The assessment team did not collect information on any drought year.

Due to time constraints, the assessment team could not assess the trends over time and in the specific years of conflict in the other districts.

Table 1. Monthly trends in livestock raids/theft during COVID-19 relative to a normal year, Abim District

Year	Year of reference	Location	Insecurity score	J	F	M	A	M	J	J	A	S	O	N	D	J (2021)	F (2021)	M (2021)	A (2021)
Good	2013/14—a normal year	Abim-Nyakwae-Bulla	0/20	0	0	0	0	0	0	0	0	0	0	0	0				
COVID-19	2020/2021—COVID-19	Abim-Nyakwae-Bulla	15/20	0	0	0	0	0	0	0	7	7	8	8	18	16	19	13	4

The figure of 20 in the insecurity score represents the highest level of insecurity in the area, e.g., before disarmament.

Methods used: a) proportional piling, with 20 stones representing the highest level of insecurity in the area, e.g., before disarmament; b) seasonal calendar, with 100 stones used to show the monthly pattern of insecurity in the different years.

HUNGER AND FOOD SECURITY

HUNGER

Hunger was a priority concern at the time of the follow-on assessment. Communities mentioned three main causes of the widespread hunger in the region (Table 2), with poor harvest in 2020[17] being the major cause in all the three districts. Loss of livestock to diseases and insecurity impacted Moroto District more than Amudat and Abim Districts. Poor access to food in the market was mainly related to increased food prices amid low purchasing power.

As explained by communities, the worst hunger they have ever experienced was in the drought of 1980:

> *"During that drought, we did not have energy even to greet someone. Instead of responding loudly to a greeting, someone just shows you his or her teeth. There were fewer newborns that year because people did not have energy to reproduce."* (FGD, Akwangagwel South village, Morulem sub-county, Abim District, 4.21.2021).

> *"In 1980, a person could dig a hole in the middle of the house, put sorghum in pots and to hide in that hole from neighbors and Karimojong raiders. Pots burst underground and sorghum germinated in the middle of the house. Everyone (those who had and those who did not have) remained the same."* (FGD member, Odolo East village, Morulem sub-county, Abim District, 4.17.2021)

> *"In 1980, people in the village scrambled for the little sorghum harvested—everything got finished immediately after harvest."* (FGD member, Odolo East village, Morulem sub-county, Abim District, 4.17.2021)

> *"In the drought of 1980, when you are happy, you do not laugh because you do not have the energy; you only clap your laps."* (FGD, Abim-Nyakwae-Geregere South, 4.23.2021)

Manifestations/impacts of lack of food (hunger) during COVID-19

Communities itemized the key manifestations[18] of hunger during COVID-19 as:

- Impact on health and nutrition—children became malnourished and susceptible to diseases such as scabies.
- Crime, and gender-based and domestic violence—this was characterized by children stealing food from the neighbors as well as family disagreements due to lack of food.
- Impact on social support systems—the traditional system of sharing of food between friends, relatives, and neighbors was affected, and there was reduced sharing of food.
- Impact on socio-cultural activities—traditional ceremonies such as marriages were postponed because of little or no sorghum for making local brew.

Due to time constraints, the assessment team could not compare these manifestations between the COVID-19 year and a drought year.

Table 2. Priority causes of hunger in the region

Cause	Rank			
	Abim District	Moroto District	Amudat District	Overall mean rank
Poor harvest in 2020	1	1	1	1
Poor access to food in the market	2	3	2	2.3
Loss of livestock to diseases and insecurity	3	2	3	2.7

Method: ranking used to show relative importance of the different causes of hunger during COVID-19. Rank 1 represented the most important while Rank 3 represented the least important cause.

[17] The poor harvest in 2020 was because of the impact of COVID-19 restrictions and other factors such as insecurity and a desert locust invasion.

[18] Communities emphasized manifestations that were verifiable, visible, and not easy to lie about.

Responses to lack of food (hunger) during COVID-19

Communities enumerated how they were managing or planning to manage the hunger situation, as shown in Table 3 below. The responses included the mobilization and use of crop, livestock, forest, and alternative/diversified livelihood resources to respond to hunger. Abim District (where farming is important) relied more on crop-based responses while Moroto (agro-pastoral) and Amudat (pastoral) Districts relied more on livestock-based responses. Responses based on forest resources and diversified livelihoods cut across all the districts/livelihood zones. As mentioned by communities, some of these response mechanisms, e.g., widespread consumption of cassava flour, widespread bartering of animals for cereals, consumption of wild fruits, reduced sharing of food, and migration to other areas for survival, are important signs of a looming food crisis.

Table 3. Community-level responses to hunger during COVID-19

Response mechanism	Abim District	Moroto District	Amudat District
Crops such as simsim, beans, millet, and sweet potatoes did well in some locations and provided relief from July 2020.	XX		
Increased consumption of sweet potatoes and cassava flour, yet they are less nutritious[19]	XX		
Bought cassava from Tesoland using income from casual labor in gardens, remittances from employed relatives, village savings and loans association (VSLA) loans, and income-generating activities such as making cassava chips	XX		
Fed on wild fruits (*Ekadweluae, Ekorete*) and leaves of local trees (*Ekorete*) amid scarcity due to deforestation—Moroto District. In Amudat, they fed on wild fruits (*Sokoria, Kadelwae, Oroo* (tamarind)) and leaves of wild trees (*Adwel, Amongo, Kadelwae, Sokoria, Soya*). In Abim, they fed on wild root tubers found on the mountains (*Omoodu*) that resemble cassava, *nyakauda* (a weed that resembles millet) and wild fruits (*Owelu, Thoo, Owii*).	XX	XX	XX
Gathered and sold wild fruits (Abim District—*thoon, oyado, olam, tugo, lango*, and *ekamongo*)	XX		
Sold charcoal and firewood amid the following challenges: insecurity, long distance to forest areas, deforestation, privatization of local trees,[20] and low prices		XX	
Sold livestock (goats, chicken, cattle) and livestock products (eggs) to buy food, despite lower prices of livestock and increased food prices	XX	XX	XX
Bartered animals for sorghum from outside[21]	XX		
Used income from aloe vera[22] despite lower prices for aloe vera and increased prices for food			XX

Continued on next page

[19] The widespread consumption of cassava flour in larger quantities is a sign of a looming food crisis.

[20] *"People have privatized local trees, especially those for fruits, edible leaves, and those fit for charcoal production. Conflict arises when you cut someone's tree or a tree on someone's garden"* (FGD, Lopur village, Nadunget sub-county, 3.16.2021).

[21] The widespread bartering of animals for cereals is a sign of a looming food crisis.

[22] A liquid is extracted after boiling, and it is sold at Uganda shilling (UGX) 15,000 for 10 liters.

Continued from previous page

Bought food using income from diversified livelihood activities, e.g., sale of stones (hard core), gravel, local brew, casual work[23]	XX[24]	XX	
Slaughtered an animal such as a goat and chicken for home consumption		XX	XX
Fed on milk because milk production was good because rain was relatively sufficient			XX
Some people moved to neighboring areas such as Acholi, Lango, and Teso regions for casual work in towns despite COVID-19-related movement restrictions.	XX	XX	
Sold a crop such as sorghum that fetched a high price in the market and used the money to buy foods that were cheap in the market but expensive in the village,[25] thereby taking advantage of differences in prices between the village and the market	XX		

Because of time constraints, the assessment team could not compare responses to hunger in the COVID-19 year and in a drought (bad) year.

Changes in the factors contributing to hunger at the time of the follow-on assessment relative to the time before and at the start of COVID-19

The 2020 assessment predicted an area-wide hunger crisis in the coming months if the following continue: market closures, restricted travel and rising costs of travel, reduced access to food and rising costs of food, decline in livelihood systems (livestock, crop, diversified), and reduced sharing of food.

Despite the presidential directive to lift the lockdown one year after COVID-19 restrictions, leading to re-opening of the economy (markets), hunger persisted. This persistence was mainly attributed to continued loss of livestock to insecurity and diseases, with insecurity also impacting negatively on farming. Milk production and availability were also affected. The 2020 crop harvest was low. Income from livestock and crop sales and from diversified sources remained low. Borrowing from village savings and loans associations was constrained by lack of cash caused by too much borrowing and stealing of saved cash by raiders/thieves. Parents were still constrained to feed the high proportion of school-going children who were still at home. Food prices were not yet to the level before COVID-19.

Nonetheless, the lifting of the lockdown led to: reduction in movement restrictions; increased availability of transport and a consequent reduction in the cost of transport; increased flow, availability, and access to food in the markets and a consequent reduction in prices of some foodstuffs; and increased sharing of food at community level. Alcohol consumption had increased further. Given that families still experienced food problems and coupled with alcohol consumption, family quarrels and break-ups were reported.

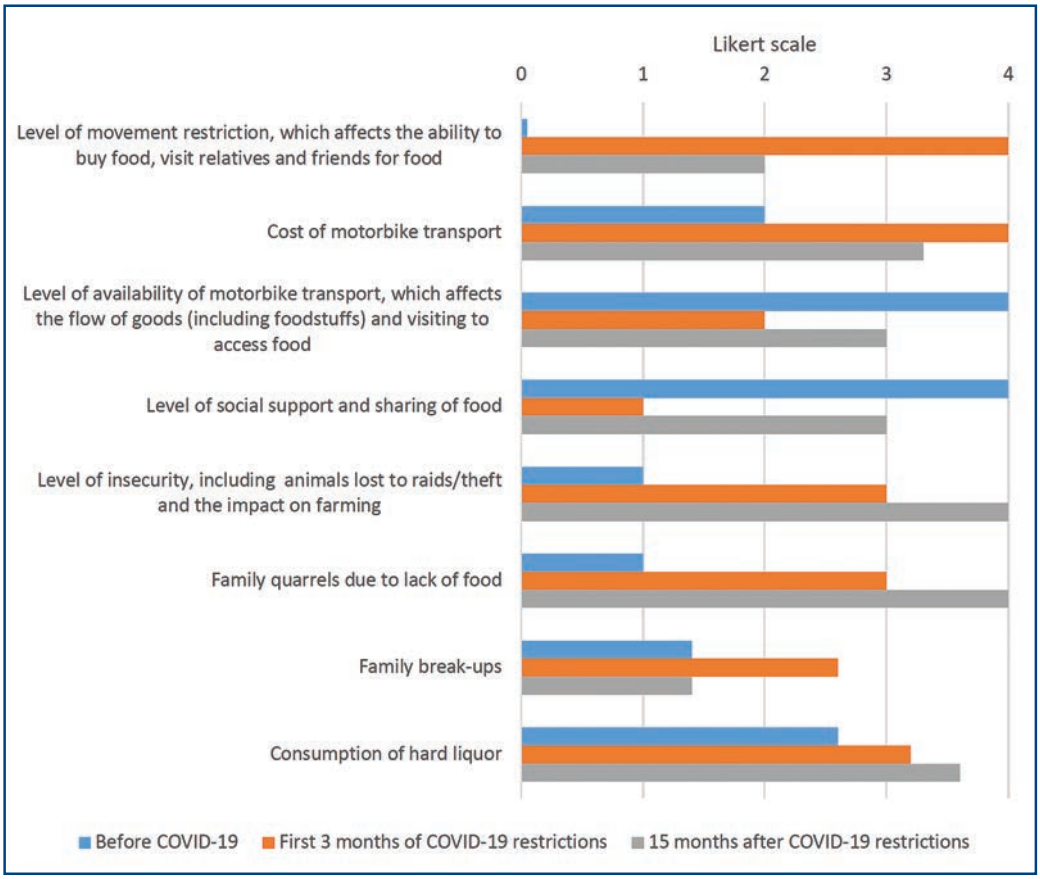
Changes in importance of the factors that contributed to the hunger situation at the time of follow-on assessment relative to the start of COVID-19 are shown in Figure 2 and Table 4.

[23] Casual work was scarce. Payment was also delayed or staggered and reduced. For instance, payment for fetching a 20-liter jerrican of water was reduced from UGX 400 to 200; payment for washing five basins of clothes was reduced from UGX 10,000 to 3,000–4,000; salary for baby sitting per month was reduced from UGX 15,000 to 5,000; and baby sitting plus cooking per month was reduced from UGX 30,000 to 10,000.

[24] Sources of income to buy food included sale of firewood and charcoal, remittances from relatives, casual work in gardens, livestock sales (goats, cattle, pigs, chicken), sale of bricks, sale of bamboo, VSLA (village savings and loans association) loans, sale of hard core (stones for construction).

[25] 500 g of beans was UGX 700 in the market but UGX 1,000 in the village.

Figure 2. Changes in Abim District in the factors related to movement, social support, security, family relationships, and alcohol consumption.



Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level; b) price data for motorbike transport; c) proportional piling, with 20 stones representing the highest level of family break-ups and of alcohol consumption.

Table 4. Changes in Abim and Amudat Districts in the factors related to livelihood systems

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Level of operation of livestock markets on designated market days	Abim-Oryeotene East-Abim	Open	Closed	Open
Level of operation of food markets	Abim-Oryeotene East-Abim	++++	++	++++
Food prices for 500 g of maize	Abim-Omoru West-Morulem	Uganda shilling (UGX) 500	UGX 1,500	UGX 1,000
Level of borrowing of loans from VSLAs	Abim-Awac-Baarliech	++++	-	+++
Level of insecurity (due to raids)	Amudat-Amudat-Kanarion	++	+++	++++
	Moroto-Rupa-Kalukalit	+	+++	++++

Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level; b) price data for maize.

FOOD SECURITY

LEVEL OF FOOD INSECURITY AT THE TIME OF FOLLOW-ON ASSESSMENT (APRIL/MAY 2021)

Attempts were made to establish the level of food insecurity at the time of follow-on assessment relative to the period before and at the start of COVID-19. The period before COVID-19 was defined as the harvest of 2019 while the start of COVID-19 was defined as 2–3 months after the onset of COVID-19, from March to May 2020. The level of food insecurity was estimated in terms of the proportion of the population who were food insecure vis-à-vis those who were food secure. In this regard, respondents were asked to divide 20 stones, representing the total population in an area, into proportions that represented the food-secure or -insecure people at different times.

The assessment revealed a higher level of food insecurity at the time of follow-on assessment in April/May 2021 compared to the same time last year at the start of COVID-19 (Figure 3). This higher level was mainly attributed to the poor harvest in 2020 compared to 2019. This finding documents the spillover effect of the poor harvest in 2020 on food security in 2021 and explains a higher food insecurity at the time of follow-on assessment in April/May 2021. Food insecurity in 2020/21 was also exacerbated by the presence of schoolchildren at home for longer periods than usual and the increased prices of food. Other factors that contributed to a persistently high level of food insecurity despite improved availability and access to food in the markets include continued loss of livestock to raids and diseases, impact of insecurity/conflict on farming, and the low purchasing power attributed to the main sources of income that were still struggling to recover post-lockdown.

Communities reported that 2019 was a good year and they had a good harvest that cushioned them against the food problems experienced at the start of COVID-19. In 2019, people with financial capacity to support farming activities, such as businesspeople[26] and those with many animals,[27] had an exceptional bumper harvest. Although it did not strongly effect the situation, insecurity existed in 2019 and restricted access to distant gardens in some places. Despite the good year, a small proportion of people who did not have a good harvest, because they could not safely access their gardens, were the families hit by increased food insecurity in 2020/21. Other groups that were severely affected included the alcoholics, the idle, elderly people who were not supported by relatives, and people who suffered from chronic illnesses such as tuberculosis and brucellosis. Also affected were the poor who cultivated small pieces of land because they did not have animals to sell to pay for the hiring of a tractor or an ox plough and struggled to cultivate with hand hoes.

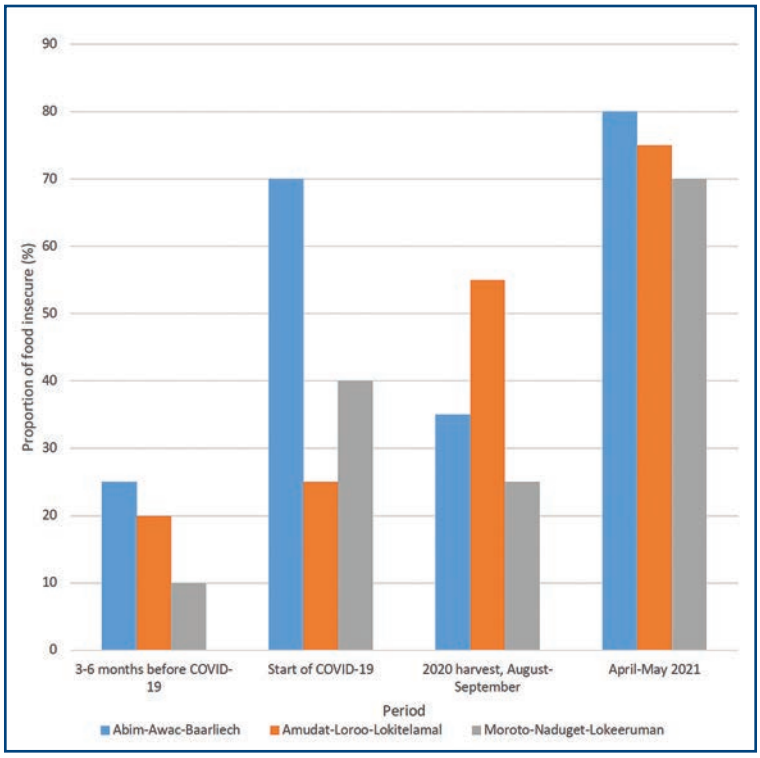


Figure 3. Level of food insecurity at the time of follow-on assessment relative to the time before and at the onset of COVID-19.

Method: proportional piling, with 20 stones representing the total population in an area and divided into a population who were food secure and the population who were food insecure at a certain point in time of the year just before COVID-19, during COVID-19, and at the time of follow-on assessment.

[26] These include motorbike owners (who do transport business), livestock traders, crop traders.

[27] Can sell animals and hire a tractor, ox-ploughs, and laborers.

CHARACTERISTICS OF THE HARVEST AND FOOD MARKETS THAT DETERMINE FOOD SECURITY AS PERCEIVED BY COMMUNITIES

Communities enumerated the following factors that determined the level of food security in a community and at household level:

- The amount of own harvest/crop yield;
- The proportion of harvest or own-grown cereals that is set aside for home consumption relative to other uses, and the period of time that home-grown produce will feed the family;
- The level of demand for purchased foods;
- Availability in the local market of cereals for purchase when own-grown cereal stocks are finished;
- The flow of food and other essential commodities to local markets;
- Access to food in the local markets;
- Prices of cereals purchased when own-grown cereal stocks are depleted;
- Price of salt as a special indicator of food crisis;
- The level of social support and sharing of food.

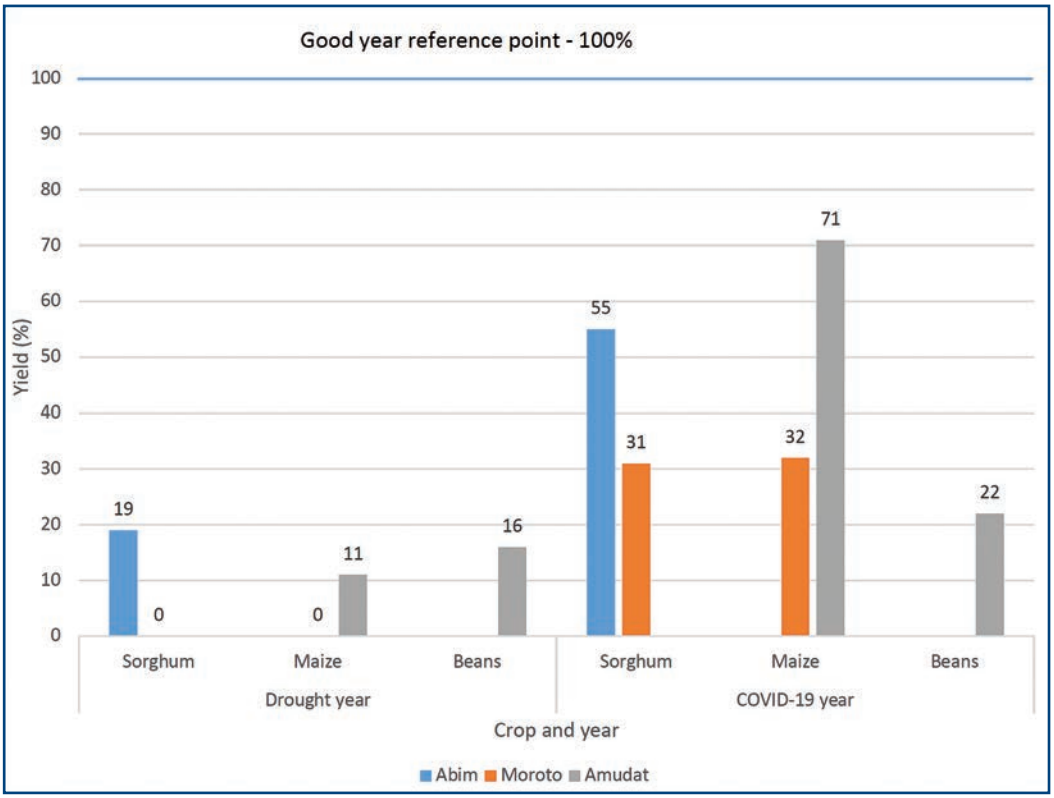
The assessment team examined these elements in two ways:

- Their status in the COVID-19 year relative to a normal and a drought year;
- Their status at the time of follow-on assessment relative to the time just before and at start of COVID-19, and the factors contributing to these changes.

