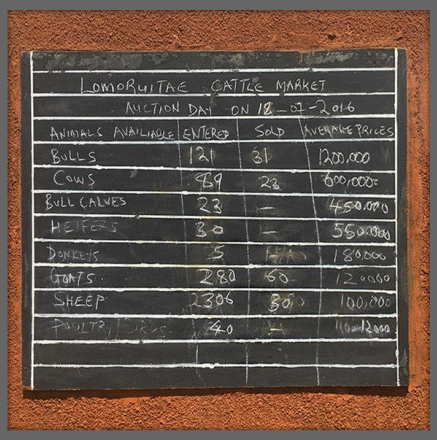
FEWS NET

FAMINE EARLY WARNING SYSTEMS NETWORK

# KARAMOJA, UGANDA

## ENHANCED MARKET ANALYSIS 2016

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## About FEWS NET

Created in response to the 1984 famines in East and West Africa, the Famine Early Warning Systems Network (FEWS NET) provides early warning and integrated, forward-looking analysis of the many factors that contribute to food insecurity. FEWS NET aims to inform decision makers and contribute to their emergency response planning; support partners in conducting early warning analysis and forecasting; and, provide technical assistance to partner-led initiatives.

To learn more about the FEWS NET project, please visit http://www.fews.net

## Acknowledgments

FEWS NET gratefully acknowledges the network of partners in Uganda who contributed time, analysis, and data to make this report possible. See the list of participants and their organizations in Annexes 1 and 3.

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## Acronyms and Abbreviations

| | |
|---|---|
| **ACF** | Action Against Hunger |
| **ASCA** | Accumulated savings and credit association |
| **CDF** | Community Development Fund |
| **CDP** | Central distribution point |
| **CIF** | Cost, insurance, and freight |
| **CGAP** | Consultative Group to Assist the Poor |
| **CNDPF** | Comprehensive National Development Planning Framework |
| **COC** | Certificate of Conformity |
| **COMESA** | Common Market for Eastern and Southern Africa |
| **CSB** | Corn-soy blend |
| **DDG** | Danish Demining Group |
| **DFID** | Department for International Development |
| **DLCA** | Digital Logistics Capacity Assessment |
| **DRC** | Danish Refugee Council |
| **EAC** | East African Community |
| **ECHO** | European Community Humanitarian Aid Office |
| **ECTS** | Electronic Cargo Tracking System |
| **EDP** | End distribution point |
| **EMA** | Enhanced Markets Analysis |
| **FAO** | Food and Agriculture Organization |
| **FDP** | Field distribution point |
| **FEG** | Food Economy Group |
| **FEWS NET** | Famine Early Warning Systems Network |
| **FFP** | Food for Peace |
| **FIC** | Feinstein International Center |
| **FMC** | Food Management Committee |
| **FOB** | Free on board |
| **FSNA** | Food Security and Nutrition Assessment |
| **FY** | Fiscal year |
| **GAM** | Global acute malnutrition |
| **GHG** | Growth, Health, and Governance |
| **GIEWS** | Global Information and Early Warning System |
| **GIZ** | German Federal Enterprise for International Cooperation |
| **GOU** | Government of Uganda |
| **HDDS** | Household Dietary Diversity Score |
| **ICT** | Information communication technology |
| **IGAD** | Intergovernmental Authority for Development |
| **IM4** | Customs Bill of Entry |
| **IPC** | Integrated Phase Classification |
| **KALIP** | Karamoja Livelihoods Program |
| **KAPDA** | Kaabong Peace and Development Agency |
| **KES** | Kenyan Shilling |
| **kg** | Kilogram |
| **KIDDP** | Karamoja Integrated Disarmament and Development Program |
| **KIDP** | Karamoja Integrated Development Program |
| **km** | Kilometer |
| **KPAP** | Karamoja Productive Assets Program |

| | |
|---|---|
| **LDU** | Local defense units |
| **LRP** | Local and regional procurement |
| **MAAIF** | Ministry of Agriculture, Animal Industry, and Fishing |
| **ml** | Milliliter |
| **mm** | Millimeter |
| **MT** | Metric tons |
| **MTN** | Mobile Telephone Networks |
| **NDP** | National Development Plan |
| **NEMA** | National Environment Management Authority |
| **NGO** | Nongovernmental organization |
| **NUSAF** | Northern Uganda Social Action Fund |
| **PIN** | Personal identification number |
| **PRDP** | Peace, Recovery, and Development Plan |
| **PVOC** | Pre-Export Verification of Conformity |
| **RAU** | Resilience Analysis Unit |
| **RFCF** | Request for Certification Form |
| **RRA** | Rapid rural appraisal |
| **RWANU** | Resiliency through Wealth, Agriculture, and Nutrition |
| **SACCO** | Savings and credit cooperative society |
| **SADC** | Southern Africa Development Community |
| **SAGE** | Social Assistance Grants for Empowerment |
| **SAM** | Severe acute malnutrition |
| **SCT** | East Africa Single Customs Territory |
| **SIM** | Subscriber identity module |
| **SO** | Strategic objective |
| **TBT** | Technical barriers to trade |
| **UBOS** | Uganda Bureau of Statistics |
| **UGX** | Uganda shilling |
| **UN** | United Nations |
| **UNAP** | Uganda Nutrition Action Plan |
| **UNBS** | Uganda National Bureau of Standards |
| **UNDP** | United Nations Development Programme |
| **UNICEF** | United Nations Children's Fund |
| **UPDF** | Uganda People's Defense Force |
| **URA** | Uganda Road Authority |
| **USAID** | United States Agency for International Development |
| **UTL** | Uganda Telecom Limited |
| **VAT** | Value added tax |
| **VLSA** | Village savings and loan association |
| **WFP** | World Food Programme |
| **WTO** | World Trade Organization |

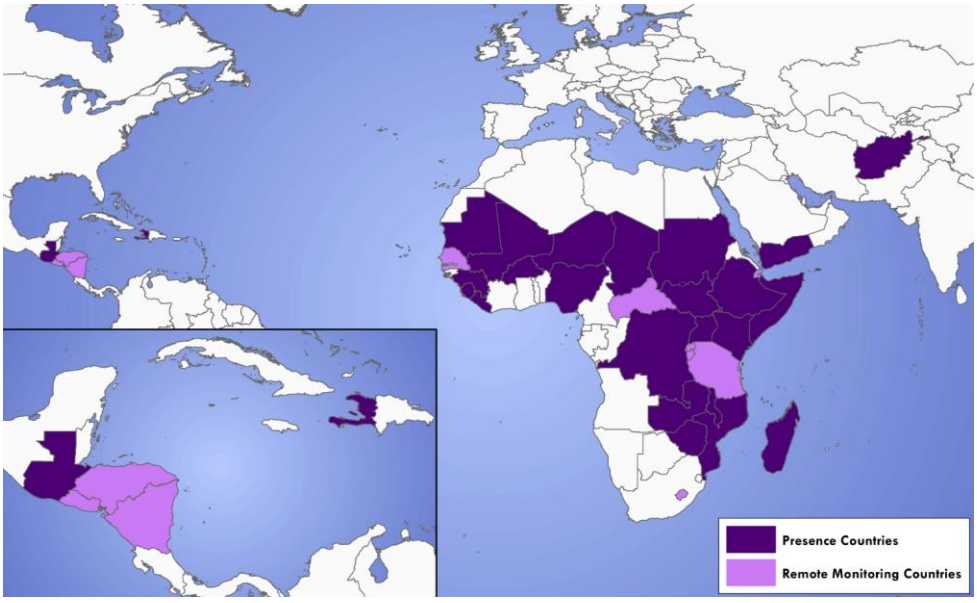
## Preface

The Famine Early Warning Systems Network (FEWS NET) is a leading provider of objective, evidence-based food security analysis. Based on in-depth understanding of local livelihoods, FEWS NET analysts monitor information and data related to weather and climate, crops, pasture conditions, markets and trade, nutrition, and other factors that influence acute and chronic food insecurity. Along with monthly reports and alerts, FEWS NET produces specialized research products on food security drivers and cross-cutting issues such as climate change and resilience.

In an effort to understand current and to foresee future market anomalies, FEWS NET relies on a broadly defined markets and trade knowledge base that includes Market Fundamentals reports (or context documents), special reports, and databases of historical market information including production, food balance sheets, and prices. The markets and trade knowledge base largely serves as baselines for the assessment of existence and extent of market-based anomalies that could contribute to food insecurity. The Market Fundamentals reports likewise serve as starting points for providing efficient and effective market-based response decision support for groups developing both emergency, including cash and voucher interventions as well as local and regional procurement (LRP), and development programs, including support to food security and nutrition through improving the availability of and access to food and value chain development.

In 2016, FEWS NET's core analytical activities were augmented to include Enhanced Markets Analysis (EMA). Under EMA, FEWS NET provides market-based response decision support, including but not limited to assessing the feasibility and potential impacts of food assistance programs (emergency and development) on a given country's local economy through Congressionally mandated analyses, often referred to as a Bellmon analysis. EMA reporting is progressive in nature, and, when possible, builds off FEWS NET's existing in-depth knowledge base in presence and remote monitoring countries.