The amount and use of own harvest/crop yield in the COVID-19 year relative to a normal and a drought year

Figure 4 shows the percentage yields of sorghum (31–55%), maize (39–71%), and beans (22%) in the COVID-19 year relative to a normal year, with Moroto District performing poorly in all crops compared to Abim and Amudat Districts. Generally, the yields in the COVID-19 year (2020) were lower than in a normal year but higher than that of a drought year. The lower yield indicates the possibility of a food crisis in 2021.

Figure 4. The amount of own harvest/crop yield in the COVID-19 year relative to a normal and a drought year.



Method: proportional piling, with 100 stones used to show the amount of own harvest/total yield of a crop in a normal/good year. The increase or decrease of own harvest during a drought year and the COVID-19 year was shown by subtracting stones from (to show decrease) or adding stones to (to show increase) the 100 stones.

Different crops have different uses. In a normal year in all the districts, maize and beans are produced both for home consumption and for selling. Sorghum has three main uses: home consumption, selling, and brewing for traditional ceremonies. The income from sales is partly used to pay for hired labor in the gardens and at home. Moroto District leads in the use of sorghum for brewing, which accounts for 56% of the total harvest. Overall, the most important use for maize, sorghum, and beans is home consumption.

In years of food shortages, people adjust the number of ways they use farm produce and the proportion of the yield allocated to each use, with more severe adjustments during drought compared to COVID-19. In Abim District, for instance, the various ways that sorghum could be used were reduced from six in a normal year to five during COVID-19 and to two during drought. The priority uses of sorghum during COVID-19 and drought were home consumption and support to friends and relatives. The priority given to support to friends and relatives during COVID-19 and drought indicates the value that communities attached to social support and reciprocity at times of crises.

At times of low yields, more of the harvest was allocated to home consumption than to other uses. In Abim District, for example, the proportion of sorghum yield allocated to home consumption increased from 48% in a normal year to 71% during COVID-19 and to 90% during drought. In Amudat District, 30%, 34%, and 100% of harvested maize was allocated to home consumption in a normal, COVID-19, and drought year, respectively. During COVID-19, a much higher proportion of harvest was also allocated to home consumption because of the presence of schoolchildren at home for longer than usual (Figures 5a to 5e), albeit being insufficient.

The shifts in the crop use patterns during COVID-19 varied by district. For example, communities in Abim District significantly reduced the amounts of sorghum brewed for traditional ceremonies and other purposes while Moroto District still allocated some sorghum for brewing. As a result, stocks of sorghum remained longer and prevented severe hunger in Abim communities compared to Moroto District.

Despite the fact that a greater proportion of the harvest went to home consumption during COVID-19 (2020/2021) and drought years, the amounts were insufficient and could only last a few months after harvest (it took a household two to six months during COVID-19, and one to three months during drought to deplete their stock of crops), instead of about eight months in a normal year. Also, in a normal year, more abundant milk supplies from livestock reduces the dependence on crops for food, which reduces the amount of crop yield allocated to home consumption.

Figure 5a. Abim—sorghum uses (own harvest).

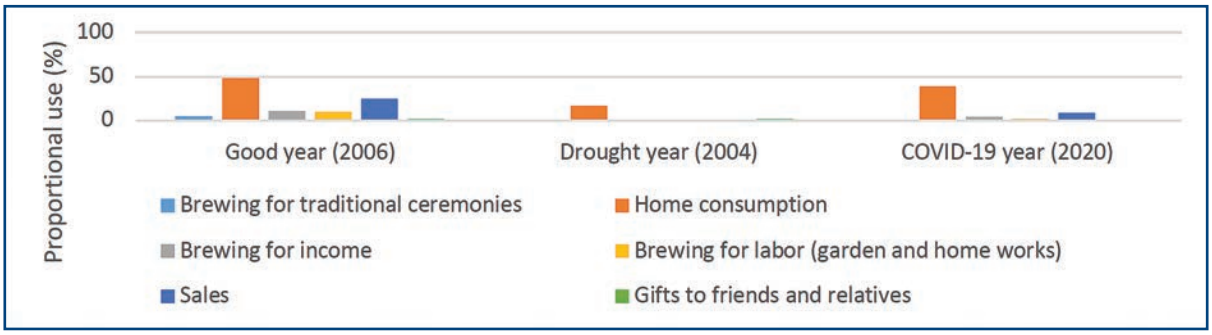
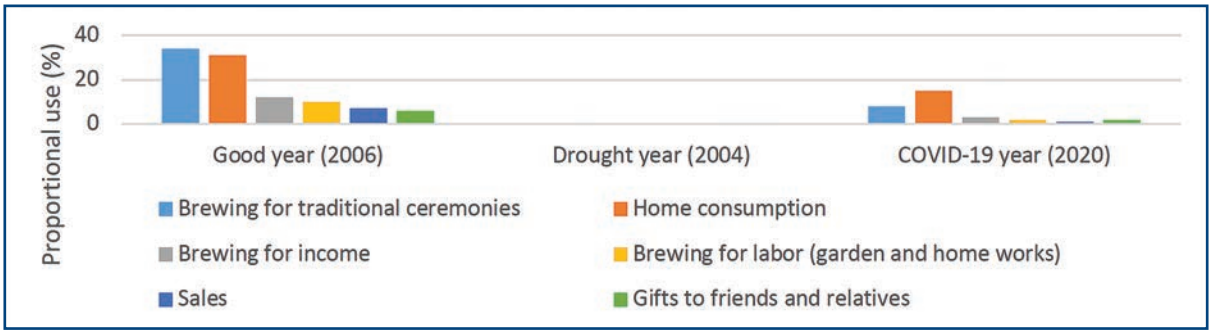


Figure 5b. Moroto—sorghum uses (own harvest).



Notes:

- Brewing for traditional ceremonies—estimates include the amount that is used in family ceremonies and what is contributed to neighbors and relatives for traditional ceremonies.
- Brewing for income—income is used to buy foodstuffs and other household items and to pay for hired labor; it also reduces the need to sell livestock and thereby encourages herd growth.
- Brewing for labor—home work includes construction of huts and cutting local construction materials.
- Sales—income used for school fees and medical care.

The period of time that household farm production covers home food consumption during COVID-19 versus good and drought years

In Amudat District, in a normal year, the amount of maize reserved for home consumption is running down in most households by May, eight months after harvest, with granaries becoming completely empty just before the next harvest in October. Consequently, most households will have insufficient food for four months between June and September. This period is described as the crop-related hunger period. In a drought year, the crop-related hunger period increases from four months to eleven months. During COVID-19, the crop-related hunger period increased to six months, i.e., higher than that of a normal year but lower than a drought year. During COVID-19, a more strategic and sparing use of the harvest was necessary

Figure 5c. Moroto—maize uses (own harvest).

Figure 5d. Amudat—maize uses (own harvest).

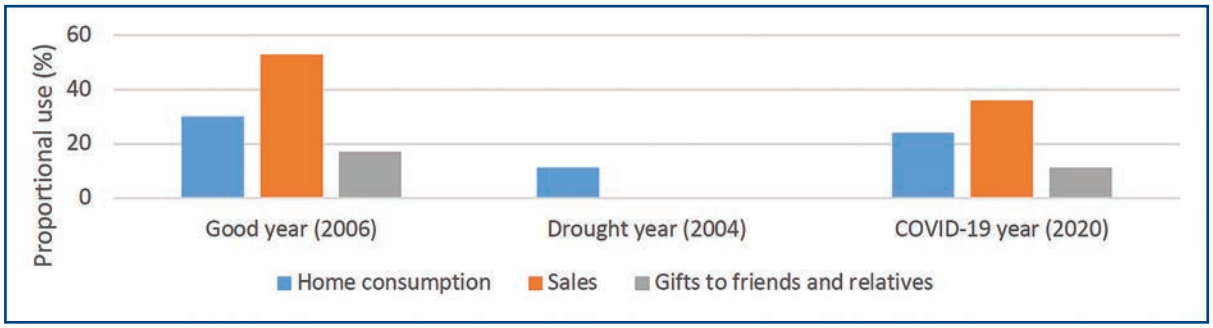
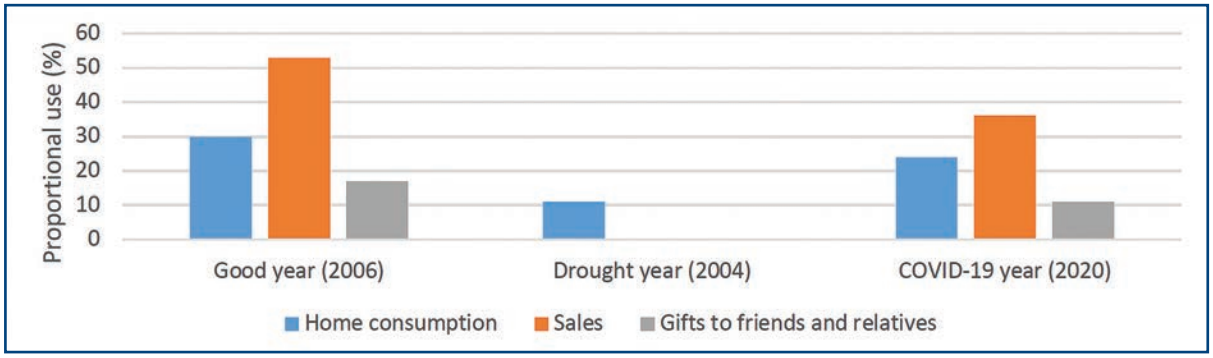


Figure 5e. Amudat—bean uses (own harvest).



Method: proportional piling, with the stones that represented the amount of own harvest of a crop in a particular year (reference: normal/good year, drought year, COVID-19 year) distributed to the different uses of harvest to show the relative use in different locations.

for the stocks to last up to March 2021. See Annexes 1 and 2 for detailed annual patterns of availability of cereals reserved for home consumption.

During COVID-19, there was variation between districts/locations, and between crops with regard to the length of the crop-related hunger period. This variation was mainly because of the differences in yield levels and in the uses that families made of their harvests. In Moroto District, own-grown sorghum that was reserved for home consumption lasted 2–3 months, leaving a 9–10 month hunger period. Abim District had a shorter hunger period of 6 months because of a higher sorghum yield, but they also reserved more of their harvest for home consumption compared to Moroto District. Limited crop alternatives in Moroto District exacerbated starvation during the hunger period. See Figure 6.

Demand for purchased foods

Most-preferred grain

The demand for purchased foods rises as stocks of own-grown sorghum and maize decline. Although other foods[28] are also purchased, people in rural areas prefer to buy maize. This practice cuts across all the surveyed districts. Communities gave the following reasons for their preference for maize over other cereals:

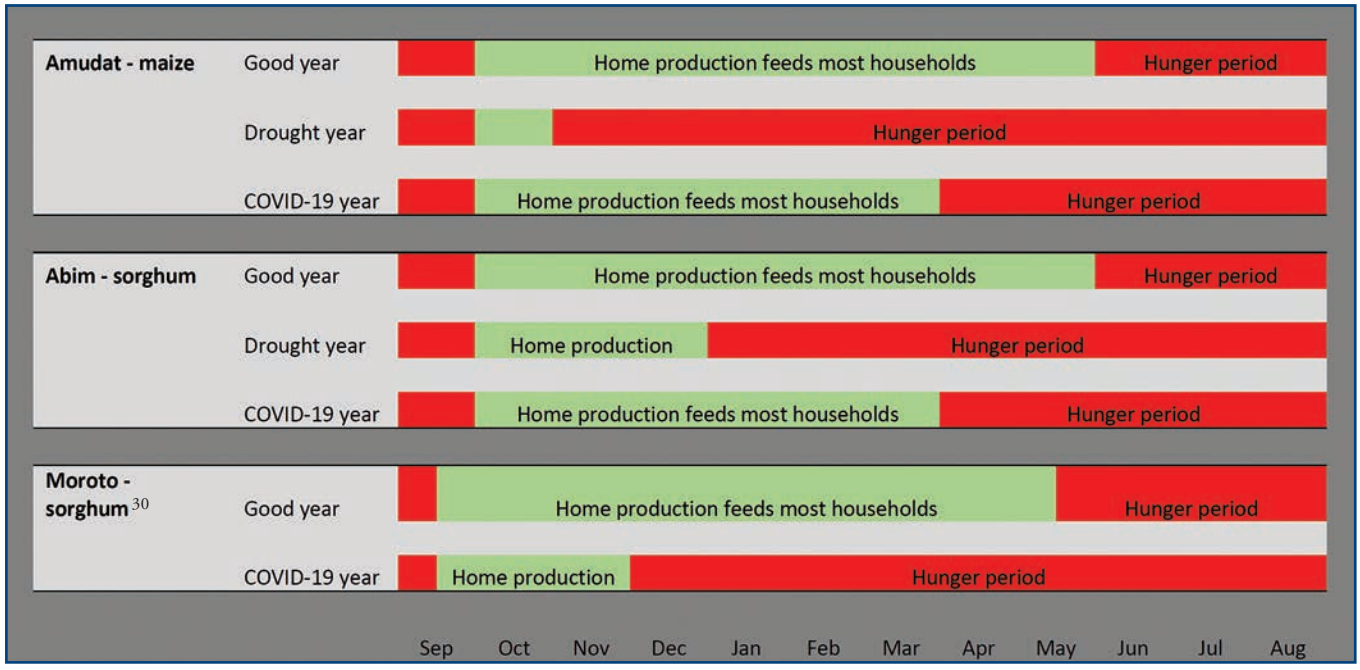
- You can prepare a variety of food combinations with maize grain and maize flour; for example, maize grain and beans (*enyoyo/ekither*), maize bread and beans, maize bread and vegetables, among others. Maize can also be eaten fresh, unlike some varieties of sorghum, especially the bitter red type. Another way to consume maize alone is to grind it partially to smaller grains (eteete), cook them, and eat them.

- When needed, maize is usually more available in the market than other grains such as sorghum. Some regions outside Karamoja grow short-maturing varieties of maize two times a year.

- Maize bread is palatable and nutritious for children, who can eat maize bread without an accompaniment, unlike sorghum bread, which is tasteless. Some varieties of sorghum are bitter.[29] Children do not like sorghum bread when prepared alone because of the red color; sorghum bread also causes diarrhea if children consume it alone. In the past, people preferred sorghum because it was locally grown and available. Milk was in abundance as an accompaniment or could be mixed with sorghum. Nowadays, milk is scarce, and people have shifted to maize. This shift explains how a reduction in livestock numbers and the availability of milk can influence a shift in diet preference or adoption of new diets, especially for children.

- In places like Abim and Amudat Districts where soils are suitable for its cultivation, people are used to consuming maize because they grow it in abundance.

Figure 6. The period of time that household farm production covers home food consumption.



[28] Other foods include cassava (fresh and flour), sweet potatoes (fresh and dried), sorghum, millet, beans, rice, cooking oil, salt, vegetables.

[29] Growing of the bitter variety of sorghum is a strategy to reduce losses due to birds.

[30] No data for the drought year.

- Where it is grown, maize matures and is harvested earlier than sorghum.

Despite the increasing preference for maize, in some places in Moroto District,[31] there is a mismatch between the sorghum that people grow abundantly and the maize that they prefer to buy when own-grown cereals are finished. Reasons for this apparent contradiction include:

- Maize is less resistant to drier conditions compared to sorghum.
- When an animal eats a maize plant at an early stage, the plant dies. However, sorghum still regenerates.
- Maize is prone to theft, unlike sorghum.
- Some areas and their soils are not fit for maize production.

Because of the above constraints, communities said that they would continue growing sorghum, with the plan to sell some of it and buy maize, and because sorghum has other uses such as production of local brew for traditional ceremonies.

In the absence of maize and sorghum, people turn mainly to cassava flour (*ediawut*) and dry sweet potatoes (*ngakokoi*). These are cheaper food alternatives, but they have been associated with some problems:

- Cassava tubers are palatable but cassava flour is not; you need to mix it with either maize or sorghum flour.
- Cassava flour cannot be eaten without an accompaniment.
- Cassava flour and dry sweet potatoes cause diarrhea and stomach pains in children.
- Cassava flour and sweet potatoes are quickly digested and do not stay in the stomach for long.
- Children may eat cassava just to survive but it does not prevent malnutrition.

The level of demand for purchased maize in a COVID-19 year relative to a normal and drought year

During the COVID-19 year, the demand for purchased maize increased by 75–90% relative to a normal year, but not to levels experienced in a drought year, when increases of 200–265% are common. A much higher demand for maize during COVID-19 was noted in Moroto District compared to other districts (Table 5). The COVID-19 period was characterized by a poor harvest in all the districts, but Moroto District experienced a much lower total harvest than other districts. This lower harvest was mainly attributed to insecurity, which especially affected Moroto District, and smaller cultivated areas. Even Amudat District, which was predominantly pastoralist and has only recently started farming, has overtaken Moroto District in terms of the area of land cultivated.

The higher demand during COVID-19 for maize and other purchased foods was mainly attributed to schoolchildren being at home for periods longer than usual and the poor harvest in 2020.

In the drought years, the much higher demand for maize and other purchased foods was attributed to the following factors:

- Zero or very poor harvests due to poor or no rains;
- The effect of drought on milk production;
- Less diversified crop production prior to the drought;
- High levels of hunger and malnutrition.

During COVID-19, the availability of maize in the market could not satisfy the demand. This was similar to drought years, for instance in the drought of 1980, when people trekked to the neighboring regions (Acholi, Lango, and Teso) to buy food. Even where markets were open, food was scarce and high priced.

The different sources of income to purchase food included loans from the VSLAs, livestock sales, sale of bamboo (only in Abim), casual work in gardens, and remittances from relatives.

[31] Unlike Abim and Amudat Districts that largely grow maize.

Table 5. The level of demand for purchased maize in Amudat, Abim, and Moroto Districts in the COVID-19 year relative to a good and drought year

District	No. of locations interviewed (FGDs)	Good year		Drought year		COVID-19 year		% increase in demand in the COVID -19 year relative to a normal year	% increase in demand in a drought year relative to a normal year
		Year(s) of reference	Average level of demand (%)	Year(s) of reference	Average level of demand (%)	Year(s) of reference	Average level of demand (%)		
Amudat	1		100	1980	300	2020/2021	175	+ 75	+ 200
Abim	1	2017	100	1980	365	2020/2021	175	+ 75	+ 265
Moroto	3	*Apa Mulele/ Ekutelek/ Ekaru Alobesen*	100	*Lorionokoriot/ Ekaru edepere ngakoyo/ Ekaru agielere ngakoyo*	315	2020/2021	190	+ 90	+ 215

Method: proportional piling, with 20 stones used to represent the level of demand for purchased maize in a normal/good year. The increase or decrease in the level of demand during a drought year and the COVID-19 year was shown by subtracting from (to show decrease) or adding to (to show increase) the 20 stones.

The period and peaks in demand for purchased maize during COVID-19 relative to a normal and drought year

The assessment revealed differences between districts in the number of months that purchased maize was in demand (Table 6) and in the peak demand months (Figure 7). The results show that, in a normal year, agro-pastoralist areas experience longer periods of demand for purchased maize compared to agricultural areas. For instance, in Moroto District (agro-pastoralist) demand for purchased maize lasted six months, followed by five months in Amudat District (pastoralist), and three months in Abim District (agriculturalist).

Table 6. Periods of peak demand for purchased maize

Year	Year of reference	District	Average level of demand (%)	Number of months that purchased maize was in demand	Peak demand months
Good/normal		Amudat (pastoral)	100	5 months, May to September	June and July
	2017	Abim (agricultural)	100	3 months: March, June, and December	March, June, December
	Apa Mulele/ Ekutelek/ Ekaru alobesen	Moroto (agro-pastoral)	100	6 months: January to June	April and May
Drought	1980	Amudat	300	9 months: January to September	March to June
	1980	Abim	365	6 months: March to August	March to June
	Lorionokoriot/ Ekaru edepere ngakoyo/Ekaru agielere ngakoyo	Moroto	315	8 months: January to August	March to June

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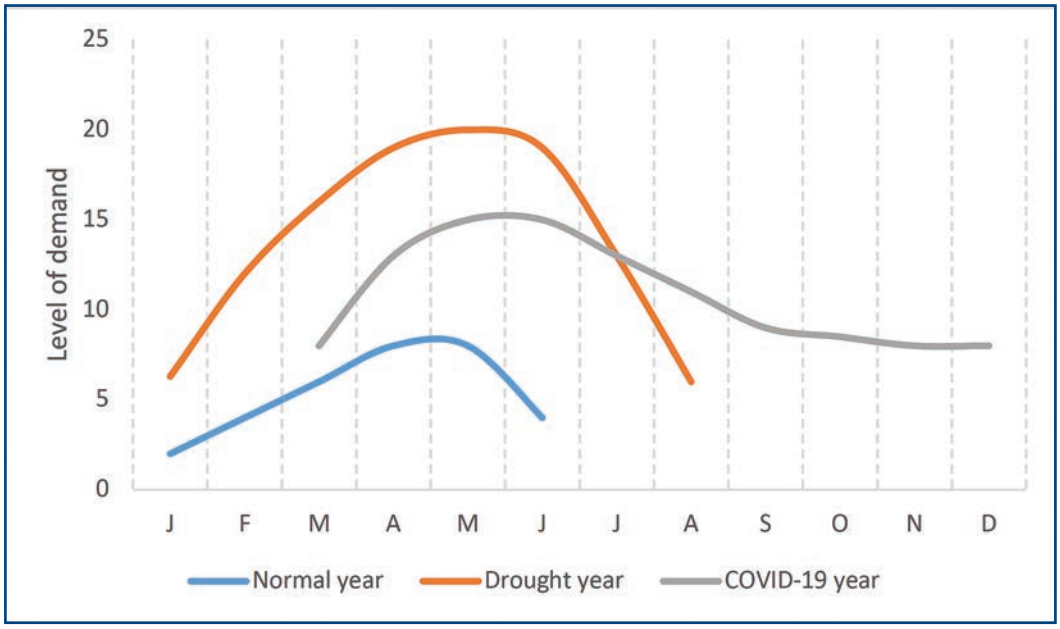
COVID-19	2020	Amudat	175	6 months: April to September	June to September
	2020	Abim	175	10 months: March to December	April to August
	2020	Moroto	190	10 months: March to December	April to June

Method: monthly calendar, with the number of stones that represented the level of demand for purchased maize in a particular year (reference: normal/good year, drought year, COVID-19 year) distributed by community members to the 12 months of the year to show the level of demand in the different months of the year (including peak demand months) and the number of months that purchased maize was in demand in the different locations.

Figure 7. Maize demand trends.



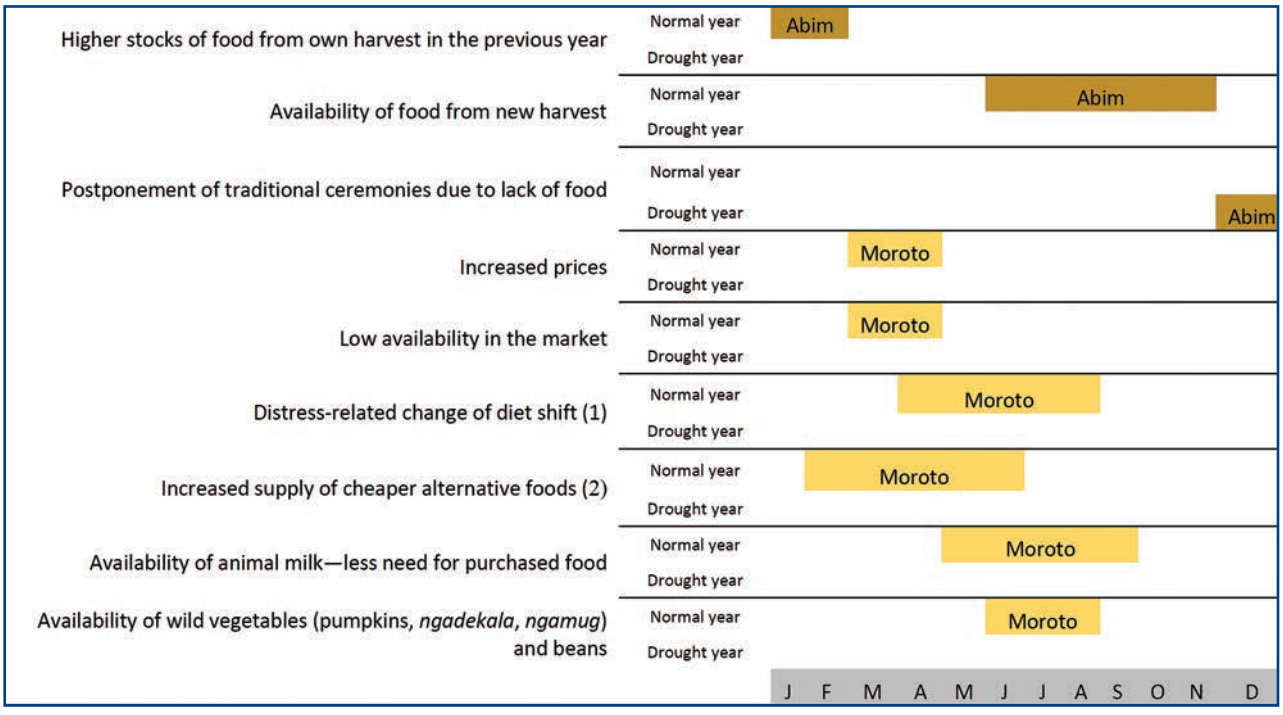
The peak demand times of the year also differ by district and agroecological zone. In Moroto District, demand peaks in the early months of the year (April/May), while Amudat District experiences peaks in the middle of the year (June/July). In Abim District, demand peaks in three separate months (March, June, and December) related to the times of the year when schools reopen and parents purchase maize and hand it to schools to support the feeding of their school-going children (i.e., community-led school feeding program). See Figure 8 for more reasons for peaks in a normal year.

In a drought year, the period of demand and the peak times of the year increase in all the districts. Compared to a normal year, the demand period in Amudat increases from five to nine months; in Abim from three to six months, and in Moroto from six to eight months. Figure 8 provides reasons for a higher maize demand and peaks during drought while Figure 9 provides reasons for a reduced maize demand in a normal and drought year.

During COVID-19, the periods of peak demand for purchased maize were longer than in a drought year; in Moroto District, 10 months compared to 8 months. However, the amounts of maize purchased in a drought year were said by communities to be much higher than in the COVID-19 year. During COVID-19, people were buying maize to stock enough food in preparation for the possible closure of markets if COVID-19 persisted and to prepare for the elections of 2021. The other reasons were schoolchildren who needed to be fed because they were not attending school, and the poor harvest in 2020, among other reasons (see Figure 10). Because of limited income, some people resorted to the purchase of cheaper but less nutritious foods such as cassava flour and dried sweet potatoes.

Figure 8. Reasons for the increased purchase of maize in a normal and drought year in Abim District.

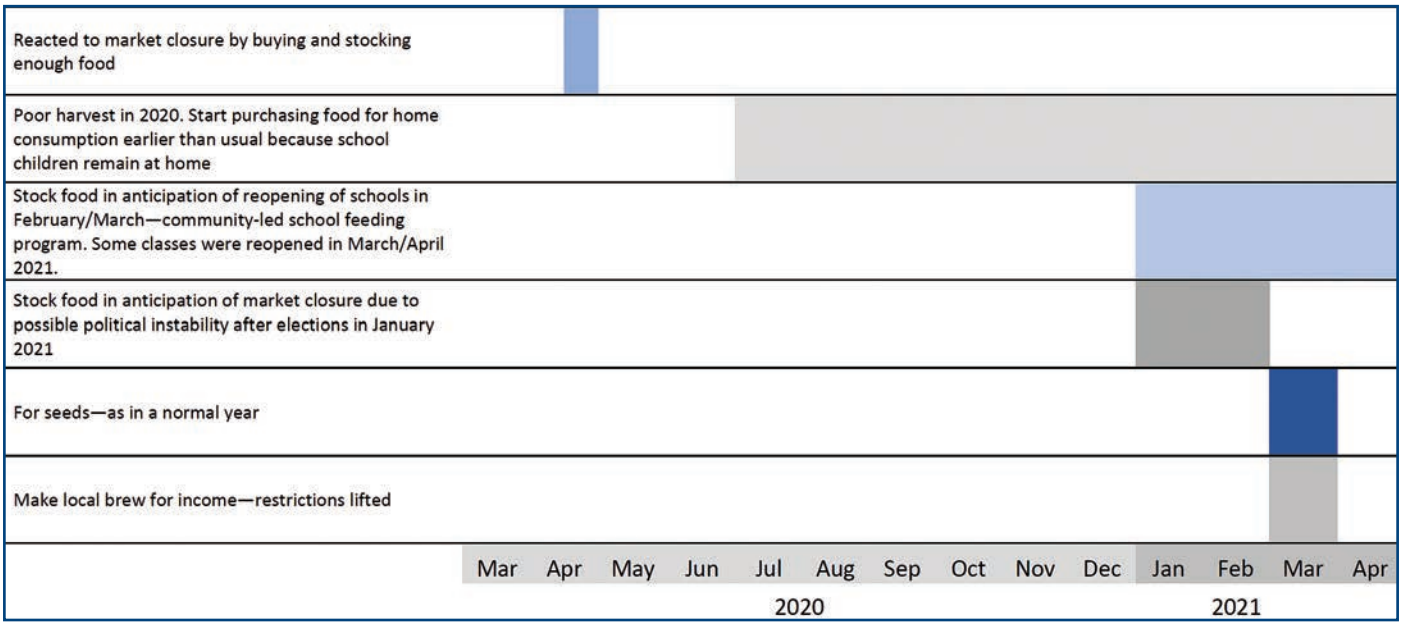
Figure 9. Reasons for reduced demand for purchased maize in a normal and drought year in Abim and Moroto Districts.



1. To dry sweet potatoes, cassava flour, and sorghum from outside that have lower prices—for food and brewing. Cannot consume cassava flour alone (tasteless) but it is eaten in combination with sorghum.

2. For example: dry sweet potatoes (*ngakokoi*), cassava flour (*Ediawut*), and sorghum from outside (*Ekabir*).

Figure 10. Reasons for the increased purchase of maize amid low purchasing power during COVID-19 in Abim District.



At the start of COVID-19, the food insecurity situation was cushioned by a spillover of the good harvest in 2019. The higher food insecurity and the consequent higher demand for purchased foods in 2021 mainly resulted from the poor harvest in 2020 and loss of livestock to raids/thefts.

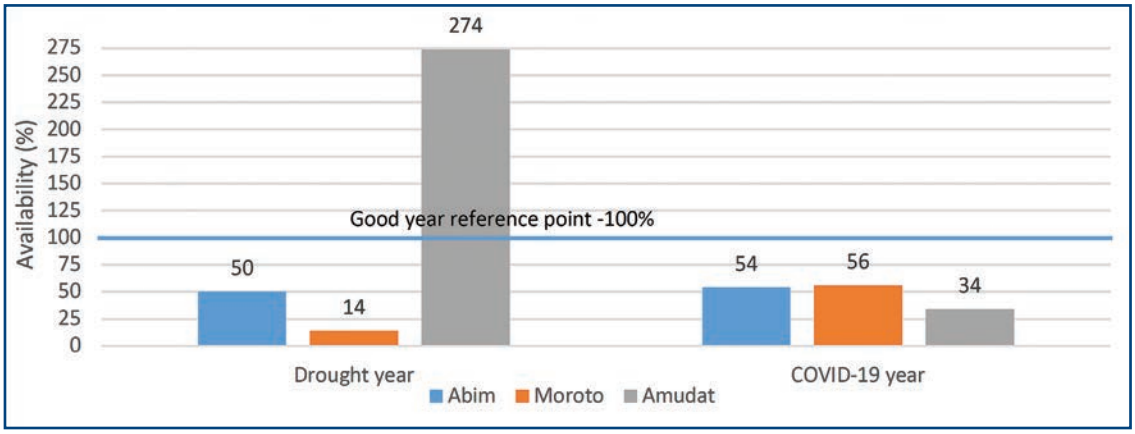
Availability of food in the market

Communities explained that the availability in the market of the different types of food varies by time. Thus, an objective analysis requires a commodity-specific approach. In this analysis, we examined maize, which is in high demand.

Comparing three decades ago and now (2021), there is a general increase in the local availability of food and other essential commodities in the local markets. This increase was attributed mainly to improved road and transport infrastructure, and establishment of markets. Further back in time, especially during the drought of 1980, due to lack of local markets, people walked to the neighboring areas such as Teso, Lango, and Acholi regions to buy food amid insecurity.

During COVID-19, on average, availability of maize in the market decreased (i.e., 48%) (Figure 11). This decrease was generally attributed to movement restrictions, the attendant bribes to the police at the roadblocks, and the poor harvest in 2020. The decrease in supplies was much higher in Amudat compared to Abim and Moroto Districts. The cross-border supplies from Kenya to Amudat were highly restricted and traders turned to the Ugandan market, which was more challenging because of poor roads. Poor roads also affected supplies to Abim District. The supplies to Moroto District were better because of the tarmac road.

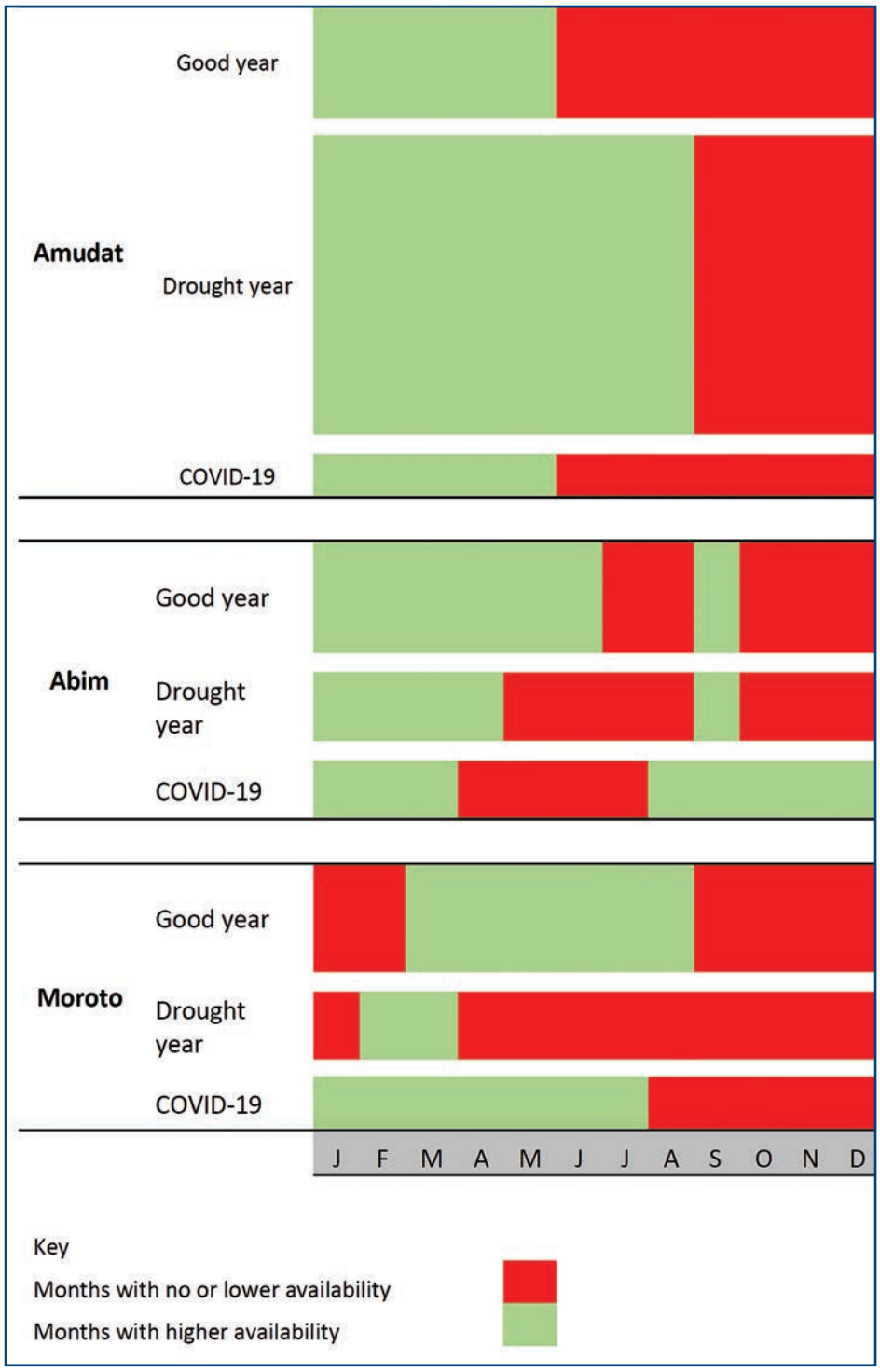
Figure 11. The level of availability of maize for purchase.



Method: Proportional piling, with 50 stones used to represent the level of availability of maize in the market in a normal/good year. The increase or decrease in the level of availability during a drought year and the COVID-19 year was shown by subtracting from (to show decrease) or adding to (to show increase) the 50 stones.

During a drought year, Amudat District experienced an exceptionally high availability of maize in the market, an increase of 174% above supplies in a normal year, while Abim and Moroto Districts experienced a decrease in supplies (Figure 11). Amudat District received good supplies of maize from Kenya. Despite the decrease, Abim District could easily get maize supplies from the neighboring Acholi, Lango, and Teso Districts. Moroto

Figure 12. Periods of lower and higher availability of maize in the market.



Methods used: a) proportional piling, with 50 stones used to represent the level of availability of maize in the market in a normal/good year. The increase or decrease in the level of availability during a drought year and the COVID-19 year was shown by subtracting from (to show decrease) or adding to (to show increase) the 50 stones; b) monthly calendar, with the number of stones that represented the level of availability of maize in the market in a particular year (reference: normal/good year, drought year, COVID-19 year) distributed by community members to the 12 months of the year to show the level of availability in the different months of the year (including peak availability months) and the number of months that maize was available in the different locations.

District was said to be too far from maize production areas within and outside Uganda, which explains the much lower supply compared to Abim and Amudat Districts.

In 2020 during COVID-19, people experienced a 9-month period from April to December 2020 of low maize availability in the market compared to a normal year in which maize is typically unavailable for 8 months, from June to February. In a drought year, however, maize is generally unavailable for an even longer 10-month period, from April to December/January (Figure 12).

In a normal year, lower availability of maize in the market was mainly caused by reduced demand, not supply issues. Conversely, during COVID-19 and drought, the low availability was mainly due to reduced supplies despite higher demand because of hunger. COVID-19 restrictions on movement and a poor harvest in 2020 mainly affected supply during COVID-19, while in a drought year, reduced supplies are mainly due to poor harvests caused by poor rains and other production challenges such as pests and scarcity of seeds. During drought, supply was also affected by poor harvest in the neighboring regions such as Acholi, Lango, and Teso regions and more generally in Uganda as a whole because maize is susceptible to dry conditions. See Table 7 for a detailed account of reasons for variation in availability of maize in the local markets in a normal year.

Table 7. Reasons for variation in the market availability of maize in Moroto District in a normal year

	J	F	M	A	M	J	J	A	S	O	N	D	J (2021)	F (2021)	M (2021)	A (2021)
Reasons for lower or no availability (normal year)																
High availability of locally grown cereals (from own harvest) for home use, so low demand for purchased cereals	XX					XX	XX	XX	XX	XX	XX	XX				
Externally supplied cereals not ready for harvest	XX															
Reasons for higher or increased availability (normal year)																
Increased supply from outside Karamoja		XX														
Declining stocks of own-produced cereals		XX														
Increased demand for home consumption (cereals)			XX	XX												
Increased demand for brewing (cereals)			XX	XX												
Food (cereals) trucks come up to the villages				XX	XX											
Lower prices due to increased supply				XX	XX	XX	XX	XX								

Method: semi-structured interviews following proportional piling exercises in section on availability of food in the market. The aim was to capture reasons for variation in the availability of food in the market in the different months of the year.

In Abim District (created in 2005/6), other issues such as land and border disputes with neighboring communities further reduced the availability of food in the local markets during the drought of 2016 and 2018. Border disputes included Agago vs. Abim Districts; Lango vs. Awac (Abim District); Lango vs. Lotuke (Abim District); Teso vs. Kobulin-Nyakwae (Abim District); Napak vs. Nyarkidi (people of Napak claiming Nyarkidi in Abim); Kotido vs. Chamkok (Abim District); Bokora game reserve corridor (game reserve annexed part of the land in Nyakwae in Abim District to the game reserve). Additionally, bandits from neighboring communities laid road ambushes and looted trucks that carried food and other commodities.

During COVID-19, the reduced availability of maize started in April 2020 due to restricted supply, a pattern similar to that in a drought year. In a normal year, depressed availability begins later in the year in July/August and is mainly due to lower demand. Other reasons for reduced availability of maize during COVID-19 include a) closure of markets; b) arrest of motorbike operators and truck drivers; c) transport/travel/movement restrictions; d) poor harvest in 2020 due to the impact of COVID-19 restrictions and non-COVID-19 factors such as insecurity, desert locusts, floods, and worms; e) increase in food prices at the source.

It was difficult to distinguish clearly the months that locally produced maize is mainly available in the market or overlaps with the availability of maize supplied from outside. However, some attempts to clarify this issue in Amudat District (Nakapelo village, Amudat sub-county) produced the following information:

- Locally produced maize is in the market from January to May; high supply of maize from outside is seen between June and July, and drops in August and September.
- In a normal year, less maize comes from outside (17%) because most households have enough stocks from the previous harvest.
- In a drought year, what comes from outside is more (67%) than what is supplied from within (33%).
- During COVID-19, the little maize that was in the market (70% of the amounts locally supplied in a normal year) was mainly from within. COVID-19 containment measures restricted supply of maize from outside.

In the drought year, increased availability of cassava flour (*Ediawut*) and dry sweet potatoes (*Ngakokoi*) compensated for the reduced availability of maize in the local markets. Despite being a cheaper alternative during times of crises, cassava flour and dry sweet potatoes were faulted for the following problems: not nutritious and does not reduce malnutrition; causes constipation and diarrhea in children if consumed alone; easily digested and has to be eaten frequently and thus purchased in bulk.