**Figure 1. FEWS NET presence and remote monitoring countries**

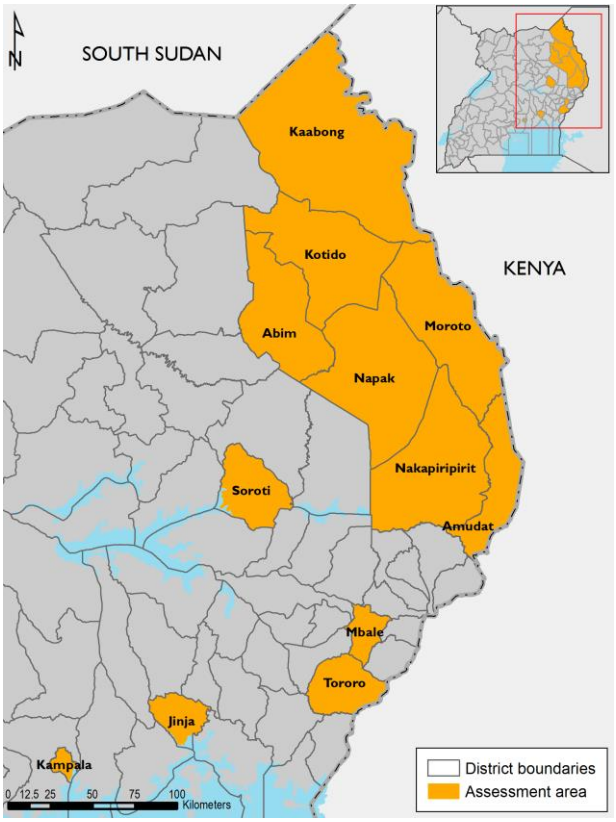



*Source: FEWS NET (2016e).*

## Executive Summary

- This FEWS NET Enhanced Market Analysis (EMA) report presents findings to inform regular market monitoring and analysis in the Karamoja subregion of Uganda. This report was prepared concurrently with a national Market Fundamentals Report for Uganda. Among other uses, the information presented jointly in these two reports can be used to support the design of food security programs, including but not limited to informing a U. S. Agency for International Development (USAID) Bellmon determination in advance of an FY 2017 USAID Community Development Fund-supported (CDF) development food assistance program in the Karamoja subregion.
- This study is based on 1) desk research, 2) fieldwork using rapid rural appraisal (RRA) techniques covering all seven districts of the Karamoja subregion as well as neighboring districts that are essential to local trade and the distribution of humanitarian assistance (Figure 2 and 3), and 3) a three-day stakeholder consultation workshop carried out in Moroto Town Center during the month of August 2016.[1]

**Figure 2 Districts visited during FEWS NET field assessment, Uganda, 2016**




*Source: FEWS NET (2016).*

- Karamoja is structurally deficit in terms of staple food availability. This deficit exists despite efforts in recent years by government and many international organizations to reduce pre-existing structural deficits in staple food production by supporting a transition from pastoral to agriculture-based livelihoods concurrently and following local disarmament. Many donors and nongovernmental organizations (NGOs), however, continue to support livestock activities. Food availability in Karamoja is determined by a combination of imports from neighboring surplus-producing areas of Uganda and local production, although important commodity-specific and geographic differences exist.
- Located in the northeastern part of Uganda, Karamoja is the least developed area in the country. Today, its three main livelihood systems are agricultural, agropastoral, and pastoral. Poverty and marginalization, poor infrastructure, conflict, insecurity, drought, and periodic food shortages afflicted the area for decades. Food assistance (food-for-work and school feeding, among others) plays an important role in meeting local food requirements for much of the population in Karamoja.
- Despite the presence of structural food gaps at both the micro and macro levels in Karamoja, the FEWS NET assessment found that, by many measures, markets perform well. An analysis of trade flow patterns and price co-movement suggests that markets within Karamoja are relatively well integrated with neighboring surplus-producing areas. Traders report being able to respond quickly to increased demand. Relatively low effective demand in Karamoja limits the extent to which the private sector can fill the local food gap.
- The region comprises Kaabong, Kotido, Abim, Moroto, Napak, Nakapiripirit, and Amudat districts. Environmental conditions vary within the region, making some areas better suited for agricultural production

[1] Please see Annex 1 for more information about the people interviewed, Annex 2 for the workshop agenda, and Annex 3 for the workshop participants list.

and livestock rearing than others. The majority of land cover is characterized as "grassland" and Normalized Difference Vegetation Index (NDVI) anomalies are pervasive. In contrast to the rest of the country, Karamoja has only one agricultural season due to its unimodal rainfall pattern, which runs from April through September. The peak of the lean season is between May and July. Low, erratic, and poorly distributed rainfall and pest/disease infestation are the most relevant threats to agricultural production within the region.

- Livestock production is more preponderant than crop production given the more favorable conditions for pasture growth and development (unimodal rainfall, drier ecosystem, frequently erratic rainfall patterns). Nonetheless, production of main staples including maize, sorghum, millet, dry beans, and oilseeds takes place, but at very low levels compared to other areas in Uganda, in both aggregate and per capita terms. Other crops such as groundnuts, cassava, and sweet potatoes are also produced at a low scale. The region is Uganda's main cultivation area for sorghum and millet. The generally low crop output is contrasted with the region's high livestock production. In fact, the Karamoja subregion is the main livestock-producing area in the country and supplies other regions in Uganda and South Sudan. Karamoja is also a transit area for Kenyan cattle moving into those same areas via the "Cattle Corridor" that runs from Turkana (Kenya) to central Uganda. Pastoralists rely on livestock rearing as a source of livelihoods and savings. In times of hardship, livestock are sold to access the resources needed to cover households' immediate needs. Poor households sell livestock at critical periods of the year when household expenditures are greatest (lean season and when school fees are due).
- Two marketing basins cover the northern and the southern areas of the region and engage in trade with South Sudan, Kenya, and the rest of Uganda. The northern most marketing basin is linked with the high-production areas of Gulu and Lira, while the southern most marketing basin is linked with Soroti. The degree of integration of marketing between Karamoja and the rest of the country is greater between areas with better road access. Transactions are based on cash, although some banks and village savings and loan associations (VSLAs) are available in Karamoja.
- It is often reported that agricultural prices are "high" in Karamoja. A review of secondary data from Farmgain and the World Food Programme (WFP) suggests that the dynamic is much more nuanced. For example, when comparing maize prices in Soroti and Gulu (two main areas that serve the Karamoja subregion) with prices in Karamoja, both the mean price levels and the coefficient of variation are similar. Prices across Uganda are highly seasonal, and prices in the Karamoja subregion are no exception.
- Three main types of markets operate in Karamoja: District town center and primary markets that are easily accessible and where the quantities traded are relatively large ; and smaller, more isolated secondary markets where the quantities traded are lower. Secondary markets can be highly seasonal in nature and operate only very briefly (for only a few hours) at strategic points of the year, particularly the harvest and postharvest period when local producers sell their crops, and during the lean season when small trucks travel into more isolated areas of the region with foodstuffs for sale.
- The local indigenous populations in Karamoja play a role in agricultural marketing, but more as "contextual actors" rather than directly engaging in agricultural and livestock trade as a livelihood source. This includes local elders, who are important in more general terms to local governance systems. Women are more likely than local men to participate in agricultural commodity trade, while men play a dominant role in livestock.
- The Karamoja subregion has long received external assistance. Most recently, the focus transitioned from assuring emergency needs in a conflict setting to seeking to develop and strengthen local livelihoods in a relatively stable context. Many activities focused on building resilience, but efforts to introduce improved agricultural practices and support agriculture-based economic growth and development are seen as incongruent with the local context.

- Market-based food assistance modalities have had mixed experiences in Karamoja. WFP is the most experienced institution in Uganda (and arguably the world) with regard to local commodity procurement and distribution. WFP Uganda was not available to meet with the FEWS NET assessment team for a meaningful technical discussion on local procurement efforts; however, information from distribution officers, industry stakeholders, and secondary sources suggests that WFP has little or no difficultly procuring and subsequently distributing required quantities of maize, maize flour, dry beans, and edible oil from within Uganda. No empirical evidence suggests inflationary impacts arising from those purchases. During the current round of USAID Title II programs, Mercy Corps, with support from World Vision, rolled out a seed voucher program in the northern districts of Karamoja. The program experienced difficulties with beneficiaries wanting seeds other than the improved ones stipulated in the program design. Low levels of literacy among vendors presented challenges. Lastly, the program shifted midway from a paper voucher to an electronic redemption and payment system. The Government of Uganda-funded Social Assistance Grants for Empowerment (SAGE) cash transfer program was also rolled out in southern Karamoja (see Chapter 5). Reliable mobile phone coverage presented difficulties, as did the lack of cash and pay points.
- Market-based modality feasibility is largely determined by the local enabling environment. In Karamoja:
    - Agricultural trade is complicated by the poor road network (and high transport costs) and localized insecurity. During the rainy season many roads are impassable, a situation that contributes to further isolation of many communities.
    - Although the security situation has improved and is now characterized as "relative peace," localized instances of theft and cattle rustling persist. These events are generally on a small scale, even targeting specific households or individuals rather than entire communities. The memory and perception of insecurity discourage trade and marketing activities in some areas (Kaabong in particular).
    - Two mobile phone companies are ubiquitous in Karamoja (Mobile Telephone Networks [MTN] and Airtel), with only a few subcounties where service is poor due to relatively mountainous terrain. The adoption and use of mobile phone technology and services are far more intensive among traders than among poor households.
    - Humanitarian storage facilities in Karamoja subregion and elsewhere in Uganda are largely viewed as adequate to support current program and project needs, but private storage options within Karamoja are limited.

# 1 Introduction to the Uganda Enhanced Market Analysis Assessment

U. S. Agency for International Development (USAID) currently supports both emergency (Food for Peace /FFP) and development (FFP, Feed the Future) food security activities in Uganda. Over the last six years, USAID/FFP has gained increasing flexibility to expand beyond the direct distribution of in-kind US-sourced commodities towards the use of market-based food assistance response modalities, including local and regional procurement (LRP), cash transfers, and food vouchers. USAID/FFP-funded development activities in Karamoja are currently supported through implementing partners Mercy Corps and ACDI/VOCA.[2] In the recent past, FFP also supported emergency programming in Karamoja. These types of programs require up-to-date evidence to support analysis of the feasibility and appropriateness of different market-based response options. To this end, USAID/FFP requested Famine Early Warning Systems Network (FEWS NET) to carry out a series of market assessments to provide this contextual information under FEWS NET's expanded Enhanced Market Analysis (EMA) capacity.