The relationship between the availability of own-grown cereal reserved for home consumption, maize demand, and prices in Amudat District

Figure 13 shows the relationship between the availability of own-grown cereal reserved for home consumption and demand for purchased maize in Amudat District in a good, drought, and COVID-19 year. Irrespective of the year, the demand for purchased maize rises as stocks of own-grown maize set aside for home consumption reduce. The increase in demand for purchased maize coincides with a reduction in market supply (availability) and increasing prices (Figure 14). See section on prices of purchased maize (Pg 50-52) for details on the behavior of maize prices in a good, drought, and COVID-19 year (Figure 16, 17, and 18). See Annex 3 for actual prices of maize in the different years.

Factors affecting the availability of purchased maize at the time of follow-on assessment relative to the start of COVID-19

The 2020 COVID-19 assessment had predicted that a persistently high cost of transport and paying of bribes en route would greatly affect the flow and availability of food and other essential commodities in the coming months. However, during the follow-on assessment, the flow and availability of food and other commodities had increased. This increase was due to the lifting of the lockdown that led to an increase in the availability of transport and a reduction in the cost of transport. Nonetheless, the improvement in supply and the contributing factors had not fully returned to the level before COVID-19. In addition, the community's purchasing power was still low and was a major hindrance to acquisition of food. Other factors that impacted the flow and availability of food during the follow-on assessment include the price of maize at the source, transport cost (truck or motorbike hire) from the source to destination, and police bribes en route. See Table 8.

Figure 13. Availability of own maize and demand for purchased maize.

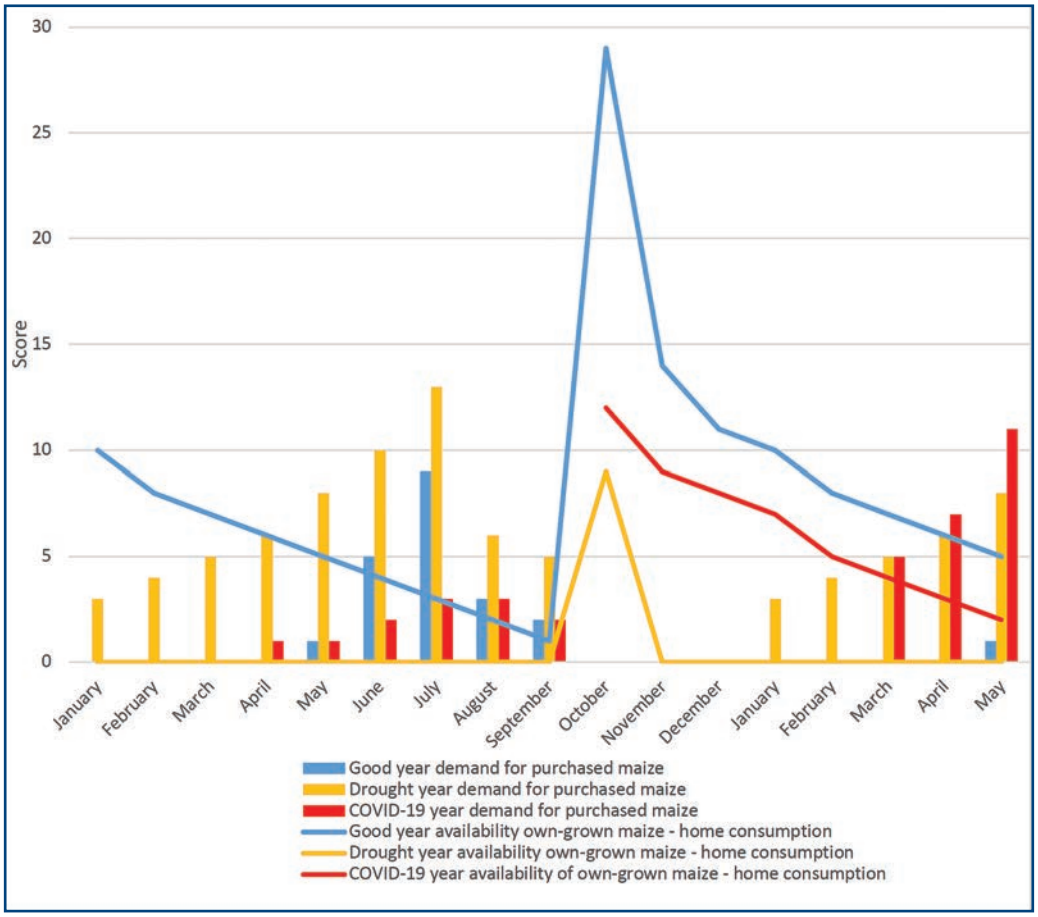


Figure 14. Maize market availability and price.

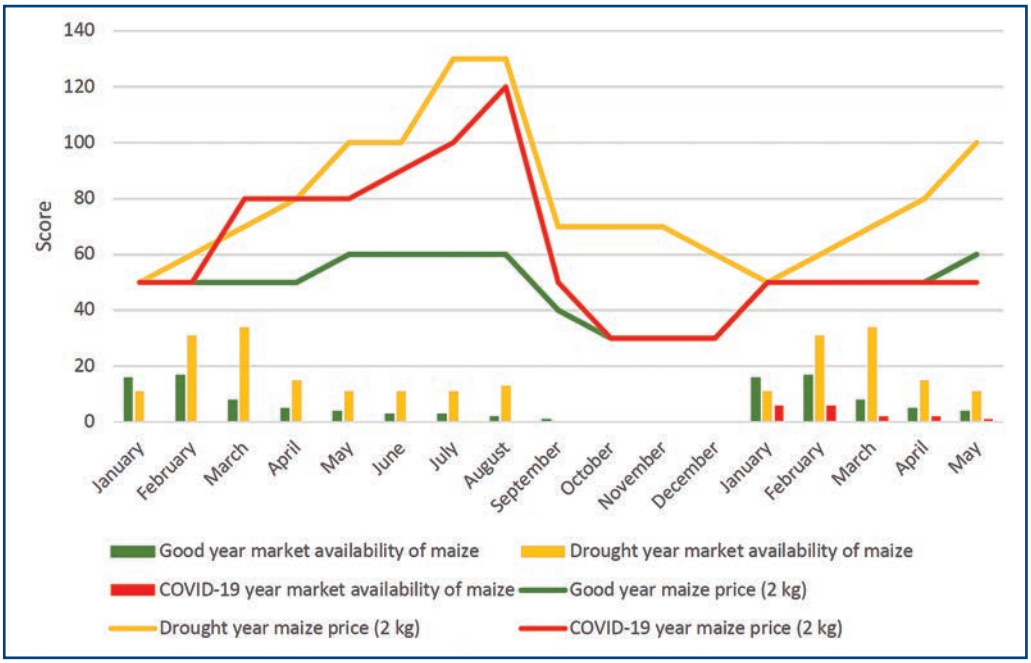


Table 8. Factors affecting the flow and availability of purchased foods, comparing the situation at the start of COVID-19 and at the time of follow-on assessment in Abim, Moroto, and Amudat Districts.

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Level of availability of goods (food) in the market	Omoru West, Morulem	++++	+	+++
Level of flow of food and other essential commodities	Oryeotene East, Abim sub-county (S/C)	++++	+	++++
Vehicle transport cost per person from Abim to Kotido	Omoru West, Morulem	UGX 5,000	UGX 30,000	UGX 20,000
Vehicle transport cost (fare) from Moroto to Matany, by bus for travelers (per person)	Moroto-Rupa-Kalukalit	UGX 5,000	UGX 10,000	UGX 8,000
Level of availability of vehicle transport for goods and passengers	Oryeotene East, Abim S/C	++++	-	+++
Level of internal travel/ transport (within the country)	Amudat-Amudat-Kanarion	++++	++	++++
Level of cross-border transport (e.g., at Amudat border between Kenya and Uganda)	Amudat-Amudat-Kanarion	++++	+	+++

Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level; b) price data for vehicle transport.

The flow of food and other essential commodities to the local markets

The level of flow of food (maize) and other essential commodities to the local markets in the COVID-19 year relative to a normal and drought year

The COVID-19-related restrictions (e.g., closure of markets, movement restrictions) reduced the flow of food and other commodities to local markets. Other factors that contributed to reduced flow included insecurity, bad roads, and poor harvest in 2020. For example, Abim District experienced a 68% reduction in the flow relative to a normal year. This reduction was higher than that of the drought of 2018 (66% reduction) but lower than that of the drought of 1980 (100% reduction). This information was captured using a proportional piling method.[32]

[32] Method: Proportional piling, with 50 stones used to represent the level of flow of maize and other essential commodities to the market in a normal/good year. The increase or decrease in the level of flow during a drought year and the COVID-19 year was shown by subtracting from (to show decrease) or adding to (to show increase) the 50 stones

In 1980, there was insecurity between Abim and Lango regions, which was a spillover effect of the overthrow of the Amin government. Transport and road infrastructure were also poorly developed then. During the drought of 2018, the lower flow of food to Abim was attributed to low demand occasioned by a good harvest the previous year.

Access to food in the local markets

The level of access to maize during COVID-19 relative to a normal and drought year

In Abim District, COVID-19-related restrictions led to 82% reduction in access to food in the local markets. This reduction was higher than the 38% reduction experienced in the drought of 2018 but lower than the 100% reduction in the drought of 1980. To capture this information, a proportional piling method was used.[33]

Table 9 shows the factors that contributed to reduced access to food in the local markets in the COVID-19 and drought years. Some of the factors were common while others were specific to the drought and COVID-19 years.

Table 9. Factors contributing to problems of accessing food in local markets in Abim during COVID-19 and drought years.

Factor contributing to poor access to food in the local market	Drought of 1980	Recent drought (e.g., 2018)	COVID-19 year
Lack of money to buy food resulting from loss of income from livestock, crops, alternative livelihoods (e.g., charcoal and firewood)	XX		XX[34]
Insecurity—restricted access to markets and livelihood sources such as charcoal burning	XX[35]	XX[36]	XX
No commodity markets in the area	XX		
No or low availability of food in the market due to poor/no harvest	XX	XX	XX
Less demand due to bumper harvest the previous year		XX	
Long distance to the market	XX	XX	
High prices	XX	XX	XX
Closure of markets			XX
Restricted movement and lack of transport (especially motorbikes) to the market			XX
Lack of masks			XX
Fear of goods from outside—fear of contracting COVID-19 or cholera from them			XX
Fear of COVID-19 or of being quarantined for COVID-19; illness due to other diseases such as malaria			XX
Difficult to go to the market in the wet season			XX
Involved with other domestic work, e.g., farming			XX

Method: semi-structured interviews following proportional piling exercises in the section on access to food in the local markets in the COVID-19 and drought years.

[33] Method: Proportional piling, with 50 stones used to represent the level of access to maize in the local markets in a normal/good year. The increase or decrease in the level of access during a drought year and the COVID-19 year was shown by subtracting from (to show decrease) or adding to (to show increase) the 50 stones.

[34] Mainly due to closure of sources of income, e.g., livestock markets.

[35] Tribal conflict that brought together the Acholi, Lango, and Teso against the Karimojong in 1980.

[36] Insecurity between Abim and the Jie communities.

At the time of follow-on assessment, the level of access to maize in the local markets had improved by 50% in Abim District, from the 25% level of access at the start of COVID-19. In Moroto District, the level of access had gone back to the level just before COVID-19 (Table 10). The following factors contributed to the improvement in access to maize in the local markets at the time of follow-on assessment relative to before the start of COVID-19 (Tables 10, 11, 12, and 13):

- The community perception that COVID-19 was finished; but was mainly due to government efforts to reduce the incidence of COVID-19 and increase the availability of masks;
- Lifting of the lockdown, which led to reduction in internal and cross-border movement restrictions, and increased availability of transport and a consequent reduction in the cost of transport;
- Re-opening of markets, although in some places the markets were still closed at the time of the follow-on assessment;
- Motorbike transport became highly available at prices similar to those before COVID-19;
- Improvement in purchasing power but not to the levels before COVID-19;
- Slight reduction in prices;
- Reduced fear to purchase unpackaged items.

Table 10. Factors related to movement/travel/transport.

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Level of access to food markets, e.g., shops (movement to buy food)	Abim-Oryeotene East, Abim S/C	++++	+	+++
	Moroto-Rupa-Pupu	++++	+	++++
Level of freedom of movement; internal movement to the market to buy food	Abim-Omoru West, Morulem	++++	++	+++
	Amudat-Amudat-Kanarion	++++	++	++++
	Moroto-Rupa-Pupu	++++	+	++++
Level of freedom of movement; cross-border	Amudat-Amudat-Kanarion	++++	+	+++
Level of harassment/arrests by police en route	Abim-Omoru West, Morulem	-	++	-
	Moroto-Rupa-Pupu	-	++++	-
Level of availability of motorbike transport	Abim-Omoru West, Morulem	++++	++	+++
	Amudat-Amudat-Kanarion	++++	+	++++
	Moroto-Rupa-Pupu	++++	-	++++
Cost of motorbike transport; passenger only	Omoru to Abim town	UGX 15,000	UGX 30,000	UGX 25,000
	Kalukalit to Moroto town	UGX 5,000–7,000	UGX 8,000	UGX 5,000–7,000
Level of visiting relatives	Abim-Oryeotene East, Abim S/C	++++	+	++++

Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level; b) price data for motorbike transport.

Table 11. Factors related to availability and use of personal protective equipment.

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Level of availability of masks (against their expectation based on number of people owning masks)	Abim-Omoru West, Morulem	-	++	+++
	Amudat-Amudat-Kanarion	-	++++	++++
	Moroto-Rupa-Pupu	-	-	++++
Level of practice of people wearing masks in daily endeavors	Abim-Omoru West, Morulem	-	+	-
	Amudat-Amudat-Kanarion	-	++++	-

Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level.

Table 12. Presence of COVID-19

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Fear of being quarantined or contracting COVID-19 when going to town	Abim-Omoru West, Morulem	-	++++	++
	Amudat-Amudat-Kanarion	-	++++	-
	Moroto-Rupa-Kalukalit	-	+++	-
Perceived level of COVID-19, including cases in their village	Abim-Omoru West, Morulem	-	-	-
	Amudat-Amudat-Kanarion	-	-	-
	Moroto-Rupa-Kalukalit	-	+	-
Number of COVID-19 cases reported in their village	Abim-Omoru West, Morulem	-	-	-

Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level.

Table 13. Market/business operations and cash availability

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Level of availability of money to buy food	Abim-Oryeotene East, Abim S/C	++++	+	++++
	Moroto-Rupa-Kalukalit	++++	+	+++
Proportion of households with money to buy food	Abim-Oryeotene East, Abim S/C	++++	++	++++
	Abim-Omoru West, Morulem	++++	++	++++
	Moroto-Rupa-Kalukalit	++++	+	++
Level of operation of market days	Abim-Oryeotene East, Abim S/C	Open	Closed	Open
	Amudat-Amudat-Kanarion	Open	Closed	Open
	Moroto-Nadunget-Kaipetar	Open	Closed	Closed
	Moroto-Rupa-Kalukalit	Open	Closed	Closed
Level of business activities in food market	Amudat-Karita-Tumwon	++++	+	+++
	Moroto-Nadunget-Kaipetar	++++	++	++++
	Moroto-Rupa-Kalukalit	++++	+	+++
Level of operation of food shops	Abim-Oryeotene East, Abim S/C	++++	++	++++
Prices of 500 g of purchased maize	Abim-Omoru West, Morulem	UGX 500	UGX 1,500	UGX 1,000
Prices of 3 kg of sorghum sourced from outside Karamoja	Moroto-Rupa-Kalukalit	UGX 3,000–4,000	UGX 4,000–5,000	UGX 3,000–4,000
Level of fear in buying unpackaged food items such as vegetables	Abim-Omoru West, Morulem	-	++	+
	Moroto-Rupa-Kalukalit	+	++	+

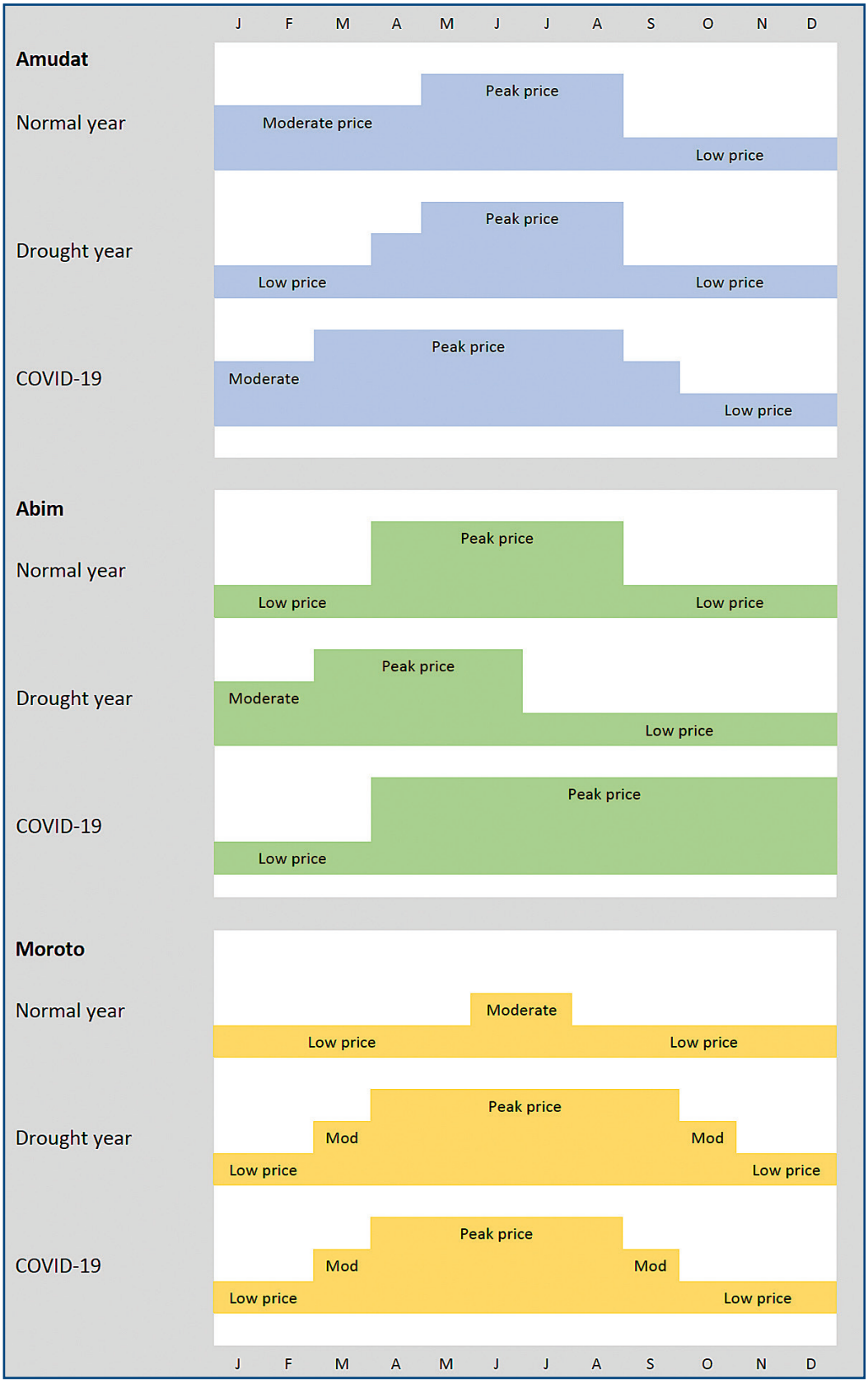
Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level; b) price data for maize and sorghum.

Prices of purchased maize

Periods of high and low maize prices during COVID-19 relative to a good and drought year

COVID-19 restrictions led to an abnormal increase in maize prices and extended the period during which prices were high. There was an increase in the number of months with price increases of 100% or more from an average of 3 months in a good year to 4.6 months in a drought year to 6.6 months during COVID-19 (Figure 15). These findings suggest a major food crisis during COVID-19. During COVID-19, there were also sharp increases in prices compared to drought and good years, in which prices increased gradually.

Figure 15. Periods of higher and lower prices for maize[37] during COVID-19 relative to a good and drought year.



Method: price data for maize in the different months in a good year, drought year, and COVID-19 year.

[37] Quantities of maize considered in the study were: Amudat: 2 kg; Abim: 0.5 kg; Moroto: 3 kg.

Maize price increases during COVID-19 relative to a good and drought year

Figures 16, 17, and 18 show the pattern of maize price changes (increases) in Amudat, Moroto, and Abim Districts in the COVID-19 and drought year relative to a good year.

Figure 16. Maize price trends in Amudat District in the COVID-19 and drought year relative to a good year (unit: 2 kg).