Over the previous three phases of the FEWS NET project, the FEWS NET team developed a rich knowledge of markets and trade dynamics in Uganda, culminating in the Uganda Market Fundamentals Report (MFR).[3] This national-level market context serves as useful background information for the present EMA Assessment Report, which focuses specifically on the scope of opportunities for market-based response options in Karamoja.

### USAID core research questions:

1. What is the general market context in Karamoja, including the structure, conduct, and performance of focus markets (maize, maize flour, sorghum, edible oil, and livestock), including the geography of production and trade, the level of market integration, and the seasonality of key activities?
   - 1.1 What are the local food preferences and dietary diversity among poor and very poor households in Karamoja?
   - 1.2 What are the existing barriers to entry into staple food and livestock marketing in Karamoja? Are certain populations more or less present in commodity marketing and why?
2. Do staple food markets (sorghum, maize, livestock, beans, and edible oil) operate in a competitive manner across Karamoja? What is the milling capacity within Karamoja?
3. What are the determinants of variations in market structure and performance across markets in Karamoja? Are there fundamental differences in the trade dynamics in Amudat district due to its proximity to Kenya?
4. What is the capacity of the private sector to increase staple food supply to support market-based food assistance activities within Karamoja?
   - 4.1 Does the private sector face constraints mobilizing financial resources to support such efforts in Karamoja?
   - 4.2 Are there other aspects of the local enabling environment (transportation and telecommunications infrastructure; availability of banking services, local experience with market-based interventions) that should be considered?
5. Do commodity supply chains operate well in areas identified for local and regional procurement?
   - 5.1 Have current implementing organizations faced logistics constraints related to procurement in Uganda and regionally and/or distribution in Karamoja?
   - 5.2 Are there commodities and countries that are better suited for local and regional procurement based on supply and price considerations?

[2] The Karamoja subregion, encompassing the districts of Abim, Amudat, Kaabong, Kotido, Moroto, and Nakapiripirit in Uganda's Northern Region, is referred to as simply "Karamoja" throughout the report.

[3] The Uganda MFR is currently under review and will be published on the FEWS NET website in late December 2016.

## 1.1 Study methods

This study was carried out in four phases between May and August of 2016.[4] The report was drafted in September 2016.

1. In May and June 2016, FEWS NET staff carried out a series of consultations with USAID/FFP Washington and the Uganda Mission staff to better understand their information needs.
2. In June and early July 2016, FEWS NET conducted a review of existing literature and resources on the local policy context, livelihoods, markets, food security outcomes, experience with previous food assistance programs, local infrastructure, and other aspects of the enabling environment relevant for market-based food assistance program design in Karamoja.
3. In early to mid-July 2016, FEWS NET designed the assessment approach and hired a team of local and international consultants and staff to support the research. During this time, the assessment questionnaires, checklists, and itinerary were developed. Within Karamoja, the study areas were purposively selected to include all seven districts. The markets and communities visited included a mix of relatively large and well-connected (physically) town markets as well as relatively small and less well-connected (physically) town markets. This sampling approach allowed for explicit comparison of market structure, conduct, and performance in large and easily accessible areas versus relatively smaller markets in more isolated areas. It is worth noting that the assessment took place during the peak of the lean season, when physical access constraints are greatest due to flooding. Although physical access is certainly an issue, the assessment team found that mobility during the rainy season was better than anticipated in most places (see Chapter 6 for a discussion of areas where physical access constraints hinder market activities, especially during the rainy season).
4. Between July 18 and August 6, 2016, the research team conducted the field assessment to fill information gaps and triangulate existing evidence and information. The team of five researchers divided into three groups, each accompanied by local facilitators. The first team (one agricultural economist and one food assistance program specialist) traveled to Abim, Kaabong, and Kotido. The second team (one agricultural economist and one food security specialist) traveled to Moroto, Nakapiripirit, Napak, and Amudat. The third team (logistics assessment specialist) traveled to Tororo, Mbale, and Soroti.[5] The study included semi-structured key informant interviews with local government and extension agents, NGO staff, traders, market administrators, farmers, private grain milling and edible oil processing firms, transporters, input dealers, and agents of financial service providers and telecommunications companies. The assessment team also conducted focus group discussions with beneficiaries of current Title II development programs in selected program intervention areas. The field assessment culminated in a stakeholder workshop that took place in Moroto from August 1–3, 2016 and served as an additional opportunity to validate many of the assessment team's findings and fill remaining information gaps through FEWS NET's network of partners. The full list of people interviewed during the assessment can be found in Annex 1. The workshop agenda and participants can be found in Annex 2 and Annex 3, respectively. As with other rapid appraisals conducted in Karamoja, the assessment findings results were triangulated with other research and secondary data to support and complete the analysis.

[4] Please see Annex 4 to learn more about FEWS NET's approach to Enhanced Market Analysis research methods.

[5] The logistics assessment specialist was not able to travel to Karamoja due to scheduling constraints. However, guidance was given to other members of the assessment team to complete this portion of the assessment within Karamoja.

## 1.2 Organization of the report

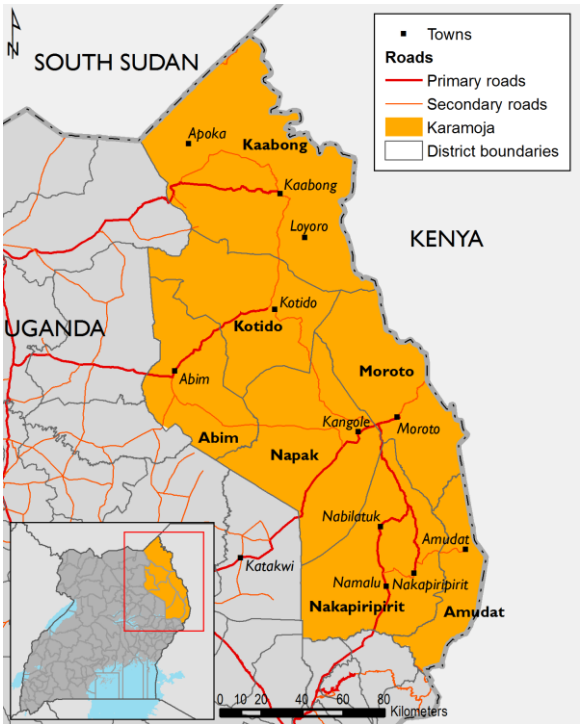
The remainder of the report is organized as follows: Chapter 2 provides readers with some of the basic context of Karamoja. This context addresses a number of cross-cutting issues including the local agroclimatology and suitability for different economic activities, physical accessibility, prevalence of poverty and malnutrition, and literacy rates. Chapter 3 discusses the local livelihoods context, including key sources of cash income and food preferences, as well an estimation of local structural food gaps among poor and very poor households. This chapter discusses the local population's low purchasing power (effective demand), one of the key underlying local dynamics, and implications for the subsequent analysis of market performance. Chapter 4 describes the local market context, including key sources of imports into Karamoja and the level of integration and price transmission with those external markets, as well as important barriers to entry to staple food and livestock marketing activities in Karamoja. Chapter 5 describes the local policy and food assistance context, including lessons learned from current implementing partners. Chapter 6 describes selected elements of the local enabling environment for market-based response efforts, including local information communication technology (ICT) infrastructure, the availability of local financial services, and standard procedures and documentation required for local and regional commodity procurement. Chapter 7 summarizes the key opportunities and challenges for market-based response program design in Karamoja that emerged from the study.

# 2 Context

## 2.1 Overview

The Karamoja subregion of Uganda's northern region, comprising the districts of Kaabong, Kotido, Abim, Moroto, Nakapiripirit, Amudat, and Napak (Figure 3), is part of the pastoralist corridor, and is largely populated by semi-nomadic cattle-keeping groups (Ezaga 2010). Karamoja is one of the poorest and most chronically food insecure regions of Uganda. Plagued by decades of conflict, instability, cattle raiding, and inconsistent climatology, the region is marginalized and underdeveloped. Interethnic conflict has historically driven insecurity, instability, and lagging socioeconomic advancement. Control for limited resources (water, pasture, etc.) and political dynamics are underlying drivers of the poor human development in the region; Karamoja exhibits Uganda's lowest human development indicators and lacks physical infrastructure, education, health facilities, and employment opportunities (Harmer 2012). Karamoja received fluctuating levels of external assistance for decades; the impact of aid programming in the region was limited, however, and often poorly aligned with the local livelihoods context, typically falling short of local needs (FEWS NET 2010). Increasing stability in recent years reinforced local perceptions of positive economic growth and opportunity. A number of prominent challenges still undermine efforts to achieve sustainable improvements to quality of life in Karamoja, as presented in more detail in the following sections:

**Figure 3 Districts of Karamoja subregion, Uganda**




*Source: FEWS NET (2016).*

- **Environmental —** Conditions are better suited to high-quality pasture land for livestock grazing than to the more intensive crop-based agricultural production systems that are supported by national and more localized government policies, plans, and projects (Chapter 5).
- **Social—**Local dependency ratios are very high. Endemic and widespread poverty occurs in a context where underlying livelihood and economic systems present limited meaningful income-earning opportunities (Chapter 3). Low rates of human capital are perpetuated by cultural attitudes toward education (particularly of girls' education) as well as by the high costs (relative to purchasing power) associated with children's education.
- **Infrastructure—**Road penetration is relatively poor (Chapter 6), and coverage is low for basic services such as electricity and water.
- **Governance —** Issues arise where formal and customary structures overlap in the management of conflict and security, often in situations of unclear jurisdiction and limited communication (Chapter 6).

## 2.2 Environmental conditions

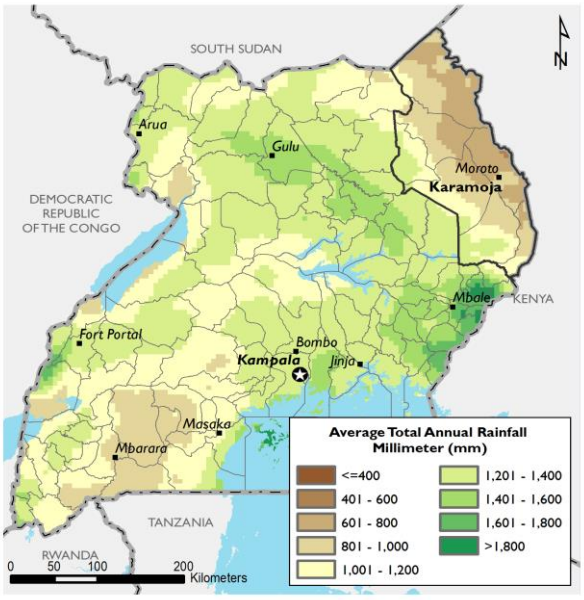
### 2.2.1 Agroclimatology

Karamoja's distinguishing climatic feature is that the region's seasonal rainfall follows a unimodal pattern, in contrast to the bimodal patterns in the rest of Uganda. Karamoja's agro-ecology is characterized by a drier pastoral zone to the east, a central agropastoral zone, and a wetter agricultural zone (or Green Belt) to the south and west.

The districts that make up Karamoja are collectively the driest in Uganda, registering only 300–625 millimeters (mm) of average annual rainfall (Figure 4). The southernmost districts of Karamoja receive rain earlier than the northern districts, with rains that peak between May and July (NEMA 2009). Rainfall is increasingly characterized and observed as erratic, poorly distributed, and inconsistent from year to year, often resulting in consecutive seasons of poor and erratic rainfall distribution (FEWS NET 2010). As Figure 4 shows, compared to the rest of the country, Karamoja not only has the lowest precipitation levels (Figure 5), but also the highest variation in rainfall (map to the right). This situation impacts agricultural production in different ways.

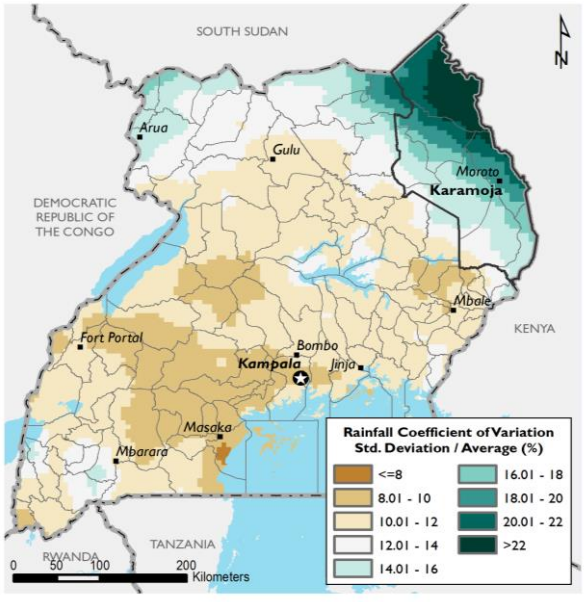
Poor and erratic rains influence decisions around timing and extent of planting, affect the growing cycle of crops, and ultimately, impact harvesting and overall yield. Compared to crops, natural grasslands are more adapted to withstand local conditions. Given the reliance of livestock on grassland, livestock production is less affected than crop production in the presence of erratic and poorly distributed rains. Between 2011 and 2014, the Karamoja subregion experienced consecutive years of insufficient and erratic rainfall. In 2013, cultivated area was reduced as much as 50 percent in some districts (WFP et al. 2013).[6]

**Figure 4 Average total annual rainfall, Uganda, 2001–2014**




*Source: Author's calculations based on data from USGS (2016).*

**Figure 5 Average rainfall variation, Uganda, 2001–2014**




*Source: Author's calculations based on data from USGS (2016).*

[6] Weather conditions were not favorable in 2012 and a prolonged dry spell affected planting and harvesting in 2013.

### 2.2.2 Soil conditions

Soils in Karamoja are acidic. Low mineral and nutrient reserves in forms that are not readily available to crops contribute to low levels of fertility and productivity. Conventional farming systems in the region contribute to further soil degradation (NEMA 2009). Soil conditions and limited precipitation on arable land limit crop production potential in an entirely rainfed production system. Without improved cropping techniques and external inputs that are suitable to local conditions, yields will remain at low levels.

### 2.2.3 Land cover

The broader Karamoja subregion is largely covered by natural bush and grassland. Subsistence agriculture takes place in areas with relatively higher and less variable rainfall (Figure 6). The region's natural suitability for livestock production is evidenced by the general availability of grassland and the traditional livelihoods that have evolved around livestock activities.

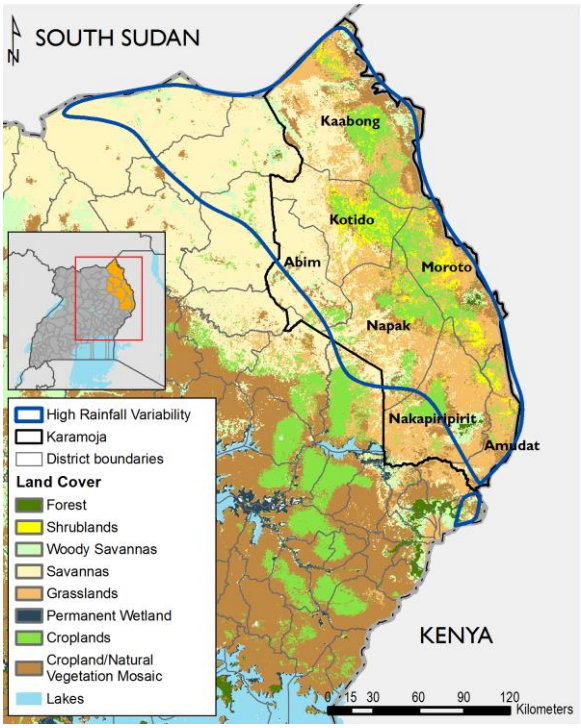
### 2.2.4 National parks, forest reserves, and wildlife reserves

The Government of Uganda (GOU) established a number of protected areas (sometimes referred to as "gazetted") across the country to protect the national natural resource base and diversity. These areas are designated as national parks, forest reserves, and wildlife reserves. Wildlife (reserve or management area) protection areas represent the category of protected environments in the region with the largest area. Figure 7 shows the location of protected areas in Karamoja. While national park and forest reserves are mainly located in the northern part, wildlife reserves and management areas are more frequent in the southern half of Karamoja. These protected environments are characterized by lower human population density and activities compared to unprotected areas.

### 2.2.5 Seasonality

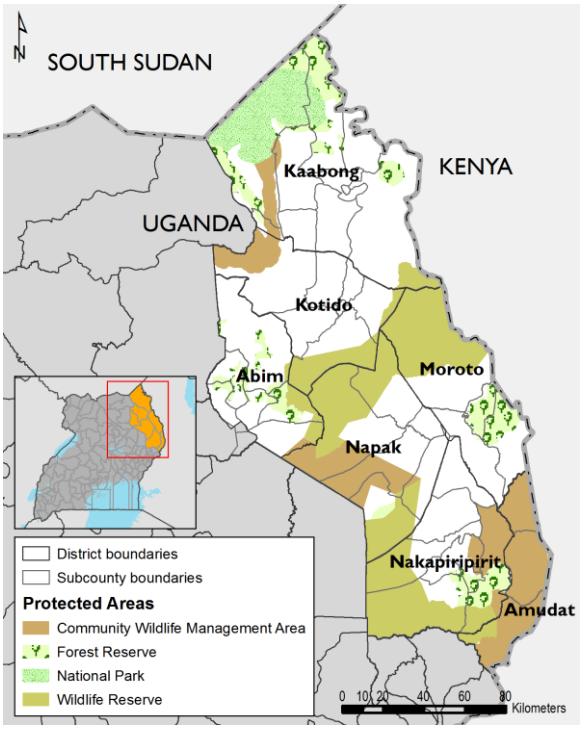
Figure 8 presents the seasonal calendar for Uganda and the Karamoja subregion. The unimodal agroclimatology conditions in Karamoja consist of a rainy season that runs from April to August/September, followed by a hot and dry season that lasts from November to March. This

**Figure 6 Land cover and rainfall variability in Karamoja subregion, Uganda**




*Source: Author's calculations based on data from USGS (2016).*

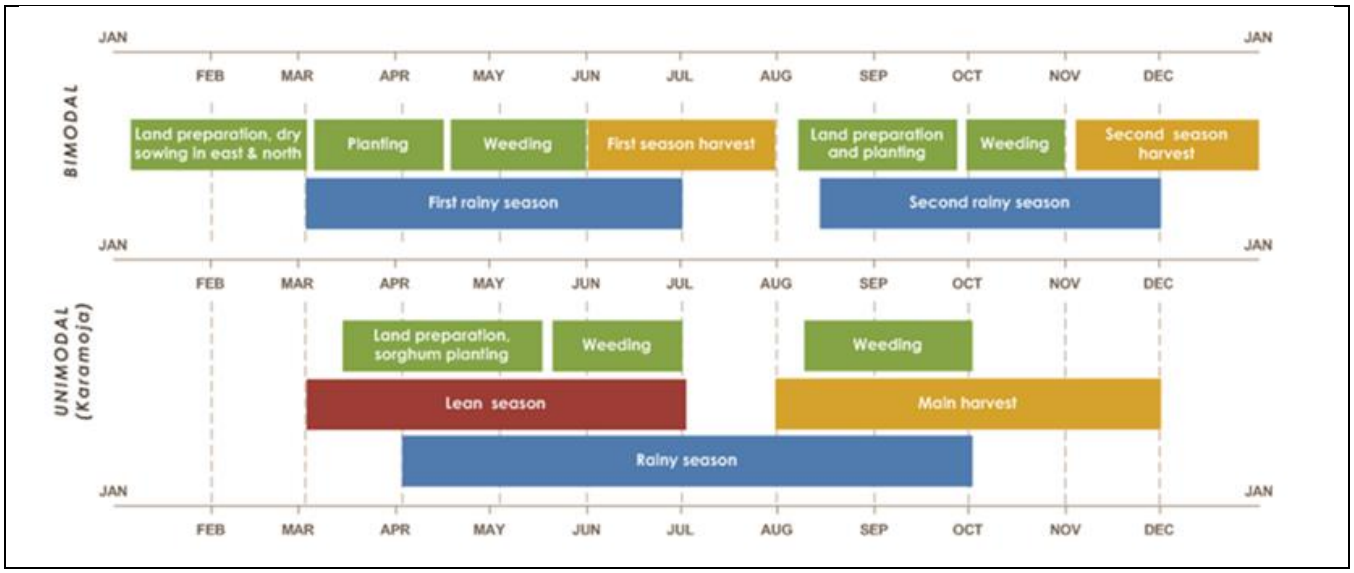
**Figure 7 National parks, forest reserves, and wildlife reserves of Karamoja, Uganda**