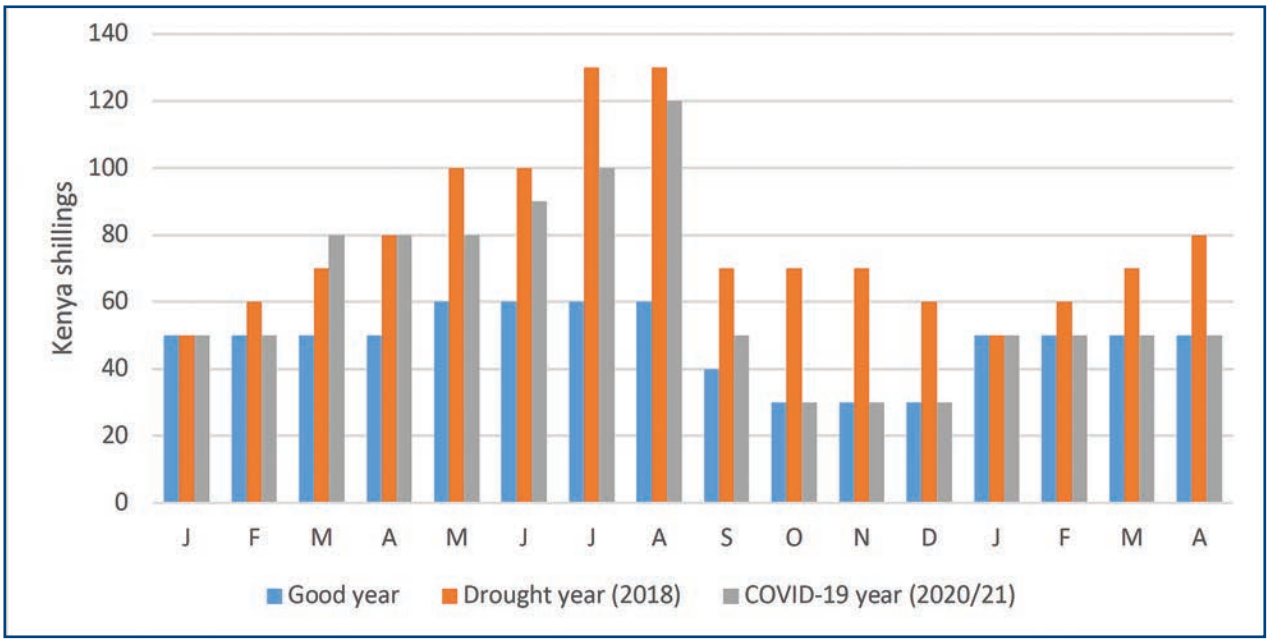


Figure 17. Maize price trends in Moroto District in the COVID-19 and drought year relative to a good year (unit: 3 kg).

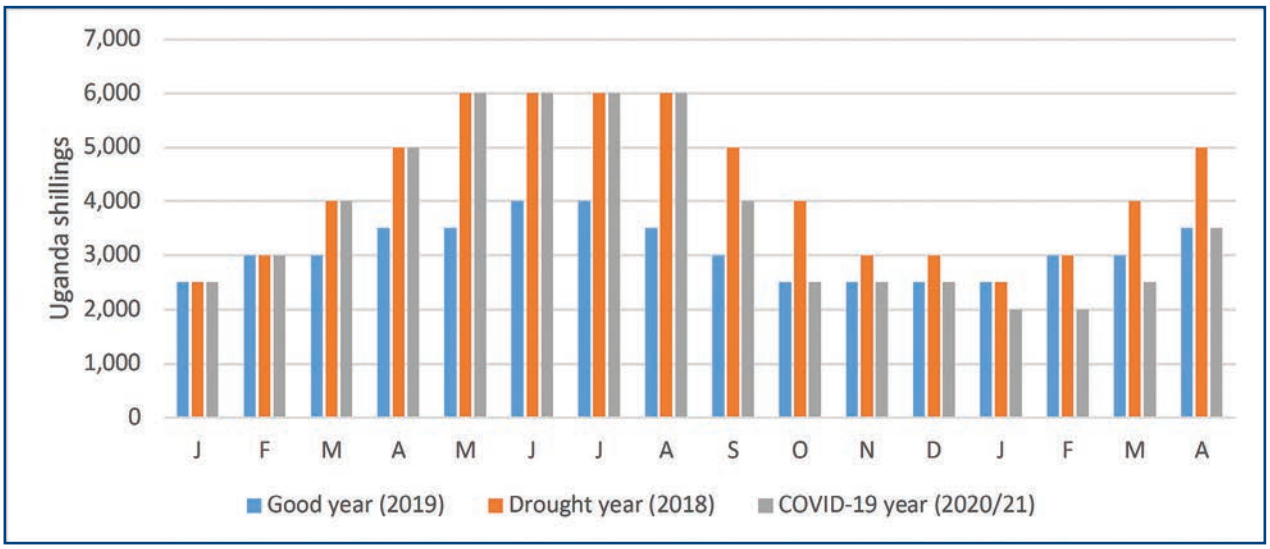
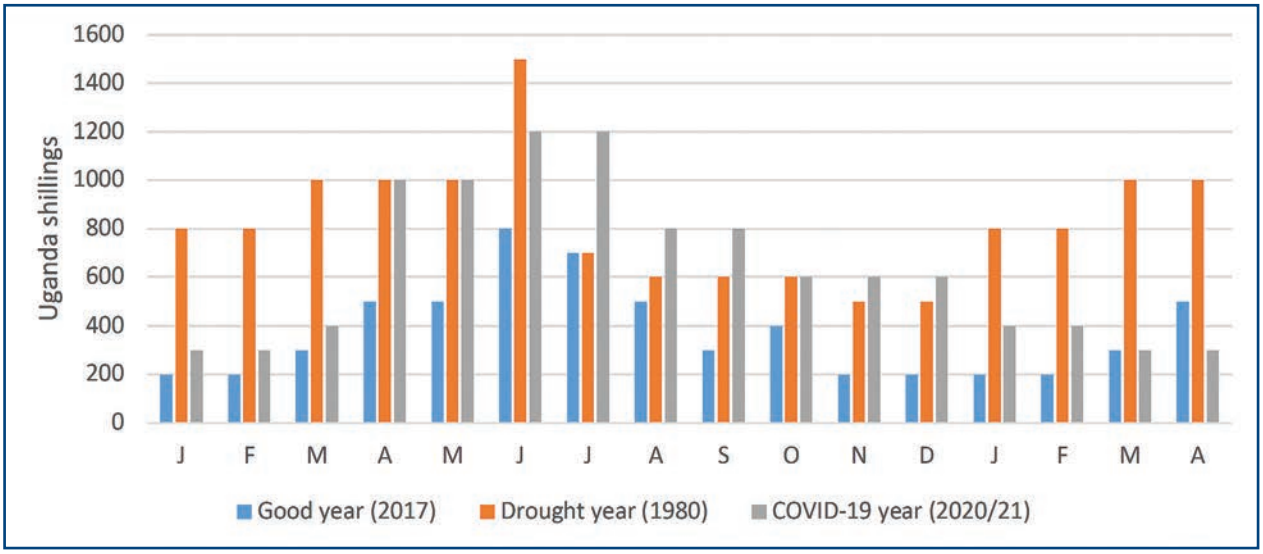


Figure 18. Maize price trends in Abim District in the COVID-19 and drought year relative to a good year (unit: 0.5 kg).



Method: price data for maize in the different months in a good year, drought year, and COVID-19 year.

Comparing price increases between years

i. COVID-19 year relative to a good year

The assessment reveals higher price increases during COVID-19 in Abim District (despite being predominantly a farming area) compared to Amudat and Moroto Districts. In Abim District, maize was sold in smaller units of 0.5 kg. This smaller unit makes it more expensive, compared to Moroto and Amudat where bigger units of 2 to 3 kg were used. Below is a detailed account of price increases in every district:

- Amudat District: 25–100% price increases, with the highest price increases seen in the six months between March and August;
- Moroto District: 33–71% price increases, with the highest price increases seen in the five months between April and August;
- Abim District: 33–200% price increases, with price increases of between 50–100% seen between April and August and abnormally higher increases of between 167–200% between September and December 2020.

ii. Drought year relative to a normal year

In common with the COVID-19 year, in the drought year, the highest price increases were seen in Abim District, followed by Amudat and Moroto Districts. The major price crisis months in the drought year were similar to those in the COVID-19 year, i.e., between March and August, although in a drought year, abnormally higher prices were seen almost the whole year (January to December). Additionally, the pattern of price fluctuations in the drought and COVID-19 years in each district followed a similar monthly trend, although price increases were much higher in the drought year. Below is a detailed account of price increases in every district:

- Amudat District: 20–133% price increases, with increases seen in the nine months between April and December;
- Moroto District: 20–71% price increases, with increases seen in the six months between May and October;
- Abim District: 20–300% price increases, with abnormally higher price increases almost throughout the entire year. In Abim District, a much older and more severe drought year (1980) was considered in the assessment, which partly explains the huge price increases between the drought and the normal year in this district. Interestingly, some prices in the year 1980 were equal to those in 2017 despite inflation in the intervening 37 years, which indicates the severity of the crisis in the drought of 1980.

Comparing price increases within years

Like a normal or a drought year, Abim District experienced the highest price increases during COVID-19 while Moroto District experienced the lowest price increases. This difference could partly be attributed to the fact that maize traded in Abim comes mainly from within the district and is sold when demand is high, for instance during the opening of schools when parents purchase

maize to support feeding of their children in school by the school feeding program. This demand contributes to sustained higher prices. High prices could also be attributed to a very commercialized community in Abim District compared to the other districts. Comparatively, Moroto District experienced the lowest price increases. Price increases could be suppressed by the higher supply of maize from outside given that Moroto town is a regional economic/business hub with a tarmac road connection.

In all the districts, the months of exceptionally high prices during COVID-19 were between March and September, as in normal and drought years, although price shocks during COVID-19 followed a drought year. Therefore, the COVID-19 crisis worsened an anticipated price crisis between March and September, with an obvious impact on food affordability.

Worth further investigation is the impact of the higher maize price increases in Abim District, for instance on the incidence and prevalence of malnutrition and food insecurity, compared to places with the lower price increases such as Moroto District. Interestingly, based on community perception, during COVID-19 Moroto District, despite lower price increases, had a higher rate of child malnutrition (37%) compared to Abim District (15%). This higher rate could be attributed to a much higher impact on food affordability in Moroto District resulting from COVID-19 restrictions and the effect of insecurity, livestock disease outbreaks, and drought on milk availability and livestock marketing, and so cash availability.

Below is a detailed account of price increases in every district in the different years (normal, drought, and COVID-19 year):

A normal year

- Amudat District: 33–100% price increases, with high prices in the eight months between January and August, with prices peaking between May and August;
- Moroto District: 20–60% price increases, with high prices in the five months between April and August, with prices peaking in June and July;
- Abim District: 50–300% price increases, with high prices in the seven months between March and September, with prices peaking between April and August;
- The major price crisis months in a normal year were between April and August.

A drought year

- Amudat District: 20–160% price increases, with high prices in the five months between April and August, with prices peaking between May and August;
- Moroto District: 20–140% price increases, with high prices in the eight months between March and October, with prices peaking between April and September;
- Abim District: 20–200% price increases, with high prices in the five months between February and June, with prices peaking between March and June;
- The major price crisis months in a drought year were between March and August.

COVID-19 year

- Amudat District: 67–300% price increases, with high prices in the nine months between January and September, with prices peaking between March and August;
- Moroto District: 20–140% price increases, with high prices in the seven months between March and September, with prices peaking between April and August;
- Abim District: 33–300% price increases, with high prices in the nine months between April and December, with prices peaking between April and September;
- The major price crisis months in the COVID-19 year were between March and September.

Factors influencing maize prices at the time of follow-on assessment in Abim and Amudat relative to before and in the early months of COVID-19

At the time of follow-on assessment, the price of maize had slightly reduced, attributed to (Table 14):

- Increased availability of maize in the market but not to the level before COVID-19;
- Increased travel and availability of transport.

It is also worth noting that prices of some foods had remained high since the rise at the start of COVID-19, more so in shops in remote locations compared to those in town centers. Household purchasing power also remained low because some livestock markets were still closed in some areas at the time of the follow-on assessment.

Table 14. The level/status of factors influencing food (maize) price changes at the time of follow-on assessment relative to the time just before and at the start of COVID-19

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Price of maize at the local market (500 g)	Abim-Omoru West-Morulem	UGX 500	UGX 1,500	UGX 1,000
Availability of food and other essential commodities	Abim-Omoru West-Morulem	++++	+	+++
Transport costs from the source to destination (truck hire)	Oryeotene East-Abim sub-county			
Maize price at the source	Abim town			
Level of internal travel/transport	Amudat-Amudat-Kanarion	++++	++	++++
Level of cross-border travel/ transport	Amudat-Amudat-Kanarion	++++	+	+++

Methods: a) Likert-type scale rating; b) maize price data.

The price of salt as an indicator of food crisis

Salt is a critical element in people's diets, and its absence leads to nutritional problems. Because of its critical nature, salt prices increase sharply when salt becomes scarce and are regarded by communities as an early warning sign of an impending food crisis.

Relative to a normal year, salt price increased between 50% and 400%, with the price of 500 g of salt increasing from UGX 600 to 3,000 during COVID-19. The increases occurred between March and December, with abnormally higher prices between April and December. Price increases during COVID-19 were up to eight times higher than those in a drought year, with increases of 50% relative to a normal year.

With regard to locations, Moroto District experienced higher price increases compared to Amudat District, where prices were held down by the cross-border smuggling of salt from Kenya. It is worth noting that prices of salt had remained high since the rise in March 2020 (start of COVID-19) up to the time of the follow-on assessment, signalling a persistent crisis.

Figures 19 and 20 show salt price trends in Amudat and Moroto Districts respectively, in the COVID-19 and drought years relative to a good year.

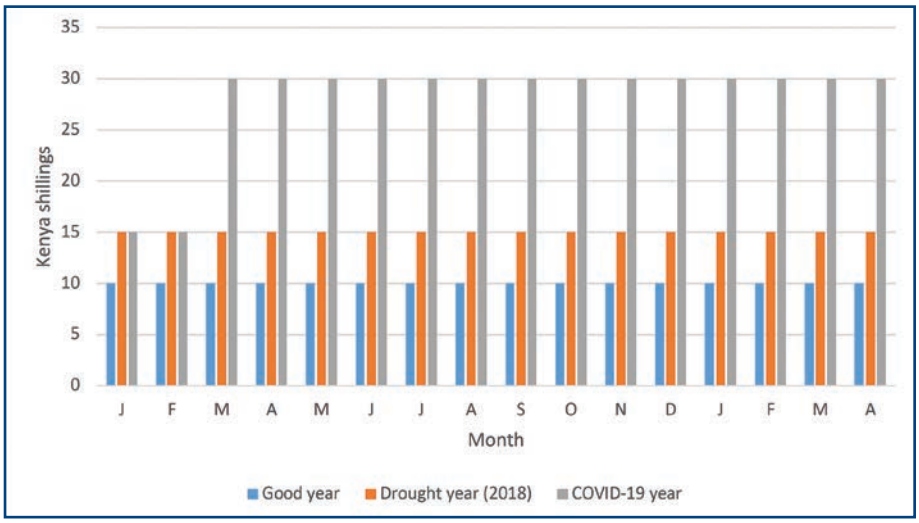
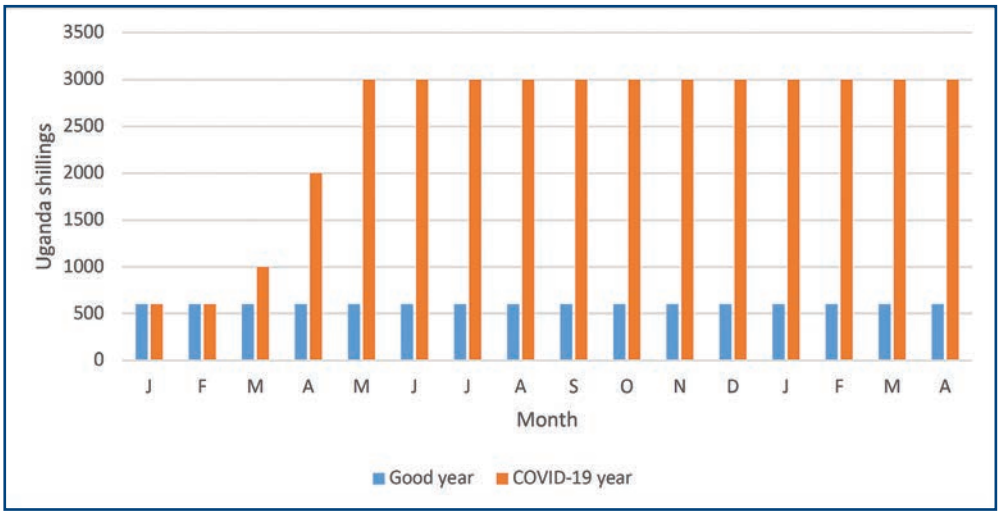


Figure 19. Salt price trends in Amudat District in the COVID-19 and drought years relative to a good year (unit: 200 g).

Figure 20. Salt price trends in Moroto District in the COVID-19 year relative to a good year (unit: 500 g).



Method: price data for salt in the different months in a good year, drought year, and COVID-19 year.

Community social support as a food security strategy

At the start of COVID-19, sharing of food was significantly depressed by restrictions on travel for purposes of visiting, reduced flow of food from outside Karamoja to the local markets, and the closure of markets. In some communities, COVID-19 further weakened an already declining social support system.

At the time of the follow-on assessment, social support in communities that still attached a substantial value to it had slightly bounced back, which was attributed to the increased flow and availability of food from outside Karamoja to the local markets and the resumption of visiting. However, this improvement did not have any significant effect on the looming hunger.

NUTRITION

LOCAL COMMUNITIES' DESCRIPTION OF A MALNOURISHED CHILD

Communities (both humorously and sometimes despairingly) provided descriptions of a malnourished child that were similar to symptoms described in the literature on nutrition and health, but also described how parents are affected by the presence and appearance of a malnourished child, as outlined below:

- The child is thin with distended stomach;
- A child with yellowish hair that is scattered on the head;
- A child with a head that is bigger than the rest of the body;
- The child is smooth and resembles a rat; the Abim community calls that child *Oyal*;
- The appearance of the child stresses the parent, which is an indirect impact of child malnutrition.

Some of the potentially important determinants of child nutrition mentioned by communities include the number and variety of meals consumed per day, the quantity of food served, and the availability of own produced foods.

LEVEL OF CHILD MALNUTRITION IN THE COVID-19 YEAR RELATIVE TO A NORMAL AND A DROUGHT YEAR

Table 15 shows the level of child malnutrition during

Table 15. Level of child malnutrition in the COVID-19 year relative to a normal and drought year

	Year of reference	Location	% of normal children	% of malnourished children
Good year	2003	Abim-Nyakwae-Geregere South	90	10
		Abim-Nyakwae-Katebakume	90	10
	Apa-Mulele	Moroto-Nadunget-Lokeeruman	95	5
		Moroto-Rupa-Pupu	84	16
	Lobore	Amudat-Amudat-Lomajanita	95	5
	Average		**90.8**	**9.2**
Drought year	1980	Abim-Nyakwae-Geregere South	0	100
		Moroto-Nadunget-Lokeeruman	10	90
	Average		**5**	**95 (10.3 times[38])**
	1998	Abim-Nyakwae-Geregere South	45	55
		Abim-Nyakwae-Katebakume	45	55
	Lokilotor	Amudat-Amudat-Lomajanita	87	13
		Moroto-Rupa-Pupu	11	89
	Average		**47**	**53 (5.8 times)**
	Lorionokoriot/ Lorionomanat	Moroto-Nadunget-Lokeeruman	90	10[39]
COVID-19 year	2020/2021	Abim-Nyakwae-Geregere South	85	15
	2020/2021	Abim-Nyakwae-Katebakume	85	15
	2020/2021	Moroto-Nadunget-Lokeeruman	63	37
	2020/2021	Moroto-Rupa-Pupu	66	34
	2020/2021	Amudat-Amudat-Lomajanita	94	6
	Average		**78.6**	**21.4 (2.3 times)**

Method: proportional piling, with 100 stones representing the total population of children under five years of age in an area and divided into the population who were normal and the population who were malnourished in a normal year, drought year, and the COVID-19 year.

[38] 10.3 times the average in a normal year.

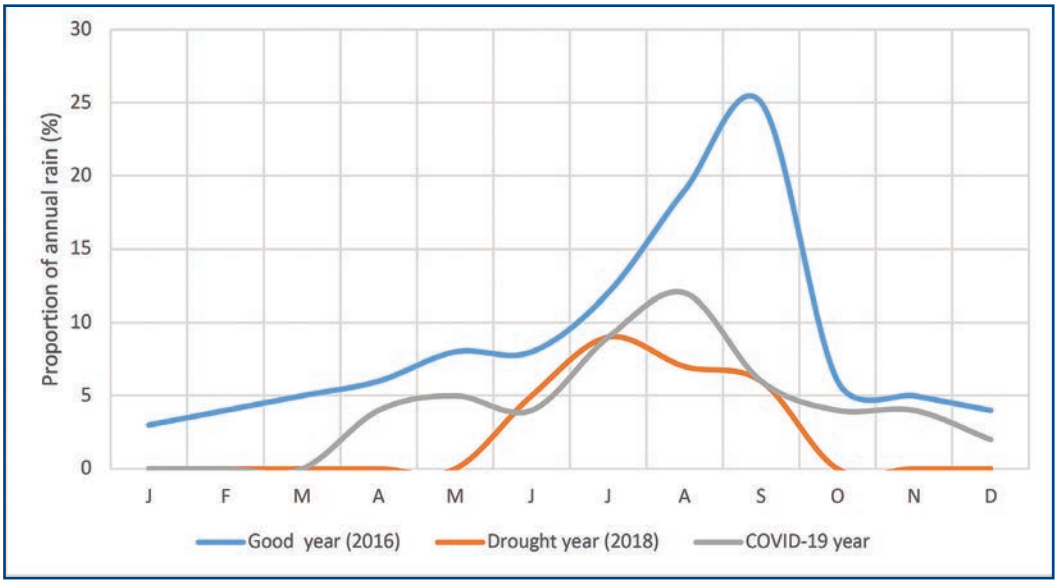
[39] It was a drought year but malnutrition in children was low.