*Source: Author's calculations based on data from UNEP-WCMC (2016).*

seasonal pattern translates into only one harvest per year and has direct implications on the capacity of local populations in Karamoja to supply food requirements through local production and on Karamoja's trade relationships and dynamics with the rest of Uganda (FEWS NET 2015a). The combination of unimodal rainfall and an increasingly unpredictable rainy season culminates in a unique and destabilizing effect on the region's agricultural production, particularly in pastoral areas. The incongruity of the region's climate and growing season complicates the development and maintenance of economic links with neighboring bimodal zones, influencing supply and demand dynamics.

**Figure 8 Seasonal calendar for bimodal and unimodal zones, Uganda**




*Source: FEWS NET (2016e).*

It is important to note that Karamoja's climate is often cited as a major constraint for development. Rainfall is increasingly characterized and observed as erratic, poorly distributed, and inconsistent from year to year, often resulting in consecutive seasons of poor spatial and temporal rainfall distribution (FEWS NET 2010). For instance, dry conditions in 2012, 2013, and 2014 resulted in three consecutive years of below average harvests and an early start of the lean season (FEWS NET 2014). Unreliable and insufficient rainfall has had significant impacts in crop production, with cultivated area being reduced in as much as 50 percent in some districts. Livestock production has been less affected, however it has registered some reductions too as pastures were affected by the extended drought (WFP, FAO, OPM, et al. 2013). While erratic and insufficient rainfall indeed affects crop production, the evidence shows that other livelihoods (livestock-related, for example) are better adapted to withstand these climatic patterns. For instance, the 2013 dry spell did not have major impacts on pastures, and therefore livestock production remained around normal levels (WFP et al. 2013). Some analysts assert that the vulnerability to climatic factors is due to a certain extent on the "inappropriate matching" of development initiatives with local livelihood patterns (FEG 2014; Levine 2010).

## 2.3 The social context

### 2.3.1 Demographics

The Karamoja subregion contains only about two percent of the Ugandan population. Regional population estimates vary among sources, with most estimates ranging from 950,000 to 1.3 million total inhabitants (Table 1). The area is sparsely populated, with about 90 percent of the population living in rural areas. The average family size is six members compared to the national Ugandan average of about five household members (UBOS 2016).

Adults (between 18–63 years of age) comprise only 32 percent of the region's population, with a resulting dependency ratio of 2:1 (Robinson and Zappacosta 2014).

**Table 1 Population by district in Karamoja, Uganda, 2014**

| District | Population | Rural | Urban | % Rural |
|---|---|---|---|---|
| **Abim** | 107,966 | 90,790 | 17,176 | 84.1% |
| **Amudat** | 105,767 | 93,982 | 11,785 | 88.9% |
| **Kaabong** | 167,879 | 156,319 | 11,560 | 93.1% |
| **Kotido** | 181,050 | 167,198 | 13,852 | 92.3% |
| **Moroto** | 103,432 | 89,219 | 14,213 | 86.3% |
| **Nakapiripirit** | 156,690 | 152,961 | 3,729 | 97.6% |
| **Napak** | 142,224 | 137,499 | 4,725 | 96.7% |

*Source: Author's calculations based on data from UBOS (2016).*

### 2.3.2 Ethnicity

A number of different ethnic groups are present in the Karamoja subregion (Table 2). The Karamojong, a specific ethnic group with strong social and political connotations, is one such group. The term "Karamojong" includes ethnic groups (or subtribes) of the Dodoth (in the north); the Jie (in the central areas); the Pokot (along the Kenyan border); and the Bokora, Matheniko, and Pian (in the south) (Powell 2010). While some of these groups speak the common Ngakarimonjong language, or languages that are similar, other groups have their own distinct languages. For the purpose of this report, the use of the term of Karamojong is almost exclusively limited to specific discussions about the role of the Karamojong ethnic group in market activities. The terms "indigenous" or "local" are used as general terms to refer to local populations from and residing in the Karamoja subregion. In other reporting, the term "Karamojong" is used to refer to the generality of inhabitants of the districts within Karamoja. However, each district within Karamoja has one or multiple main tribes that may exhibit slightly different livelihood strategies and living situations, as well as their own cultural identity.

### 2.3.3 Poverty

Poverty is endemic and widespread in Karamoja. An estimated 82 percent of the population lives in absolute poverty, a notable poverty rate when compared to the national average of 31 percent (RAU 2015). Income sources are very limited and are usually from petty trade, agricultural labor, and the sale of livestock (WFP et al. 2013). Livestock is the main source of wealth in Karamoja (WFP et al. 2014).

Poverty appears to be increasing, at least when defined by livestock ownership, a correlation that is reflected in local perceptions of wealth and livelihoods stability. Indigenous households associate loss of livestock holdings with poverty and associate a decrease in livestock assets with a direct loss of wealth and income normally gained through the sale of animals and animal

**Table 2 Dominant ethnic groups of Karamoja, Uganda**

| District | Group |
|---|---|
| **Abim** | Ethur, Iteso |
| **Kotido** | Jie |
| **Kaabong** | Dodoth, Ik |
| **Moroto** | Matheniko, Tepeth |
| **Nakapiripirit** | Karamojong, Bagisu, Kadama, Baganda, Pokot |
| **Amudat** | Pokot |
| **Napak** | Karamojong, Tepeth |

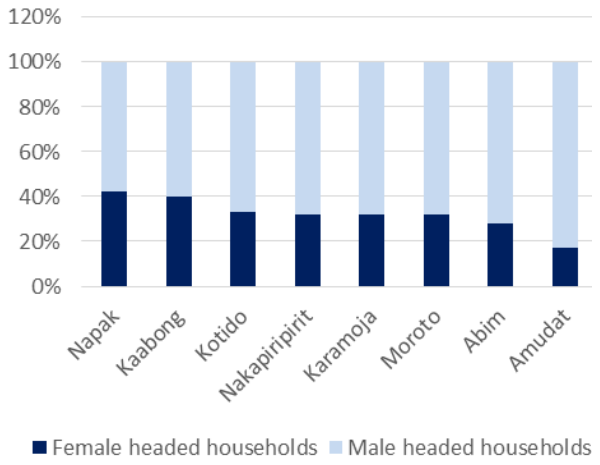
Note: Other smaller groups are not listed in this table. Ethnic group is used interchangeably with the term "tribe."

*Source: MoDPMR and UNDP (2014a);-MoDPMR and UNDP( 2014b); MoDPMR and UNDP (2014c); MoDPMR and UNDP (2014d); MoDPMR and UNDP (2014e); MoDPMR and UNDP (2014f); MoDPMR and UNDP (2014g).*

products (Burns, Bekele, and Akabwai 2013). Illustrating the decreasing rate of livestock ownership as a whole, assessment results from a 2014 food security assessment suggest that just over 40 percent of households in Karamoja do not own livestock, with the highest percentage lacking animals in Nakapiripirit (65 percent) and the lowest in Amudat (8 percent).

The significant proportion of female-headed households in the region is notable when considering food security and livelihood systems, as these households are typically among the most vulnerable and food insecure. Approximately one-third (32 percent) of households in the region are headed by women (Figure 9); this characteristic is most prominent in Napak (42 percent) and least prominent in Amudat (17 percent) (WFP et al. 2014). In general, female-headed households are less likely to own livestock.

**Figure 9 Proportion of female-headed households in Karamoja, Uganda, 2014**




*Source: WFP et al.( 2014).*

### 2.3.4 Literacy and education

Literacy rates in the Karamoja subregion are significantly lower than in the country as a whole (Table 3). This difference is especially prevalent among women in Karamoja, where only about one in five are literate. Conflict, poverty, and culture have all contributed to the low levels of literacy and overall education. The protracted conflict in the north affected children's ability to attend school, negatively affecting current adult education levels (UNDP 2015).

**Table 3 Adult literacy rates (%), Uganda, 2012/2013**

| Region | Men | Women | Total |
|---|---|---|---|
| **Uganda** | 77 | 65 | 71 |
| **Karamoja** | 45 | 20 | 31 |
| Note: The source of information for this table presents this information as pertaining to the "northeast" area of Uganda. The Karamoja term was used instead since the northeast area includes the districts of Kotido, Moroto, Nakapiripirit, Abim, Kaabong, Amudat , and Napak, which encompass the Karamoja subregion. | | | |

*Source: Author's calculations based on data from UBOS (2014a).*

By 2013, 63 percent of persons aged 15 and older in Karamoja did not have any formal schooling. This proportion contrasts sharply with the corresponding national-level figure of 18 percent. Uganda's Universal Primary Education and Universal Secondary Education programs implemented in 1997 abolished school fees and significantly increased funding to public education. However, for those in Karamoja with high rates of poverty, school is still not entirely free since parents contribute to the costs of supplies and incur the opportunity costs of children not participating in livelihoods. Relative to other parts of the country, children are also much more likely to travel far distances to attend school, adding to the cost of attendance. Thus, cost remains a major constraint to education in Karamoja (UNDP 2015). Finally, the indigenous culture, with its emphasis on pastoralism, can be critical of formal education and its uses in traditional society. Several studies note these criticisms among the Karamojong people (Powell 2010).

### 2.3.5 Disarmament

Historically, the people of Karamoja acquired small arms from several sources including but not limited to the small arms trade linked to conflicts in South Sudan, Ethiopia, and northern Kenya. Starting in the 1970s, small arms were used in cattle raids that escalated in lethality with the proliferation of modern assault rifles. Criminality and violence spread, impairing the region's socio-economic development. The process of disarmament has occurred in phases, with frequent modifications to the approach given the complexity of the situation.

- 2001-2003: During the first phase, the GOU started to disarm the Karamojong ethnic group, but was only partially successful. It was originally a voluntary call to surrender arms, an exercise that was handled by the military. However, these efforts were hampered by the insurgency of the Lord's Resistance Army in northern Uganda. This period was the height of insecurity in Karamoja.
- 2004-2005: During the second phase, the GOU embarked on a renewed Karamoja disarmament effort, a process that was militarily enforced. Development partners and other stakeholders entered into the picture at this time as part of support efforts to local communities. This preceded a period of intensified forceful disarmament by the government and heightened inter- and intra-ethnic confrontations and conflicts in 2006.
- 2007-2010: During the third phase, the disarmament and a transition to recovery programming were implemented through the Karamoja Integrated Disarmament and Development Programme (KIDDP). This medium-term framework harmonized the various interventions by the Government and its development partners. These initiatives for sustainable development of Karamoja were guided by the Peace, Recovery and Development Plan (PRDP) for northern Uganda.
- 2011-2015: During the fourth phase, the KIDDP became the Karamoja Integrated Development Programme (KIDP), dropping the disarmament component, which ended in 2015.

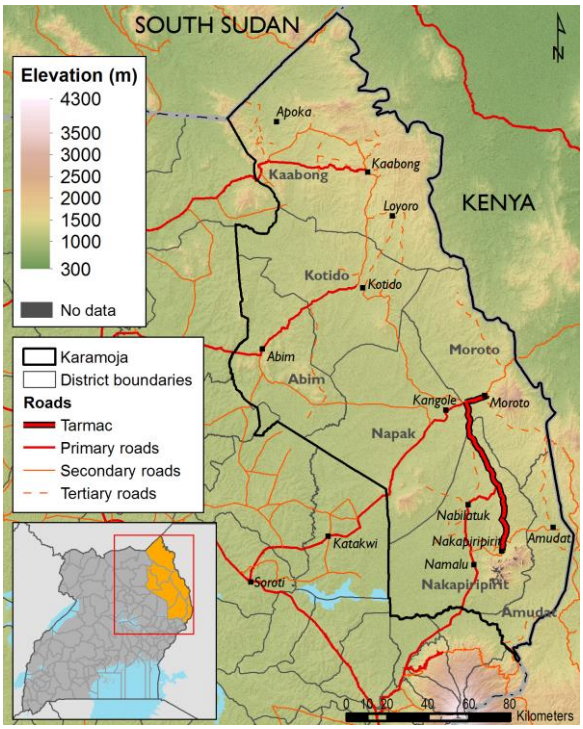
## 2.4 Infrastructure

### 2.4.1 Road infrastructure

Overall, road infrastructure in Uganda is underdeveloped. Nationally, only 19 percent of the road network is paved (Obita 2015). Roads in the Karamoja subregion are especially poor and an impediment for travelers during the wet season (Figure 10). Parts of the roads between many of the major towns become flooded or impassable during the rainy season. Traders may forgo trips to the region during this time to avoid becoming stuck or having to turn back along the way (Burns, Bekele, and Akabwai 2013).

Improvements in road infrastructure include the introduction of a tarmac road between Nakapiripirit and Moroto, which improved market access and led to a reduction in transaction and transport costs of moving goods between the two towns. Once the section of the road from Nakapiripirit to Sironko/Mbale is complete, travel time and transportation costs Karamoja to eastern Uganda will reduce significantly (FEWS NET 2016a). Some areas along

**Figure 10 Road infrastructure and elevation in Karamoja, Uganda**




*Source: Elevation data are from NASA (2016); road data are from OpenStreetMaps (2016).*

the Kenyan border are at very high elevation, which, combined with poor road infrastructure, complicates the exchange of goods.

### 2.4.2 Basic services

Access to basic services such as electricity, clean water, and sanitation coverage is significantly lower in Karamoja compared to the rest of the country. Nationally, only 14.0 percent of rural households have access to electricity (Coronel 2015). This figure is even lower in Karamoja, at a rate of only 2.8 percent of households (UNDP 2015).

Access to improved water sources through boreholes and pumps has improved but is still problematic in most parts of Karamoja (UNDP 2015). Many villages report broken boreholes and pumps, very long waits at functioning boreholes, or having to travel well over an hour to fetch water (Burns, Bekele, and Akabwai 2013). Karamoja has the lowest level of sanitation coverage in the whole country; latrine coverage was an average of 27 percent in 2012 versus a national average of 83 percent (UBOS 2015).

### 2.4.3 Storage

Food storage is generally very rudimentary in Karamoja, with no sources of cold storage and very few improved stores. About 80 percent of households use some sort of storage technique, the vast majority of which are traditional storage baskets (cribs). WFP and nongovernmental organizations (NGOs) have storage facilities throughout the country, including in Karamoja. Storage facilities used by food security actors in Karamoja typically consist of Rubb halls. The closest large-scale private storage facilities are located in Mbale, Soroti, and Tororo (FEWS NET 2016a).

### 2.4.4 ICT/Connectivity

Uganda's ICT coverage has grown rapidly. From 2010 to 2014, cell phone subscribers increased by nearly 60 percent to 20.3 million subscribers (UBOS 2015). During that same period, internet penetration increased from 1.8 percent to 29.5 percent (UBOS 2015). A few major operators (MTN and Airtel) provide cellular phone services throughout Uganda, including Karamoja. In Karamoja, an estimated 65 percent of people have access to mobile phone services, and most areas have a good or acceptable quality of service (FEWS NET 2016b).

## 2.5 Governance

Karamoja's governance system comprises both formal government and local customary actors, notably elders, who work together at the subcounty and district level and with neighboring districts. Their functions include intelligence gathering and dissemination, dispute resolution, enforcement of the community's laws and agreements, and provision of justice. Collaboration between actors, both vertically and horizontally, is key to the system's capacity to effectively address social challenges that occur, including but not limited to conflict.

The formal government actors that constitute Karamoja's conflict management system include: 1) district-level officials, particularly members of the District Peace Committee and District Security Committee; 2) the Subcounty Peace Committee, comprising both government officials and community representatives; 3) the Uganda People's Defense Force (UPDF); and 4) the police. Government-led conflict management tends to focus on the preservation of security, which includes disarmament and patrolling, and judicial responses to conflict, such as livestock recovery and criminal prosecution (Vaughan and Gurung 2013). Community members prefer localization of security mechanisms through local defense units (LDUs), which has led to increased trust and confidence in the LDUs' capacity to maintain security. The UPDF is also viewed as accessible due partly to district officers' willingness

to cultivate personal relationships with community elders, thereby allowing them to tap into their local knowledge and relationships to effectively recover stolen livestock.

While elders in Karamoja have at times played a leading role in planning armed raids (FEWS NET 2005), they are also the primary customary actors responsible for conflict management. Though internal hierarchies among elders vary across communities, elders continue to play an important role in fostering peace and justice, sharing information, punishing delinquent youth, arbitrating disputes, and facilitating the return of stolen livestock (Vaughan and Gurung 2013). The process of conflict resolution led by elders is typically characterized as reconciliatory and restorative, and is usually perceived as more legitimate and in line with local values than justice delivered by formal actors. Male elders are often the leaders of *manyattas* and *kraal*s,[7] and make decisions on the use of resources, movement to grazing lands, food security (such as sale of animals in times of need), and protection. Information about weather, security, and animal health moves easily between *manyattas* and *kraal*s due to the regular flow of people between these locations, and is shared with specific families by the elders at the *ekokwa*, informal gatherings held daily by male elders at *manyattas* and *kraal*s. Elders are often engaged by formal authorities to identify criminals in the community and to carry out rituals with deep significance for making peace and absolving offenders. The importance of elders is linked to their intimate knowledge of their communities as well as to their perceived legitimacy as the keepers of traditional customs and values.

Among the biggest challenges faced by conflict management actors in Karamoja is the lack of role clarity and overlapping or unclear jurisdiction between customary and formal authorities, which is exacerbated by both the lack of communication between actors and variations in the structures and composition of peace and security committees across administrative boundaries. Greater collaboration and communication between actors will lead to a more resilient and dynamic conflict management system, which will in turn support private sector activities, including trade.

[7] See Section 5.1.4 for a definition of the terms *manyatta* and *kraal* and a discussion of their role in local society in Karamoja.