COVID-19 relative to a normal and drought year. During COVID-19, an average of 21.4% of children were malnourished, compared to 9.2% in a normal year, 53% in a moderate drought year, and 95% in an extreme drought year. Amudat District (predominantly pastoralist) consistently recorded a low but increasing rate of child malnutrition in a normal (5%), COVID-19 (6%), and drought year (13%) while Moroto District (agro-pastoralist) recorded a higher and increasing rate of child malnutrition in a normal (16%), COVID-19 (34%), and drought year (89%). Abim District lies between Amudat and Moroto Districts, with 10% child malnutrition in a normal year, 15% in the COVID-19 year, and 55% in a drought year. The COVID-19 year (2020) was regarded as a good year in terms of rainfall, receiving 78% of the expected rainfall in Amudat District (Figure 21).

Families with malnourished children during COVID-19 commonly had the following characteristics:

- Single parent families;
- High alcohol consumption;
- Frequent quarrelling (gender-based and domestic violence);
- Poor families without animals to sell to buy food (poverty);
- With the poor harvest in 2020, families who had not worked hard enough on farming. The reduced harvest in 2020 provided food for only one month—September 2020. From October 2020 to the time of the assessment in April and June 2021, hunger and child malnutrition increased;
- Families with many animals lost to raids, diseases, and drought, which affected milk production and availability. In Moroto District, for instance, a major disease outbreak that killed many animals began in April and May 2020 and peaked in July 2020 while insecurity increased beginning in April and May 2020. Families were left with fewer animals that they were reluctant to sell to buy food. Markets were also closed, livestock prices were low, and food prices were high;
- A high incidence of scabies in both children and adults;
- Families in which children were fed on meat from animals dying of disease. While this was a response

Figure 21. Annual rainfall in Amudat District in the COVID-19 year relative to a good and drought year.



Methods: a) proportional piling, with 50 stones used to represent the level of rainfall in a normal/good year. The increase or decrease in the level of rainfall during a drought year and the COVID-19 year was shown by subtracting from (to show decrease) or adding to (to show increase) the 50 stones; b) monthly calendar, with the number of stones that represented the level of rainfall in a particular year (reference: normal/good year, drought year, COVID-19 year) distributed by community members to the 12 months of the year to show the level of rainfall in the different months of the year (including peak rainfall months) and the number of months with rainfall in the different locations.

to the problem of insufficient food, the meat caused diarrhea in children. Many cases of child diarrhea were reported between June and August 2020 in Moroto District;

- Families who could not move to town for casual work or to sell charcoal or firewood because of COVID-19 restrictions on movement (i.e., impact of COVID-19 restrictions on livelihoods).

Families who experienced child malnutrition in a normal year include:

- Those who had not farmed;
- Those with high alcohol consumption;
- Children from mothers who had not spaced their pregnancies;
- Children of parents who did not bother to cook for their children;
- Mothers with enough breast milk but the child has stunted growth for unknown reasons;
- Families with no variety in their diet;
- Children born with ailments.

In an extreme drought year such as 1980, almost all children (95%) were malnourished, with children in farming communities being more affected than those in agro-pastoral/pastoral communities. In 1980, people fed on old animal skins and hides (*ngijom*), sold bones of animals that died of drought in order to buy food, and were ferried by lorries to food relief camps.

However, during a moderate drought (e.g., 1998), about 53% of children were malnourished, more than double what was experienced during COVID-19 (21.4%). The higher rate of child malnutrition during drought was attributed mainly to loss of animals to drought and no or poor harvest.

During the Lorionokoriot drought of 1984 in Moroto District, a smaller proportion of children (10%) were malnourished, a lower rate of malnutrition than expected. In Lorionokoriot, everyone including children moved with animals. In the mobile camps at Nakapiripirit, there was enough milk available for children. As people migrated, they also accessed cheaper cereals from farming areas in Karamoja, especially Nakapiripirit. This suggests that pastoral mobility helps to reduce child malnutrition in droughts, especially when children are part of the movement.

Families who did not experience child malnutrition in a drought year were also characterized by their managing to harvest some cereals despite the drought, having enough animals and the capacity to buy cereals, and having small businesses. These results point to the importance of livestock ownership, access to cereals, and availability of income from diversified livelihoods such as business in reducing vulnerability to child malnutrition.

Overall, the key factors to check when assessing the risk of malnutrition in Karamoja include:

- Livestock ownership and the availability of milk and animals for sale;
- The prevalence of livestock diseases and insecurity;
- Availability of own grown or purchased cereals;
- Markets that are open and operating;
- Level of alcohol consumption;
- Family relationships;
- Human diseases;
- Spacing of pregnancies;
- Pastoral mobility, with the children moving with the herd;
- Income from diverse sources, including businesses.

MONTHLY PATTERNS, PEAKS, AND DURATION OF CHILD MALNUTRITION IN AGRO-PASTORAL/PASTORAL AND FARMING COMMUNITIES IN THE COVID-19 YEAR RELATIVE TO A NORMAL AND DROUGHT YEAR

Duration of child malnutrition

The duration of child malnutrition varies by year (normal, drought, and COVID-19) and by district (Figure 22). Moroto District recorded a consistently higher duration of child malnutrition in a normal year, drought year, and during COVID-19, whereas Amudat and Abim Districts recorded a consistently lower duration of malnutrition in a normal year, drought year, and during COVID-19. Amudat District has a large livestock population to supply milk and sale animals whereas Abim District has diverse crop resources, all of which reduce the prevalence of malnutrition. Generally, the duration of child malnutrition was much longer and more severe in a drought year than during COVID-19.

Figure 22. Duration and peaks in child malnutrition during the COVID-19 year relative to a normal and drought year.

Method: monthly calendar, with the number of stones that represented the level of child malnutrition in a particular year (reference: normal/good year, drought year, COVID-19 year) distributed by community members to the 12 months of the year to show the level of child malnutrition in the different months of the year (including peak malnutrition months) and the number of months with malnutrition in the different locations.

Peaks in child malnutrition

The peak months for child malnutrition in a normal year vary by district, as indicated below (also see Figures 22, 23, 24, and 25):

- Amudat District: January to February;
- Moroto District: January to May;
- Abim District: May to June. In a normal year, child malnutrition is common in May and June. In May, stocks of groundnuts and millet are low, and other foods are also scarce. Child malnutrition peaks in June because stocks of groundnuts and millet are finished. In July, child malnutrition declines because people start harvesting early crops such as green grams, millet, and sweet potatoes.

In the drought and COVID-19 years, child malnutrition peaked earlier than expected, lasted longer than in a normal year, and worsened the already expected peaks in the sub-region in the months of January to June (Figures 22, 23, 24, and 25). The levels of malnutrition in a drought year were 1.5 to 2 times higher than in the COVID-19 year while the levels in the COVID-19 year were 2 to 3 times higher than in a normal year.

In communities with consistently lower rates and duration of malnutrition such as in Amudat and Abim Districts, when malnutrition increases, e.g., in a drought and COVID-19 year, the level of panic is higher (2.5–4.5 times) than in Moroto District (2.4 times) where levels of malnutrition are perennially higher. This reaction is typical of populations who have not experienced, or have less experience with, disasters.

Figure 23. Monthly patterns in child malnutrition in the COVID-19, normal, and drought year, Amudat District.

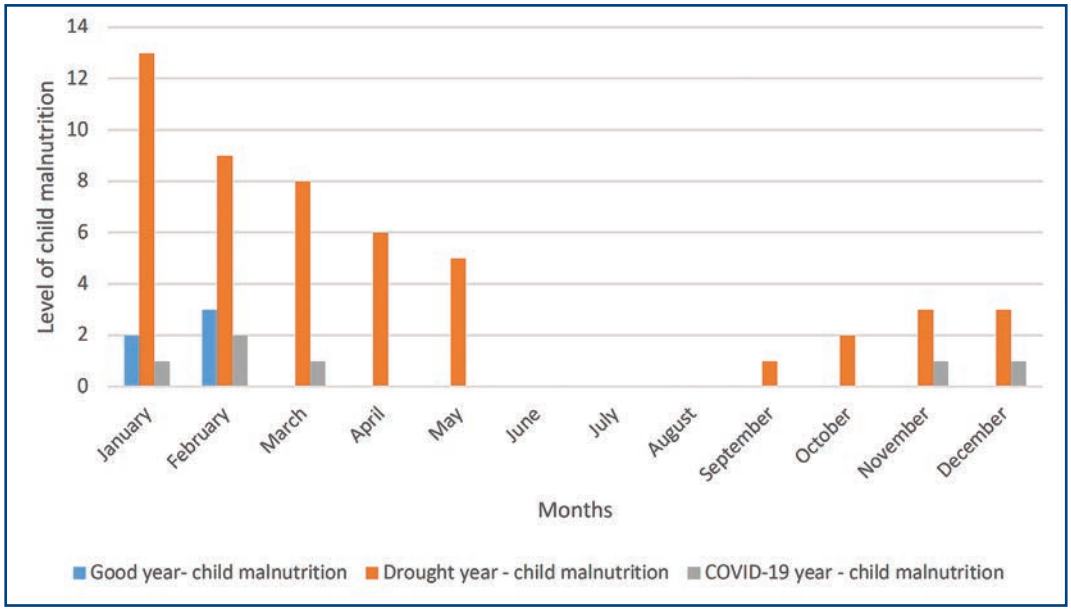


Figure 24. Monthly patterns in child malnutrition in the COVID-19, normal, and drought year, Moroto District.

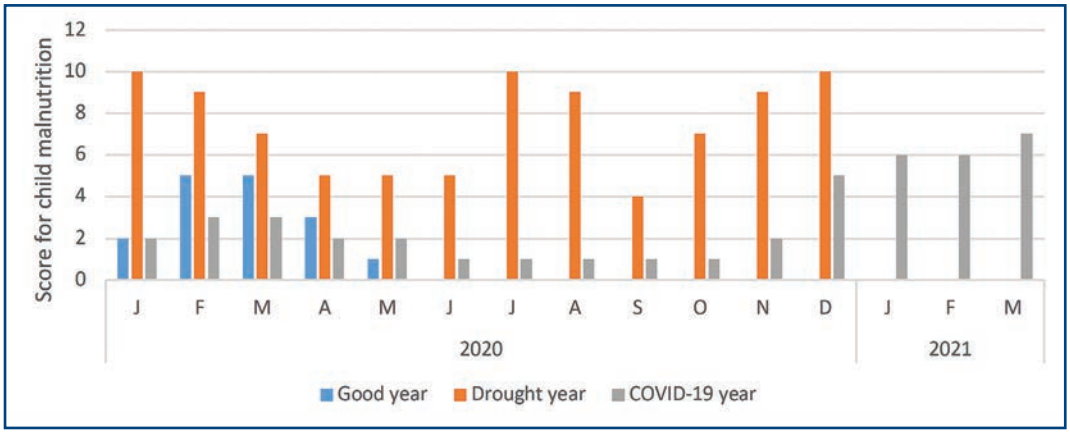
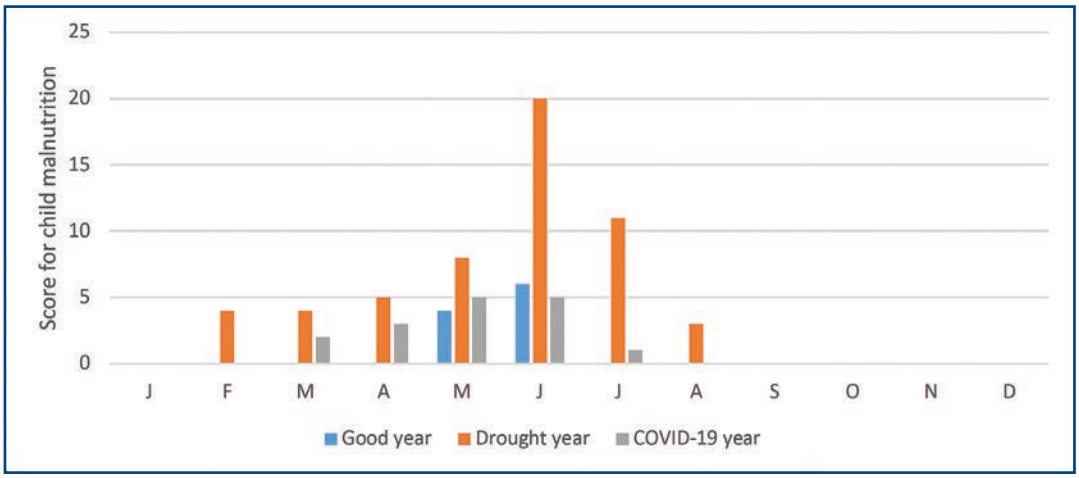


Figure 25. Monthly patterns in child malnutrition in the COVID-19, normal, and drought year, Abim District.



Methods: a) proportional piling, with 100 stones representing the total population of children under five years in an area and divided into the population who were normal and the population who were malnourished in a normal year, drought year, and the COVID-19 year; b) monthly calendar, with the number of stones that represented the level of child malnutrition in a particular year (reference: normal/good year, drought year, COVID-19 year) distributed by community members to the 12 months of the year to show the level of child malnutrition in the different months of the year (including peak malnutrition months) and the number of months with malnutrition in the different locations.

RESPONSES TO MINIMIZE CHILD MALNUTRITION DURING COVID-19

Community-level responses—some families employed various strategies to minimize child malnutrition amid COVID-19-related challenges. It is worth learning from these strategies (Table 16).

Table 16. Community-level responses to child malnutrition during COVID-19

Response	Abim District	Moroto District	Amudat District
Had food stocks from 2019	XX		
Rationed available food because people were uncertain about the food situation due to COVID-19 and the national elections	XX		XX
Used bush routes to travel to Tesoland to buy cassava	XX		
Cultivated fast-growing crops and vegetables for early relief. These included *boo, malakwang*, Sukuma wiki, green grams, and sweet potatoes.	XX		
Due to COVID-19 restrictions on group work (for farming, VSLAs), mothers had more time for their children (breastfeeding; healthcare).	XX		
Had arranged with Teso traders to sell to them food in the bush; they bought sorghum for brewing and in turn made money to buy food.	XX		

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Men and mature schoolchildren went fishing and hunting guinea fowls to supplement food; they sold some fish and wild game to buy food.	XX		
Slaughtered chickens for home consumption	XX		
Sold livestock to buy food; the cheapest food in Moroto District was dry sweet potatoes and cassava flour.	XX	XX	XX
Collected traditional herbs (e.g., *abach, thimere, too, atokarach* (aloe vera) to respond to ailments in children and the rest of the family	XX		

External responses—the support received from external agencies included:

- Children were under NGO supplementary feeding program by World Food Programme (WFP)/Andre Foods International (AFI).
- Children survived on plumpy nuts (*Odi*) distributed by NGOs.
- In Abim District, people received food rations from Caritas/Catholic Relief Services (Nuyok project): beans, posho, cooking oil, *mukena* (silver fish), salt, and soap. The ration was given in July, although malnutrition began just after the lockdown in March 2020.
- Food relief from the Catholic Church and the Office of the Prime Minister.

LOCALLY GROWN FOODS AND CHILD NUTRITION

Most important types of foods

For pastoralist and agro-pastoralist communities in Amudat and Moroto Districts, the most important food for children is animal milk. For farming communities in Abim District, the priority foods include groundnuts, simsim, millet, and sunflower, in descending order. Groundnuts, the most important food, is regarded as "milk for children." Groundnuts are served to children as paste, or fried, or as paste mixed with porridge. Other important locally produced foods include animal milk, cheese, and shea nut oil.

The yield and availability of the most important locally grown/available foods in the COVID-19 and drought years relative to a normal year

Availability of groundnuts ("child's milk") in farming communities

There are different uses of the locally produced groundnuts, including home consumption, especially for children; sale to cover school fees; barter for sorghum; and as a gift to a friend or a relative (Table 17).

Table 17. The yield of locally grown groundnuts and how it is used

	Year of reference	Location	Total harvest (%)	Uses of groundnut harvest		
				Home use	Selling	Gift to friends/ relatives
Good year	2019	Abim-Nyakwae-Katebakume	100	56%	24%	20%
Drought year	2017	Abim-Nyakwae-Katebakume	48	71%	29%	0
COVID-19 year	2020/ 2021	Abim-Nyakwae-Katebakume	40	65%	35%	0

Method: proportional piling, with 50 stones used to represent the yield of locally grown groundnuts in a normal/good year. The increase or decrease in the yield during a drought year and the COVID-19 year was shown by subtracting from (to show decrease) or adding to (to show increase) the 50 stones. Thereafter, the number of stones that represented the yield in a particular year (reference: normal/good year, drought year, COVID-19 year) were distributed by community members to the different uses to show the relative use in different locations.

As depicted in Table 17 above, groundnut yields declined during COVID-19, as they do in drought years, which led to increased retention of the smaller harvest for home use and sale, and the elimination of gifting to friends and relatives. In Abim District, during COVID-19 in 2020, low groundnut production was attributed mainly to desert locust invasion and floods. The stocks of groundnuts harvested in 2020 lasted a shorter period than in a normal year, giving rise to an increase in child malnutrition in 2021. In the drought of 2017, drier conditions, disease (Olemwa), termites, and wild animals, especially baboons, affected groundnut production. Good rains, timely planting, and the absence of Olemwa disease cause the good production of groundnuts in a normal year.

The relationship between groundnuts availability and child malnutrition in Abim District during COVID-19

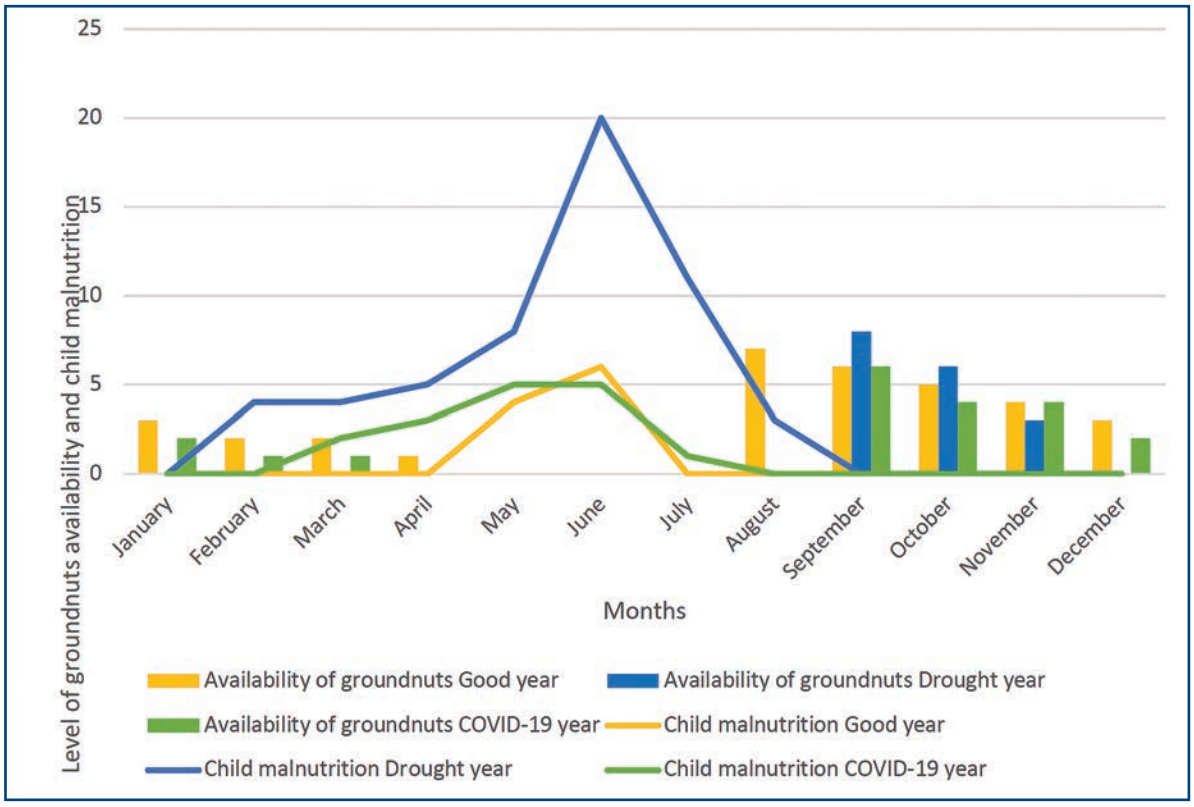
There is an inverse relationship between groundnuts availability and child malnutrition (Figure 26). Malnutrition peaks when there are no stocks of groundnuts. For instance, in a normal year, malnutrition peaks in May/June (two months) when groundnut stocks are at zero. No cases of malnutrition are seen between July–December–April when groundnuts are available.