# 3 Livelihood systems

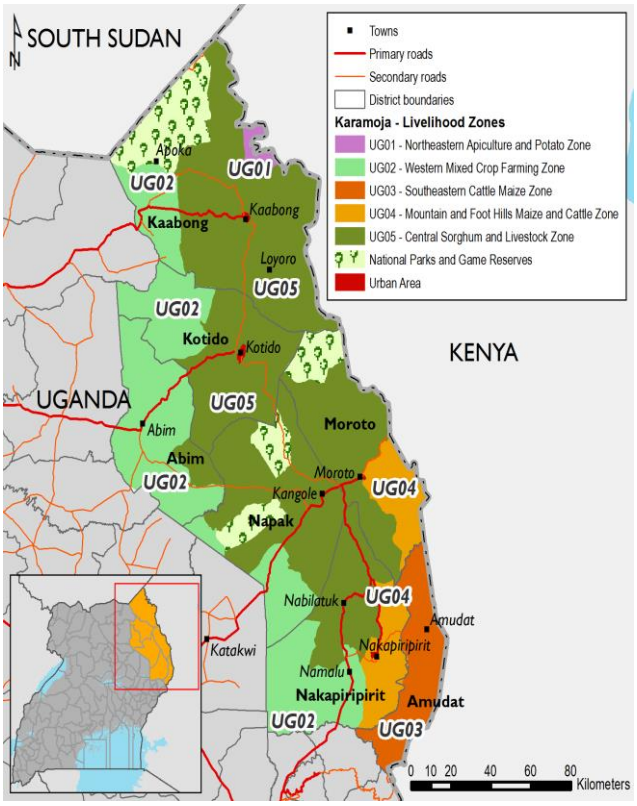
This chapter describes the subregion's main livelihood attributes and characteristics and is heavily informed by the FEWS NET Livelihood Zone Profiles (2010) and by the Food Economy Group (FEG) Livelihood Baselines (2014). Readers are encouraged to refer directly to the 2014 Baseline updates (FEG 2014), which provide more nuanced and location-specific variations in livelihood patterns, specifically income sources and food expenditure patterns

## 3.1 Dominant livelihood systems of Karamoja

The Karamoja subregion is part of the pastoralist "Cattle Corridor", and is largely populated by semi-nomadic cattle-keeping groups (Ezaga 2010). The region is composed of five rural livelihood zones (Figure 11): Northeastern Highland Apiculture, Western Mixed Crop Farming, Southeastern Cattle and Maize, Mountain Slopes Maize and Cattle, and Central Sorghum and Livestock (FEG 2014).

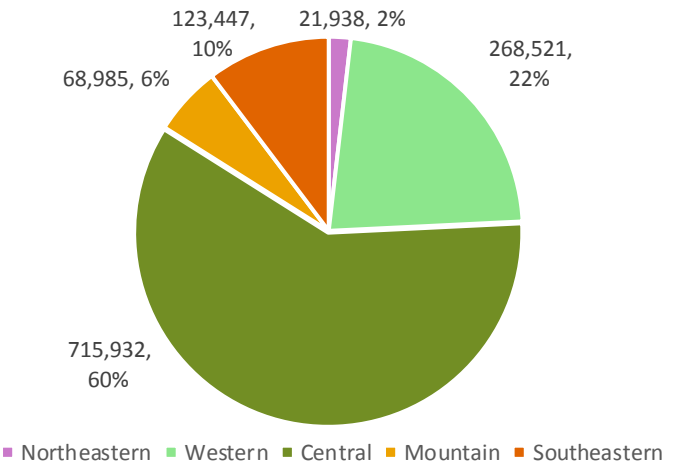
The region can be characterized overall by three major livelihood systems: a predominantly "agriculture"-based livelihood zone along the western areas that corresponds roughly to the Northeast Highland Apiculture and Western Mixed Crop zones; a primarily "agro-pastoral" zone comprising the Central Sorghum and Livestock Zone; and a primarily "pastoral" zone in the remaining eastern areas, roughly comprising the revised Southeastern Cattle and Maize and Mountain Slopes Maize and Cattle livelihood zones (FEG 2014; FEWS NET 2010). Most households in Karamoja engage in a blended, dual-subsistence strategy that combines livestock management and some degree of opportunistic cultivation of cash and food crops. Even so, pastoralism plays a heavy role in food security and livelihood strategies.

**Figure 11 Karamoja districts and livelihood zones, Uganda**




*Source: FEWS NET (2016e).*

**Figure 12 Livelihood zone population (rural), Uganda, 2013**




*Source: Author's calculations based on data from FEG (2014).*

While variations are evident across specific livelihood zones and wealth groups, market purchase comprises a significant portion of household food needs, especially in the lean season. Purchasing power among the poor and very poor is limited to seasonal, low-wage, and sporadic income sources, particularly self-employment/petty trade

(sale of charcoal, locally brewed beer, crop sales) and casual labor (agricultural and farm-based). These activities supplement other income earned more consistently from crop sales and livestock marketing, or from in-kind payments. Credit emerges as a significant source of purchasing power among poor households, especially during the lean season, resulting in widespread debt among poor households in particular; debt is often a food access strategy and has a longstanding impact on household economies.

**Table 4 Key Karamoja rural livelihood zone cash income sources and foods consumed, Uganda**

| Livelihood zone | Dominant system | Main cash income sources | Main food crops consumed | Population |
|---|---|---|---|---|
| **Northeastern Highlands Apiculture Potato** | Agriculture | Crop, honey, and labor sales, and self-employment | Sorghum, maize, finger millet, dry beans, groundnuts, sesame | 21,938 |
| **Western Mixed Crop Farming** | Agriculture | Labor sales and self-employment | Sorghum, maize, dry beans, groundnuts | 268,521 |
| **Central Sorghum and Livestock** | Agropastoral | Self-employment, labor and livestock sales | Maize, sorghum, dry beans | 715,932 |
| **Southeastern Cattle and Maize** | Pastoral | Livestock sales | Maize, dry beans | 123,447 |
| **Mountain Slopes Maize and Cattle** | Pastoral | Self-employment, livestock and labor sales | Maize, sorghum, dry beans, groundnuts, sunflower | 68,985 |
| Note: The main income sources and foods consumed apply to poor and very poor households. Households across livelihood zones and wealth groups also consume purchased edible oil and salt. Locally grown oilseeds (sesame, groundnuts, sunflower) are ground and mixed into stews for consumption, but are generally not crushed locally in Karamoja for consumption as edible oil. | | | | |

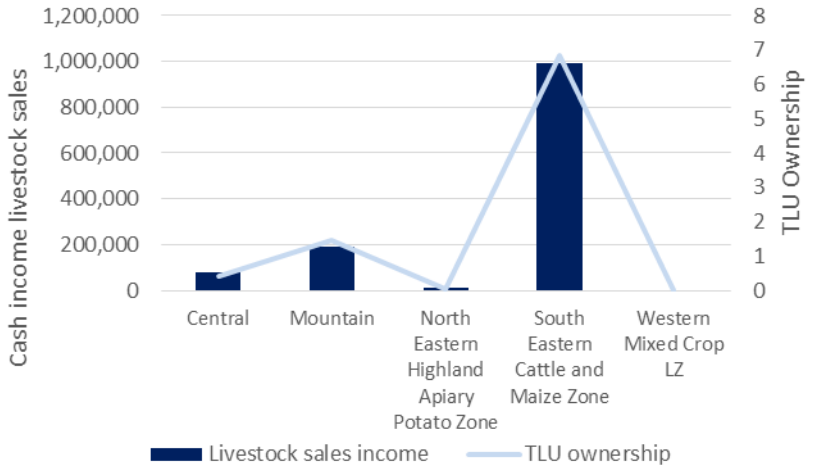
*Source: Author's calculations based on data from FEG (2014) and UBOS (2014a).*

The wider Karamoja, which includes portions of South Sudan, Kenya, and Ethiopia, hosts a vast pastoralist production system that heavily shapes local economies, as well as sociocultural structures (Harmer 2012). In Uganda specifically, Karamoja's pastoralist system was impacted heavily by insecurity, animal disease, post-demobilization *kraal* systems, and a gradual transition to more agriculture-based livelihoods, all of which drove a general reduction in regional livestock numbers over the last decade. At a national level, households in Karamoja participate the least among regions in terms of agriculture (61 percent of households participate in agriculture, compared to the national average of 78 percent), and the most among regions in terms of livestock (26 percent of households participate in livestock, compared to 16 percent nationally) (USAID-BEST 2011).

According to the USAID-funded Baseline Study for the Mercy Corps Growth, Health, and Governance (GHG) Program (ICF International 2014), concepts of wealth and wealth group assignments are subjective among the population (especially in northern Karamoja), but wealth is equated with either the number of livestock possessed by the family, or the scope and scale of income derived from crop sales. The former, logically, holds more importance in agropastoral and pastoral areas, whereas the latter is a more consistent measure of economic status in agricultural zones. To provide a benchmark regarding livestock and associated "wealth" characteristics, Levine (2010) noted that in the agropastoral/pastoral zone, a typical herd for a middle-wealth household could include 25 cattle and 50 shoats.

**Pastoral zone:** This semi-arid zone is not well-suited for agricultural production given it has the lowest annual rainfall (less than 700 mm) and extended dry seasons that begin in October and end in March in a normal year. Rainfall is often erratic, with the rainy season typically running from April to September. Livestock production is the core of economic activity, with production focused primarily on cattle, goats, sheep, poultry, and a marginal camel population. Despite the presence of fertile soils, crop production is small-scale, opportunistic, and typically dependent on rainfed systems in an unstable climatic environment. Sorghum is the primary crop, followed by maize and pulses, and almost no cash crops. Important food sources include a combination of milk and meat, market purchase enabled by livestock sales, wild foods, and supplementary subsistence crop production and marketing. The lean season is this zone typically extends from December to March.