In the COVID-19 and drought years, malnutrition peaked much earlier than expected (i.e., from February in a drought year and from March in the COVID-19 year) and lasted longer than in a normal year. This was because of lower availability of groundnuts in the drought year and during COVID-19 (see Figure 26).

The relationship between availability of cow's milk and child malnutrition in a pastoral and agro-pastoral community in the COVID-19 year relative to a normal and drought year

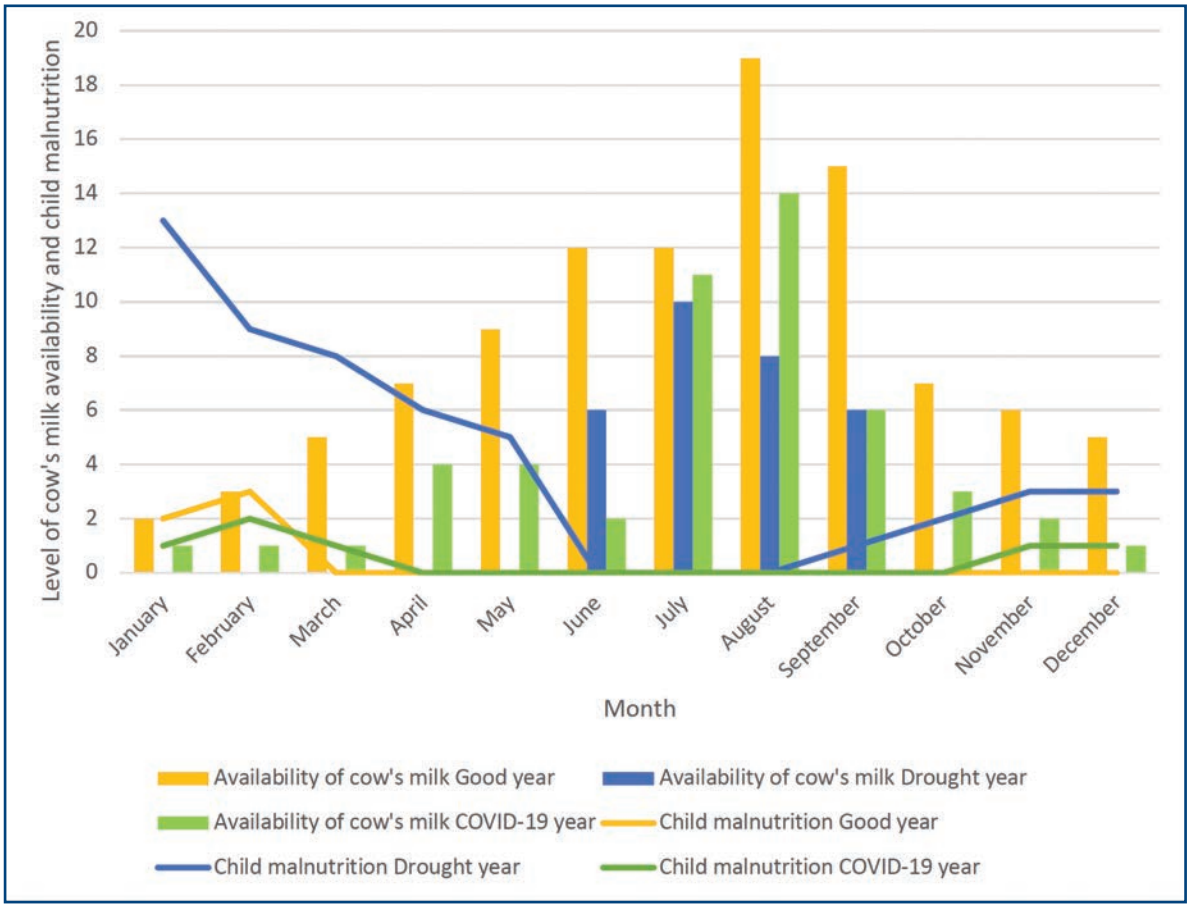
Figure 27 shows the monthly pattern of cow's milk availability and child malnutrition in a pastoral setting (Amudat District). Generally, as cow milk availability increases, child malnutrition drops. Irrespective of the year, child malnutrition peaks in January and February. Child malnutrition lasts for 2 months between January and February in a normal year, lasted 9 months between September and May in a drought year, and lasted 5 months between November and March in the COVID-19 year. The longer the period of cow milk availability, the shorter the period of child malnutrition. For example, milk availability in a normal (good) year is for 10 months (between March and December), which reduces the period of child malnutrition to 2 months (January and February).

Figure 26. Monthly trends in the availability of groundnuts and child malnutrition in a normal, drought, and the COVID-19 year in Abim District (agriculturalist).



Methods: a) proportional piling; b) monthly calendar.

Figure 27. Monthly trends in the availability of cow's milk and child malnutrition in a normal, drought, and the COVID-19 year in Amudat District (pastoral).



Methods: a) proportional piling, with 100 stones representing the total amount of cow's milk expected in a household and divided into the amount of milk that was lost and the amount that was available in a normal year, drought year, and the COVID-19 year. The assumption was that, even in a normal year, not all milk expected is realized. Some can be lost through, for instance, environmental and disease factors; b) monthly calendar, with the number of stones that represented the amount of cow's milk available in a household in a particular year (reference: normal/good year, drought year, COVID-19 year) distributed by community members to the 12 months of the year to show the level of milk availability in the different months of the year (including peak milk months) and the number of months that milk was available in the different locations.

Factors affecting child nutrition at the time of follow-on assessment

The 2020 COVID-19 assessment predicted that child malnutrition will continue rising if the following continue: food access problems; declining livelihood systems (livestock, crop, diversified); low purchasing power; alcoholism; gender-based violence; schoolchildren staying at home.

Compared to the early months of COVID-19, at the time of the follow-on assessment, more children were back in school and family quarrels had declined, as had stress from lack of food. Alcohol consumption had, however, increased compared to the early months of COVID-19 but remained lower than before the pandemic (Table 18). Despite the above improvements, child malnutrition persisted due to the continued loss of livestock to raids and livestock diseases, which affected availability of milk and animals for sale. People's purchasing power also remained low.

Table 18. Factors effecting child nutrition at the time of the follow-on assessment.

Factor	Location	Level just before COVID-19	Level at start of COVID-19 and for next 2–3 months	Level at the time of follow-on assessment, one year later
Level of child malnutrition	Moroto-Rupa-Kalukalit	+	++	++
Proportion of school-going children in school	Omoru West, Morulem	++++	-	+
	Amudat-Amudat-Kanarion	++++	-	+++
	Moroto-Rupa-Kalukalit	++++	-	+
Level of hard liquor consumption by parents	Moroto-Rupa-Kalukalit	++++	+	++
Level of family quarrels (*egurigur*) due to lack of food	Moroto-Rupa-Kalukalit	+	+++	++
Level of stress (*ngatameta*) due to lack of food, which partly led to family quarrels	Moroto-Rupa-Kalukalit	-	++++	+++

Methods: a) Likert-type scale rating to show the level of different factors just before COVID-19, at the start of COVID-19, and at the time of follow-on assessment; the scale of 4 represented by a longer stick represented the highest level (100%) while the scale of 0 represented the lowest level.

OTHER IMPACTS OF COVID-19

TEENAGE PREGNANCIES IN SCHOOLGIRLS

According to community perceptions, the greatest impact of school closure during COVID-19 was on teenage pregnancies, which led to the following:

- Many girls dropped out of school.
- Parents lost unused fees for girls who did not return to school.
- Girls' futures were ruined, leading to hopelessness for both parents and affected girls, especially for girls who may not get support to return to school.
- Conflicts between the parents of girls and the parents of the boys they were involved with. In some communities, conflicts were resolved using traditional mechanisms, such as:
  - Among the Pokots of Amudat District, fines were applied. Ten cows or UGX 7 million were paid by parents of the boy before the girl gives birth to his child. After birth, if the boy doesn't want to marry the girl, a further punishment was imposed. If the child is a boy, an additional 10 cows are paid. If the child is a girl, an additional six cows are paid. A higher penalty is applied for the boy child because at maturity he is free to relocate to the family of the father, and the parents of the groom are not entitled to any other benefits. A lower penalty is applied for the girl child because the girl remains with the parents of her mother and at marriage most of the bride wealth goes to the relatives of the mother; the father of the girl is given only two cows irrespective of the size of the bride wealth as a sign of appreciation for fatherhood.
  - In Abim District, a bride wealth of two goats and UGX 400,000 was paid. This is a major change from the further in the past when people used to pay 10 cows, 30 goats, and 1 cent (*sumun*).
- An additional burden is placed on the parents of the girl to take care of their daughter and her child as the father of the child does not have the capacity to provide for the young family.
- Parents of the boy must sell land to pay bride wealth, to cater to the basic needs of the young family, and to help them to start an income-generating activity.
- Most girls gave birth through caesarean section because of a less-developed reproductive system. Caesarean sections lead to post-operative complications and are a healthcare burden to parents, as is caring for the child's health.
- Affected girls became thieves, stealing food from parents and neighbors to take care of their child, which leads to conflict within the families and between neighbors.
- Teenage divorce occurs because of the stress of providing food and other necessities.
- Court cases and their associated costs can lead to imprisonment, longstanding grudges, and accusations of bribery.

Based on these experiences, parents and affected communities suggested various steps that might minimize the impact of teenage pregnancies or limit their number:

- The government and NGOs should support girls to continue with education, including counselling, mentorship, and enrolling the girls in boarding schools.
- Laws should be enacted that punish the perpetrators of child abuse.
- Schools should fully reopen because girls are safer in school.
- Parents should take seriously their role in protecting girls.

HUMAN DISEASES

Pre-COVID-19 human diseases such as cough, diarrhea in children, malaria, and scabies remained a problem, but of main concern was persistence of scabies (*Lokoo* or "I'm busy"), as described and emphasized jokingly by communities:

> *"When the son-in-law is scratching through the pocket of the trouser, the mother in-law thinks he is removing money to give to her."* (FGD, Lopur village, Nadunget sub-county, 3.16.2021)

> *"Health workers are also scratching while attending to scratching clients (patients)."* (FGD, Kaethin village, Nadunget sub-county, 3.18.2021)

Communities were still fearful of COVID-19 but regarded themselves as lucky: *"We are lucky that Corona was diverted to livestock and many animals are now dying and people are safe"* (FGD, Lopur village, Nadunget sub-county, 3.16.2021). Masks distributed by government made it easy to access health centers. However, health centers reportedly had inadequate medicines and personnel, village health teams (VHTs) were poorly resupplied with medicines, the cost of services at private clinics had not dropped following price increases at the beginning of COVID-19, and the closure of livestock markets made it difficult to pay for private medicine.

ANNEX 1. ANNUAL TRENDS/PATTERNS IN THE AVAILABILITY OF OWN-GROWN MAIZE FOR HOME CONSUMPTION IN A NORMAL, DROUGHT, AND COVID-19 YEAR

Year	Location	% set aside for home consumption from total harvest	J	F	M	A	M	J	J	A	S	O	N	D	J (2021)	F (2021)	M (2021)	A (2021)	M (2021)
Good (2016) — *Lobore*	Amudat-Amudat-Litei	28	10%	8%	7%	6%	5%	4%	3%	2%	1%	29%	14%	11%					
Drought (2015)— *Lokilotor*	Amudat-Amudat-Litei	9	0	0	0	0	0	0	0	0	0	100%	0	0					
COVID-19 year (2020)	Amudat-Amudat-Litei	26										24%	18%	16%	14%	10%	8%	6%	4%

ANNEX 2. TRENDS/PATTERNS IN THE AVAILABILITY OF OWN-GROWN SORGHUM FOR HOME CONSUMPTION IN A NORMAL, DROUGHT, AND COVID-19 YEAR

Year	Location	% set aside for home consumption from total harvest	J	F	M	A	M	J	J	A	S	O	N	D	J (2021)	F (2021)	M (2021)	A (2021)
Good (2016)	Abim-Morulem-Ywee wii cell	48	9%	7%	5%	4%	3%	1%	Other foods available			32%	22%	17%				
	Moroto-Nadunget-Lorikokwa	20	8%	8%	6%	6%	4%	4%	2%	2%	30%	12%	10%	8%				
Drought (2015)	Abim-Morulem-Ywee wii cell	17	15%	10%	5%	0	0	0	0	0	0	35%	25%	15%				
COVID-19 year (2020)	Abim-Morulem-Ywee wii cell	39										56%	14%	10%	8%	6%	4%	2%
	Moroto-Rupa-Lokalimon	24										80%	16%	4%	0	0	0	0
	Moroto-Nadunget-Lorikokwa	10										40%	30%	20%	10%			

ANNEX 3. PRICE TRENDS FOR PURCHASED MAIZE DURING COVID-19 RELATIVE TO A NORMAL AND DROUGHT YEAR

Location	Year	Units	J	F	M	A	M	J	J	A	S	O	N	D	J (2021)	F (2021)	M (2021)	A (2021)
Amudat-Karita-Tumwon	Good	2 kg (Kenya shilling (Ksh))	50/-	50/-	50/-	50/-	60/-	60/-	60/-	60/-	40/-	30/-	30/-	30/-				
	Drought—*Lokilotor* (2018)	2 kg (Ksh)	50/-	60/-	70/-	80/-	100/-	100/-	130/-	130/-	70/-	70/-	70/-	60/-				
	COVID-19 (2020/21)	2 kg (Ksh)	50/-	50/-	80/-	80/-	80/-	90/-	100/-	120/-	50/-	30/-	30/-	30/-	50/-	50/-	50/-	50/-
Amudat-Amudat-Nasilili	Drought (*Lokilotor*)	3 kg (UGX)	2,500	3,500	4,000	4,000	5,000	5,000	5,000	7,000	2,500	2,500	2,500	2,500				
	COVID-19 (2020/21)	3 kg (UGX)	2,000	2,000	2,500	1,500	1,500	3,000	2,000	1,000	1,000	1,000	2,000	2,000	1,000	1,500	2,000	2,000
Abim-Abim-Aroo West	Good (2017)	500 g (UGX)	200/-	200/-	300/-	500/-	500/-	800/-	700/-	500/-	300/-	200/-	200/-	200/-				
	Drought (1980)	500 g (UGX)	800/-	800/-	1,000/-	1,000/-	1,000/-	1,500/-	700/-	600/-	600	600	500	500				
	COVID-19 (2020/21)	500 g (UGX)	300/-	300/-	400/-	1,000/-	1,000/-	1,200/-	1,200/-	800/-	800/-	600/-	600/-	600/-	400/-	400/-	300/-	300/-
Moroto-Rupa-Lokalimon	Good year	3 kg (UGX)	2,500	3,000	3,500	4,000	5,000											
Moroto-Nadunget-	Good (*Apa Mulele*)	3 kg (UGX)	2,500	3,000	3,000	3,500	3,500	4,000	4,000	3,500	3,000	2,500	2,500	2,500				
Nataparakwangan	Drought (*Lorionokoriot*)	3 kg (UGX)	2,500	3,000	4,000	5,000	6,000	6,000	6,000	6,000	5,000	4,000	3,000	3,000				
	COVID-19 (2020/21)	3 kg (UGX)	2,500	3,000	4,000	5,000	6,000	6,000	6,000	6,000	4,000	2,500	2,500	2,500		2,000	2,500	3,500

ANNEX 4. MONTHLY CALENDAR OF WOMEN'S FARMING ACTIVITIES IN A NORMAL YEAR—ABIM DISTRICT

Month	Location: Ywee Wii Cell, Morulem	Location: Aroo West, Abim S/C	Location: Akwangagwel South, Morulem	Location: Bulla, Nyakwae S/C
January	- Clearing land - Symbol: hoe/panga	- Clearing land - Symbol: hoe	- Clearing land - Symbol: hoe	- Clearing land - Symbol: hoe
February	- Burning heaps of waste/rubbish from garden - Symbol: ash	- Burning waste/rubbish - Symbol: fire; match box	- Burning rubbish - Symbol: ash	- Burning rubbish - Symbol: match box
March	- Ploughing and planting sorghum, simsim, green grams, and millet - Symbol: sorghum seeds	- Planting maize and millet - Symbol: maize seeds	- Planting of millet and sorghum (intercropping) - Symbol: sorghum	- Planting millet - Symbol: millet seeds
April	- Ploughing and planting maize, groundnuts, *boo* - Symbol: groundnut seeds	- Planting white sorghum - Symbol: sorghum seeds	- Planting groundnuts and maize - Symbol: maize	- Planting sorghum, simsim, groundnuts, and sunflower - Symbol: sorghum seeds
May	- Planting beans (K20 variety), cassava, heaping sweet potatoes (first planting) to support during hunger period (eaten fresh), soya beans - Symbol: bean seeds (K20)	- Weeding millet and maize - Symbol: green grass	- Weeding millet, groundnuts, and maize - Symbol: green grass	- Weeding - Symbol: green grass
June	- Clearing piece of land for heaping sweet potatoes and planting—to be ready in December - Planting sunflower - Weeding sorghum, groundnuts, maize, beans - Symbol: weeds	- Planting beans and green grams - Symbol: bean seeds	- Planting beans - Symbol: bean plant	- Planting green grams - Symbol: green grams
July	- Planting beans (*obong odwogo*) - Heaping sweet potatoes - Symbol: sweet potato leaves	- Heaping sweet potatoes and planting simsim - Symbol: fresh sweet potatoes	- Heaping potatoes - Symbol: dry sweet potatoes	- Harvesting millet - Symbol: millet plant

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Month	Location: Ywee Wii Cell, Morulem	Location: Aroo West, Abim S/C	Location: Akwangagwel South, Morulem	Location: Bulla, Nyakwae S/C
August	- Harvesting groundnuts, millet, maize, sorghum (*serena*), and sweet potatoes that were heaped in May - Symbol: harvested millet (still in stalks)	- Harvesting maize, groundnuts, and millet - Symbol: groundnuts	- Harvesting millet, maize, and groundnuts - Symbol: groundnuts	- Harvesting groundnuts and simsim - Symbol: groundnuts
September	- Cutting/harvesting bamboo (men) and grass (women) for construction of living houses (huts) - Symbol: bamboo	- Weeding sweet potatoes and simsim - Symbol: simsim	- Harvesting beans - Symbol: beans	- Harvesting sunflower - Symbol: sunflower seeds
October	- Harvesting sorghum (*enyang*) - Symbol: *enyang* still in stalks	- Harvesting white sorghum - Symbol: knife	- Harvesting sorghum - Symbol: sorghum	- Harvesting sorghum - Symbol: sorghum
November	- Harvesting sweet potatoes for drying/preservation - Symbol: dried sweet potatoes	- Cutting grass, bamboo, poles for construction - Symbol: sickle	- Cutting grass, reeds for granaries, and bamboo for building huts - Symbol: sickle	- Cutting grass, fetching firewood, fencing homes - Symbol: sickle
December	- Construction of living houses (huts) - Slicing of sweet potatoes for drying - Brick laying for construction and sale - Traditional ceremonies: funeral rites, marriages - Doing small businesses - Symbol: bricks	- Construction of huts - Harvesting sweet potatoes - Traditional ceremonies: marriages, funeral rites - Laying bricks - Symbol: bamboo	- Construction of huts and granaries - Symbol: bamboo	- Construction/repair of huts - Celebrations with local brew from new harvest - Marriages - Visiting friends - Initiation to adulthood (*asapan*) - Symbol: a piece of wood

ANNEX 5. MONTHLY CALENDAR OF WOMEN'S FARMING ACTIVITIES IN A NORMAL YEAR—AMUDAT DISTRICT

Month	Location: Tumwon village, Karita S/C – 4.5.2021	Location: Kasikirei, Amudat S/C – 4.6.2021	Location: Chemotong, Amudat S/C – 4.9.2021	Location: Lomajanita, Amudat S/C – 4.9.2021
January	- Clearing land - Symbol: rake	- Clearing gardens - Symbol: panga	- Clearing gardens - Symbol: panga	- Clearing gardens - Symbol: panga
February	- Digging - Symbol: hoe	- Digging - Symbol: hoe	- Digging - Symbol: hoe	- Digging - Symbol: hoe
March	- Planting maize, beans, and *musung* - Symbol: maize, beans, and sorghum	- Planting - Symbol: maize and bean seeds	- Planting - Symbol: maize seeds	- Planting - Symbol: maize seeds
April	- Fencing gardens—when crops are germinating - Symbol: panga	- Harvesting aloe vera for sale - Symbol: aloe vera (*Tolkos*)	- Fencing - Symbol: thorns	- Fencing gardens - Symbol: thorns
May	- Major weeding - Symbol: green grass	- Serious weeding - Symbol: green grass	- Weeding - Symbol: green leaves	- Weeding - Symbol: green leaves
June	- Harvesting beans - Symbol: beans	- Harvesting beans - Symbol: beans	- Harvesting beans - Symbol: beans	- Beans ready - Symbol: beans
July	- Taking care of crops in the gardens - Symbol: *manilla* mat—sleep in gardens	- Cutting sticks for repair/building of granaries - Symbol: sticks	- Constructing granaries - Symbol: sticks	- Construct/repair granaries - Symbol: dry sticks
August	- Building/repairing granaries—maize and sorghum ready - Symbol: dry sticks for granaries	- Collecting grass for granaries - Children taking care of maize in gardens - Symbol: dry grass	- Harvesting aloe vera - Symbol: aloe vera	- Harvesting aloe vera - Symbol: aloe vera

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Month	Location: Tumwon village, Karita S/C – 4.5.2021	Location: Kasikirei, Amudat S/C – 4.6.2021	Location: Chemotong, Amudat S/C – 4.9.2021	Location: Lomajanita, Amudat S/C – 4.9.2021
September	- Heaping maize - Symbol: standing sticks—like heaps	- Cutting and heaping of maize - Symbol: standing sticks	- Heaping maize - Symbol: standing sticks	- Heaping maize - Symbol: standing sticks
October	- Transfer maize to the store (with cobs) - Symbol: maize cobs	- Thresh maize and store in granaries - Symbol: thresher and maize cobs	- Threshing - Symbol: thresher	- Constructing/repairing huts - Symbol: heap of dry mud
November	- Building/repair of living houses - Symbol: dry grass	- Repair/construction of living houses - Symbol: wet mud	- Construction of living houses - Symbol: mud	- Threshing - Symbol: thresher
December	- Threshing maize - Symbol: thresher and sack	- Watering and cutting leaves for goats that remain in the village - Symbol: water container	- Watering goats at the riverbed - Symbol: plate with water	- Watering goats - Symbol: container with water

ANNEX 6. MONTHLY CALENDAR OF WOMEN'S FARMING ACTIVITIES IN A NORMAL YEAR—MOROTO DISTRICT

Month	Nakalimon, Rupa	Kotaruk, Nadunget	Nakonyen, Tapac	Pupu/Kanakol, Rupa	Kosomaita, Nadunget
January	- Charcoal burning and selling - Sale of firewood - Symbol: charcoal	- Charcoal burning/selling - Symbol: charcoal	- Clearing old gardens - Symbol: axe	- Clearing gardens - Symbol: Panga	- Collecting firewood - Burning charcoal - Symbol: stick
February	- Clearing the garden (*Akidim*) - Symbol: axe/panga	- Clearing gardens - Symbol: panga/axe	- Burning chaff - Removing tree stumps - Symbol: mattock (*surur*)	- Burning chaff (rubbish) - Symbol: ash	- Clearing gardens - Symbol: panga
March	- Digging/tilling land using a hoe - Planting the white Turkana sorghum (*tinyitinyi*)	- Symbol: hoe - Digging using hoes - Symbol: a hoe	- Ploughing/digging nearer gardens - Symbol: hoe	- Digging by hand/hoe - Symbol: hoe	- Planting by hoe - Symbol: hoe
April	- Planting the red Karamojong sorghum - Ploughing using oxen - Planting maize - Symbol: *ayokot* (stick for tying the plough disc on the bulls)	- Ploughing using oxen - Symbol: *ayokot*	- Planting in the nearer gardens - Symbol: *ayokot*	- Ploughing using oxen - Symbol: *ayokot*	- Ox-ploughing - Symbol: *ayokot*
May	- Weeding - Symbol: leaves; green grass	- Weeding (*Akichap*) - Symbol: green grass/ leaves	- Weeding nearer gardens - Symbol: leaves; green grass	- Weeding - Symbol: green leaves	- Weeding - Symbol: green grass
June	- The white Turkana sorghum is flowering - *Ngamug, ngadekala,* and *eboo* leaves ready and consumed - Symbol: *ngadekala; ngamug*	- Consuming vegetables (including wild ones)—leaves of beans, *ngadekala, ngamug* - Symbol: guard	- Beans, *ngamug*, and *ngakaidei* are ready - Symbol: *ngamug*	- Wild vegetables, *ngadekala* ready - Symbol: *ngadekala*	- Eating *ngamug* - Symbol: *amugit*

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Month	Nakalimon, Rupa	Kotaruk, Nadunget	Nakonyen, Tapac	Pupu/Kanakol, Rupa	Kosomaita, Nadunget
July	- Harvesting white sorghum - Symbol: white sorghum	- Harvesting white sorghum - Symbol: white sorghum	- Fresh maize from nearer gardens ready and consumed - Symbol: maize	- White sorghum ready - Symbol: white sorghum	- Harvesting beans - Symbol: beans
August	- Harvesting maize - Harvesting red sorghum fallen by frogs (*ngimwa lu angakidodoka*) - Symbol: maize	- Harvesting maize—maize ready - Symbol: maize	- Cutting, heaping (*atukot*), and drying of maize from nearer gardens - Symbol: maize	- Maize ready - Symbol: maize	- Harvesting maize - Symbol: maize
September	- Harvesting red sorghum - Constructing racks for drying sorghum (*ngatukito*) - Symbol: red sorghum	- Harvesting red sorghum - Symbol: red sorghum	- Building or repair of granaries (*ekeru/edula*) and putting maize (with cobs)—from nearer gardens - Symbol: sticks and maize	- Harvesting red sorghum - Symbol: red sorghum	- Harvesting sorghum - Symbol: sorghum/knife
October	- Threshing, winnowing, and putting sorghum in the granaries - Symbol: thresher (threshing stick)	- Threshing and winnowing red sorghum - Symbol: thresher	- Repair or construction of living houses - Symbol: sticks	- Threshing and winnowing red sorghum - Symbol: *aramet*	- Threshing sorghum - Symbol: thresher
November	- Traditional ceremonies (*ngasuban*), e.g., wedding - Making local brew using poor- quality sorghum (*ngikabinin*) - Symbol: *alagait*	- Traditional ceremonies—a lot of local brew for ceremonies - Symbol: *alagat*	- Threshing and putting maize in sacks - Ceremonies (*ngasuban*)—*Lopeikirep; asapan*; weddings - Symbol: *alagait*	- *Ngasuban* - Symbol: *alagait*	- Traditional ceremonies - Symbol: *alaga*
December	- Cutting grass for thatching—construction or repair of huts - Symbol: dry grass	- Collecting grass for building or repair of houses - Collecting sticks for building or repair of houses - Symbol: dry grass	- Clearing new gardens - Symbol: panga	- Collecting grass and sticks for house repair/construction - Symbol: dry grass	- Repair/construction of huts - Symbol: sticks

ANNEX 7. EXAMPLES OF GOOD VERSUS DROUGHT YEARS—MOROTO DISTRICT

Location(s) that mentioned	Local name	Meaning/derivation of the name	English name/ translation	What happened (major/ remarkable events)
Good years				
Moroto-Nadunget_ Lokeeruman	*Ekaru ka apa Mulele/ Ekaru Ekutelek*			• Good rains • Fall army worm first affected sorghum. When it disappeared, crops flourished, and there was a bumper harvest.
Bad (drought) years				
Moroto-Nadunget_ Lokeeruman	*Lorionolup/ Lorionokoriot*			• Little or no rain (drought) • People cultivated but seeds did not germinate. • Migrations for food and pasture to South Karamoja (Nakapiripirit) and Tesoland; some people also went to Turkana (Kenya) for food relief. • Blanket distribution of relief food
	Lodiim Kejen/Ekaru angakoyo/Lokoyo			
	Lolibakipi			
	Lorengelaga			
	Lokooro			
	Ekaru akomonti	The year when a food relief camp was established at Municipal Primary School (Moroto) for people affected by drought		
	Ekaru a-Nachan/ Lokan-kaarei			
Tapac-Nakonyen	*Lomoloko/ekurut angimwa*			
Tapac-Nakonyen	*Ekaru ka-Akolong*			
Tapac-Nakonyen	*Ekaru angamor/ Ekaru a-Nachan*			
Tapac-Nakonyen	*Ekaru a-Losuron*			

ANNEX 8. EXAMPLES OF GOOD/NORMAL AND BAD (DROUGHT) YEARS—AMUDAT DISTRICT

Location(s) that mentioned	Local name	Meaning/derivation of the name	English name/ translation	What happened (major/ remarkable events)
Good years				
Loroo-Kotiti	*Konyi nya kikoghoy kifwolin*	Year of disarmament (2006??)	2006?	People accepted salvation/ spirituality
Loroo-Kotiti			2019?	
Amudat S/C-Akoule	*Konyi Lobore*		2007?	
Loroo-Akorikea; Loroo-Chemanjal	*Apa Loreng*			
Amudat-Litei; Loroo-Naloit; Loroo-Ngotutei; Amudat S/C-Kases	*Lobore*		2015??	
Loroo-Naloit; Amudat-Chemotong	*Akuroreng*			
Amudat-Loroo-Lokitelamal	614	Year named after a variety of maize	2016	
Bad (drought) years				
Loroo-Kotiti	*Konyi Losuron*	Year of Losuron		Losuron, a member of parliament (MP) for Kacheliba (Kenya) brought relief food.
Loroo-Kotiti; Karita-Arapada; Loroo-Akorikea; Amudat-Akoule; Karita-Tumwon; Loroo-Chemanjal; Amudat-Litei; Loroo-Naloit; Loroo-Ngotutei; Amudat S/C-Kases; Amudat-Chemotong	*Konyi Lokilotor Konyi Lokit??*		2018	- Drought; hunger - All cows, even those from Kenya, migrated to Lokilotor (in Bukedea, Tesoland) for pasture and water. - People dug very deep water wells at river Kanyangareng.
Amudat-Loroo-Lokitelamal	*Lomoloko*	The year of fall army worm of maize	2018	

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Location(s) that mentioned	Local name	Meaning/derivation of the name	English name/ translation	What happened (major/ remarkable events)
Karita-Arapada	*Konyi Kogeta*			- Animals migrated to Kogeta (near Namalu, Nakaps District). Karamojong took advantage and did several raids on the Pokots. The government responded through a major military operation.
Amudat S/C-Akoule	*Tapoyo*			- Drought—animals, people, and birds died.
Amudat S/C-Akoule	*Konyi Chepoyi*			Drought; women tied children on trees to allow them to fetch water from a well. Sometimes, these children died.
Amudat S/C-Akoule	*Konyi* "wheat"			
Loroo- Akorikea	*Konyi Apaipus*	Apaipus, a Karamojong man, migrated to Pokot land.		Drought and hunger
Loroo-Akorikea	*Konyi Chemaswetai*	The year of *Chemaswetai* (a small sack that takes 15 *doli—doli* is a 3 kg tin)		Drought; people went to Amakuriat and Turkana (Kenya) to buy food.
Loroo-Akorikea	*Konyi Chelek*	- The year of Chelek (name of a place) - People bought food from Chelek, a place in Turkana.		Drought
Loroo-Naloit	*Lomoloko*			

ANNEX 9. EXAMPLES OF GOOD/NORMAL VERSUS BAD (DROUGHT) YEARS—ABIM DISTRICT

Location(s) that mentioned	Local name	Meaning/derivation of the name	English name/ translation	What happened (major/ remarkable events)
Good years				
Odolo East, Morulem			1981	
Omoo West (Awac S/C); Rachkoko South (Morulem S/C), Geregere South (Nyakwae S/C)	*Mwaka Kauda* (2003)	2002/3		The late MP, Omwony Ojok, gave 3 guns per village for security.
Omoo West, Awac; Odolo East, Morulem			2006	
Rachkoko South, Morulem; Katebakume, Nyakwae			2008	
Achan Penino, Alerek			2009/2010/ 2011	- Animals in good body condition - Good harvest
Otumpili North, Alerek			2010	
Akwangagwel South (Morulem S/C); Geregere South (Nyakwae S/C)	*Mwaka Ka Echwee Otheru*	Even the lazy harvested something.	2011	
Aroo West, Abim S/C; Bulla, Nyakwae			2013/2014	
Ywee Wii Cell, Morulem			2016	
Aroo West, Abim S/C;			2017	
Ywee Wii Cell, Morulem; Bulla, Nyakwae			2018	
Nyikinyiki, Magamaga; Loka, Lotuke; Gulopono Central, Lotuke; Aroo West, Abim S/C; Akwangagwel South, Morulem' Katebakume, Nyakwae	*Mwaka Ka Kaal*	The year of millet	2019	
Nyikinyiki, Magamaga			2020	

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Location(s) that mentioned	Local name	Meaning/derivation of the name	English name/ translation	What happened (major/ remarkable events)
Bad (drought) years				
Nyikinyiki, Magamaga; Achan Penino, Alerek; Otumpili North, Alerek; Omoo West, Awac; Loka, Lotuke; Rachkoko South, Morulem; Odolo East, Morulem; Aroo West, Abim S/C; Akwangagwel South, Morulem; Geregere South (Nyakwae S/C); Katebakume, Nyakwae; Bulla, Nyakwae	*Mwaka Rubale/ Mwaka Pier aboro/ Nyakauda/Ruun Kotikau/Oringo Kec/Kec Pier Aboro /Mwaka muleth*	The year that people fed on the weed called *Rubale*. The year that people moved to Muleth for casual work.	1979/80	- Most severe drought in history; hunger; livestock theft/raids - People survived on old skins/ hides and on a weed called *Nyekauda* that looks like millet. - People ate the leaves and fruits of the following trees: *owii* (leaves and fruits), *olam* (leaves and fruits), *Omoodu* (roots resemble yams), *Welu* (fruits).
Omoo West, Awac			1988	Hunger
Achan Penino, Alerek; Loka, Lotuke; Geregere South (Nyakwae S/C)	*Mwaka Odiawut/ Mwaka Rubale/ Opong Kirio*		1998	- Kony disturbance - Hunger
Otumpili North, Alerek	*Maa Ocika*	Mothers warning daughters not to tamper with the little sorghum in the granary	1995/96	
Loka, Lotuke; Gulopono Central, Lotuke			2004	Drought
Akwangagwel South, Morulem	*Mwaka erubale*		2013	
Rachkoko South, Morulem			2014) (floods	
Achan Penino, Alerek	*Mwaka bangoting*		August 2015 –May 2016	People survived on residue of local brew and leaves of *ekorete* tree.
Ywee Wii Cell, Morulem	*Mwaka Eluko*		2015	*Eluko* is a type of sorghum from Lira/Lango sub-region. People fed on it in 2015.
Aroo West, Abim S/C	*Mwaka Kaorumbale*		2016	
Otumpili North, Alerek			2017 (floods)	

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Location(s) that mentioned	Local name	Meaning/derivation of the name	English name/ translation	What happened (major/ remarkable events)
Ywee Wii Cell, Morulem; Geregere South (Nyakwae S/C); Katebakume, Nyakwae; Bulla, Nyakwae	*Maa Chika /Mwaka Kalamakuka/ Mwaka Kapelibiong /Mwaka na eloko dhok kibel*		2017 (drought)	- Fed on a hard type of sorghum from Lango sub-region - Got relief food from WFP - The year that people exchanged cows for sorghum from Acholi
Nyikinyiki, Magamaga; Akwangagwel South, Morulem	*Mwaka Odiawut*	The year of cassava flour, when most households were buying cassava flour for porridge	2018	
Ywee Wii Cell, Morulem			2019 (floods)	
Omoo West, Awac; Aroo West, Abim S/C; Akwangagwel South, Morulem	*Mwaka Kabonyo*		2020	- **Desert locusts** invaded and caused a lot of crop destruction. - However, there was enough rain (**floods**). - There was a lot of **insecurity**—restricted access to distant gardens

ANNEX 10. REMARKABLE EVENTS IN THE POKOT AREA

Source: William Atukoi Matale, Konyao, Amudat

Year (English translation)	Year (local name)	Meaning of the name	What happened/remarkable events
1895–1906	*Kima ngwinya/ Tuwin Po Koor*	The world became dark/empty.	- **Severe drought** and **disease** - Wild animals (lions, hyenas) ate people. - Many people and animals died.
1915			The first European called Krampton (*Krimti*—Pokot pronunciation) came and established an office in Kacheliba, Kenya.
1917			- The Turkana of Kenya (locally termed by Pokots as *Ntarwa*) **raided** Pokots at Lodwar in Alale, Kenya. Pokots were pushed towards Kadam, Namalu, Katabok, and Karita.
1918	*Konyi Krimti*	The year of *Krimti* (*Krampton*	- **Major clash** between Pokots and Karamojong (Pian) at a waterpoint called Okilim. People first used sticks to) fight and then spears. The Karamojong were overwhelmed and pushed towards Bukedea in Teso. Pokots took Karamojong animals and moved towards Kitale, Kenya through Kanyirus and Suam. - With support from Krampton, the Pokots launched a major **revenge attack** on the Turkana and took many animals.
1922			Europeans pushed/**displaced** Pokots from around Kitale in Kenya towards Kacheliba in Kenya
1926			The major eclipse of the sun
1928	*Koringring*	Earthquake	Major earthquake
1931	*Kinyaka*		- **A major desert locust invasion** - A white man mobilized many people to step on the breeding sites of locusts. During the activity, the Pokots composed a Kiswahili song that they sung while crushing locusts. Song: *kanyaga polepole*
1933			**Foot and mouth disease (FMD) outbreak**
1934	*Konyi Kimomor Nawi*		Pokots requested their seer for permission to start **war** with the Karamojong. This was after a long time of peace. Before then, there was celebration (dancing, feasting) at Lobore (1930/31). The seer granted permission at Nawi, near Karita, Amudat District. At Lobore, elders did rituals to prepare the youths for war.
1942			**Drought**—Pokots migrated to Lokilotor in Tesoland. They stayed there for one year until the Teso and Karamojong complained that Pokots should go back to their ancestral land.
1944	*Konyi Lokitare*	The year of Lokitare	Lokitare and his uncle called Lemukol (a hero) were killed in a **raid** at Koromoch (near Achorchor).

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Year (English translation)	Year (local name)	Meaning of the name	What happened/remarkable events
1947/48	*Konyi Molmolei/ loleo*	The year of rinderpest	- **Rinderpest outbreak**—cattle died. - Eclipse of the sun (*Chema asis)* - Circumcision of the last age set (Korongoro) - **Drought**
1949/50			- Pokots attacked (**raided**) Akapel (a hill near Lorengedwat) in Karamoja and took many animals. Lorika, an agent of a white man, reported the raid. - Building of Marich Pass bridge in West Pokot, Kenya
1953	*Konyi Lorika*	The year of Lorika	- **FMD (*Ngorian*) outbreak** - **Pokots clashed** with Karamojong. Apangolekit (a Karamojong chief) and Lorika (father of Asiyo), a Karamojong elder, were killed/speared. - **Drought**
1955	*Konyi Lotiakamelei*		- **Severe drought** - People migrated/scattered in different directions because of drought. - Topogh star did not appear—this was a sign of no rain.
1958	*Konyi Kowokoi*		- **Severe drought** - People moved a lot looking for pasture for livestock. - Walangor (a Pokot elder) was killed.
1960	*Konyi sindano/ molmolei*	The year of vaccination against rinderpest	- Very **severe rinderpest outbreak**; worse than 1947/8 - There was vaccination against rinderpest. Unvaccinated animals died while those that were vaccinated survived. - **Drought**
1965	*Tapoyo*		**Severe drought**
1979	*Konyi Kifaru*	The year of the military tanker	- **Drought** - Pokots went to **raid** areas around Namalu (Nakapiripirit District, Karamoja sub-region) and were scattered by an army tanker. Many Pokots were killed.
1980	*Konyi tokodou*	The year of the Mark 4 gun (*Tokodou*)	- **Cholera outbreak**—started at Moruita in Nakapiripirit District—many people died. - The cholera outbreak was followed by **drought**—many people and animals died due to drought. - Karamojong acquired guns (Mark 4), attacked Pokots, and pushed them from Karita area (in Amudat District) to Kacheliba in Kenya. It was a **huge raid** by the Karamojong. - **Drought, cholera, and raids** made Pokots from Loroo to move towards Makutano and Kacheliba in Kenya—Loroo area was deserted. - Gold was discovered in Korpuk.

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Year (English translation)	Year (local name)	Meaning of the name	What happened/remarkable events
1984	*Konyi Lotiriri*	The year of helicopter gunship (*Lotiriri*)	- The Kenyan military, together with the Ugandan military, mounted a major military operation on Pokots and Karamojong (of Kadam and Nabilatuk). People were arrested, and the impounded animals were taken to Kacheliba police station in Kenya. Homes were bombed. The operation lasted for three months. - Wild animals (lions, hyenas) and impounded cattle stayed together. - There was **drought**. - Gold was discovered in Chepkararat in Karita sub-county (Amudat District)—that is how people survived the drought.
1991/92	*Konyi Longam*		- The Pokots went to **raid** the Karamojong of Namalu and were massacred by the army and the Karamojong - There was enough rain??? - Bush clearing for construction of Turkwel dam in Kenya
1992	*Konyi* "wheat"/ *Konyi* Losuron	The year of wheat/ the year of Losuron	- **Drought**—people were given wheat as relief food. Losuron, a Kenyan member of parliament, brought relief food.
1994	*Konyi Chepoyi*		**Severe drought**
1996	*Konyi Rubi*	The year of *Rubi* (a mineral)	- *Rubi* (a mineral) was discovered in Nakirokon in Alale, Kenya. - It was an average year. - Alcohol consumption (hard liquor/changaa) and prostitution erupted from the *Rubi* mining sites. That is the genesis of the current alcohol consumption habits and prostitution.
2005? 2007?	*Konyi* Lobore		Elders performed rituals at Lobore to reverse the war commands given many years ago and give way for peace.
2015? 2016?	*Konyi* Lobore		- This was a repeat of Lobore event held in 2005? 2007? to complete the rituals. People were advised to go to church and to school and not to war. - It was a good year.
2018	*Konyi Lokilotor*		**Drought**
2019			Good year
2020	*Konyi* Corona	The year of Corona	COVID-19 in Uganda