**Figure 13 Livestock ownership of very poor households by livelihood zone, Uganda, 2013**



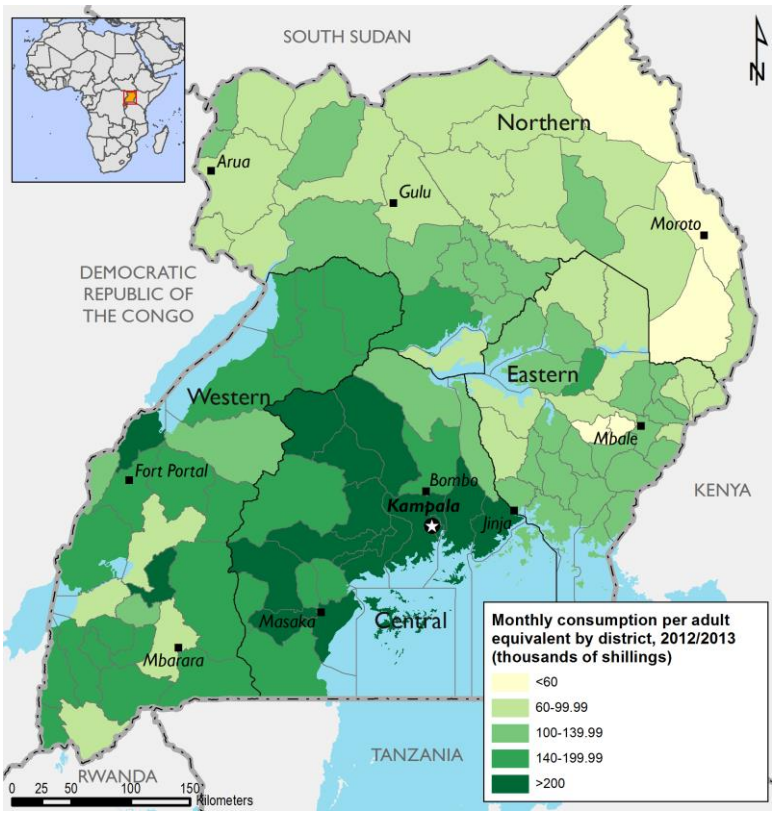

*Source: Author's calculations based on data from FEG (2014).*

Despite the reliance on livestock production in this zone, the literature largely points to an overall decrease in livestock populations as a driver of increased poverty rates and chronic food insecurity. The pace and rate of decreased livestock holdings are attributed to a combination of high destocking rates, insufficient feed supplementation, and limited access to veterinary services (RAU 2015). The literature also points to the impact of this reduction in herd size on livelihood patterns in the region, indicating that the redistribution of or decline in livestock assets contributed to a longer-term trend of increased dependence on crop production (Burns, Bekele, and Akabwai 2013). Though livestock data should be considered with caution, the Food and Agriculture Organization Global Information and Early Warning System (FAO/GIEWS) points to current estimates of 1.8 million heads, compared to about 6 million in the 2008 UBOS Livestock Census, showing a regional decrease of about 70 percent (Robinson and Zappacosta 2014).

**Agropastoral zone:** This zone is known for livestock production, particularly of cattle, goats, and sheep. Livestock aspects of the farming system in this area connect to the transhumant herds, which provide regular contributions to the household food economy through the sale of bulls, steers, and cull cows, and sheep and goat slaughter stock through the weekly markets (Robinson and Zappacosta 2014). Although the climatology and geography of this zone are more favorable for livestock production, rainfed crop production is also practiced, with slightly more favorable rainfall patterns that offer 500-800 mm of rainfall, although rain is often poorly distributed. Crop production is predominantly sorghum, maize, millet, groundnuts, sunflower, cowpeas, and beans, as well as a small amount of tobacco for personal use and sale. The vast majority of the population relies heavily on food purchase; household crop production as a food source is supplementary to milk, meat, and blood from livestock and wild food harvesting. The potential for crop production is such that, in a good year, households can produce enough cereal to meet their needs. During a typical year, the agropastoral zone is a net importer of crops (from Mbale, Soroti, Kitgum, Pader, and Lira) and a net livestock exporter (cattle, sheep, and goats). Sales peak between March and June, when food reserves are low.

**Agricultural Zone:** The wider Green Belt benefits from the highest rainfall levels (800–1200 mm per year). In a normal year, the primary food sources are household crop production, supplemented by purchased food, payment in-kind for casual labor, a greater degree of food assistance than in other zones, and wild foods. Households depend on rainfed cropping and therefore face increased vulnerability when rainfall is below average or poorly distributed. Staple crops include sorghum, millet, beans, cowpeas, pigeon peas, groundnuts, sweet potatoes, sesame, and sunflower. Small-scale cultivation of maize and a variety of cucurbits (cucumber, watermelon, and pumpkin) is also common. Households earn income primarily from selling crops and livestock (small ruminants) and from local agricultural labor, including labor migration to nearby districts in search of work, such as selling charcoal and firewood and making bricks. Migration may occur to areas outside of Karamoja (Pader), supporting household income.

**Figure 14 Monthly consumption per adult equivalent by district, Uganda, 2012/2013**




Note: This map demonstrates the broad pattern across the country; the UNHS was not designed to generate estimates for individual districts of counties, and the sampling error is therefore relatively wide.

*Source: Author's calculations based on data from MAAIF and UNDP (2014).*

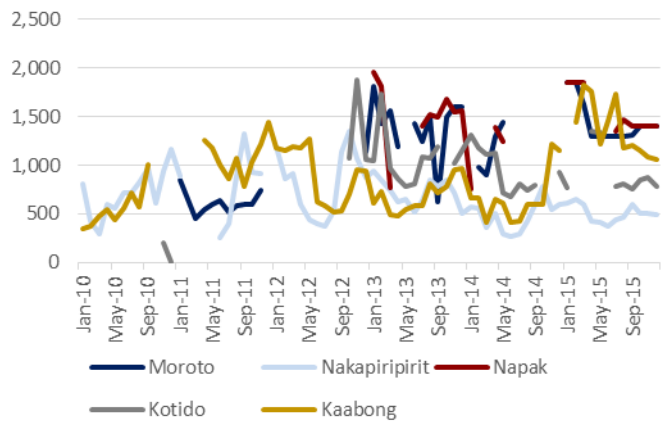
## 3.2 Income sources and expenditure patterns

Income-earning opportunities are typically varied and obtained sporadically as needed. Casual labor and self-employment income supplements sales from crops or livestock/livestock products, and are typically secured through informal arrangements. Income is earned through menial, informal work as most people lack the basic skills and education needed to engage in formal employment opportunities (Burns, Bekele, and Akabwai 2013). Agricultural labor income is often earned in-kind in Karamoja, thereby providing an important food source. Other important sources of cash income among poor and very poor households include producing charcoal, collecting firewood, producing local brew, engaging in small-scale agricultural production (Table 4) (ICF International 2014; FEG 2014). Poor households typically engage in diversified livelihood activities such as farm labor for better-off households (weeding, harvesting, land preparation, for which they are paid in-kind with beer or grain), collecting firewood, brickmaking, petty trading, and other forms of casual labor (Burns, Bekele, and Akabwai 2013).

Some households benefit from sales of cereals, beans, groundnuts, chickpeas, and cowpeas. Sunflower and sesame (simsim) are produced and sold across the region, with beans and groundnuts associated with higher income-earning potential (Burns, Bekele, and Akabwai 2013). Although livestock ownership and income earned through livestock sales are highly correlated, animals are often sold for a specific purpose or in times of distress to meet essential household needs (such as food, education, or health/medicine). Terms of trade between livestock and casual labor to cereals are therefore jointly useful indicators of households' staple food purchasing power, which vary considerably, both intra- and inter-annually (Figure 15 and Figure 16).

Overall, households spend a large percent of income on food purchases (Figure 23). This finding appears to be generally applicable across livelihood zones, and increases in bad production years. Food expenditure also increases during months when casual labor opportunities (and in-kind payments) are more limited (January and August). Wealthier households across Uganda, including Karamoja, spend a lower percent of income on food purchases, but average expenditure on foodstuffs is higher and more varied (FEG 2014; USAID-BEST 2011). Poor households can access the market, but the value and variety of their transactions are low.

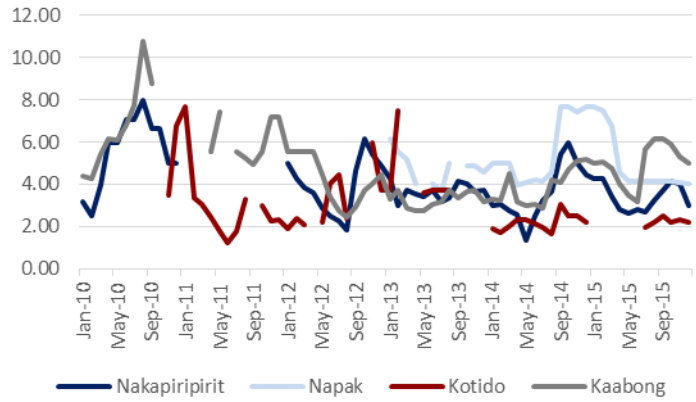
**Figure 15 Terms of trade between livestock and sorghum, Uganda, 2010–2015**




*Source: Author's calculations based on data from WFP (2016).*

Households in Karamoja typically participate in markets at a micro-level, purchasing or selling agricultural products or livestock to meet basic food needs. For example, because the labor market is dominated by temporary and short-term menial or casual labor, poor households are limited by cash income earned through those opportunities and foodstuffs for sale on local markets. Indeed, the majority of households in Karamoja (including the poor) are only marginally integrated into the market (ICF International 2014).

**Figure 16 Terms of trade between casual labor and maize, Uganda, 2010–2015**




*Source: Author's calculations based on data from WFP (2016).*

Because households are consistently market-dependent, seasonal or event-based fluctuations in staple food prices (such as a poor production year) can portend a larger food security shock; food security and nutrition assessment data from 2014 suggest that 52 percent of households experienced high food prices as a shock in the previous three months, with eight percent of households reporting price shocks as the primary shock suffered (RAU 2015).

## 3.3 Income earned through trade with Kenya

Within Karamoja, trade with Kenya is most vibrant in Amudat district (and, to a lesser extent Moroto) in the Southeastern Cattle and Maize livelihood zone (see Chapter 4) (FEWS NET 2016a). This trade is facilitated by local geography and physical accessibility on the Kenyan side of the border. Likewise, some trade occurs between Kaabong and Kenya, although the dynamics are less vibrant due to various factors (social, geographical, and the structure of the local economy). Cash income earned through livestock sales in Kaabong, Kotido, Moroto, and Amudat is directly linked to cross-border trade with Kenya. In Amudat, nearly all locally-produced goods sold on markets are destined for local consumption or trade with Kenya. This includes all the main local cash income sources (livestock, grain, local brew, honey, and minerals/gold). Although households themselves may not engage directly in cross-border trade, they participate in a broader marketing system that is linked to both Kenya and

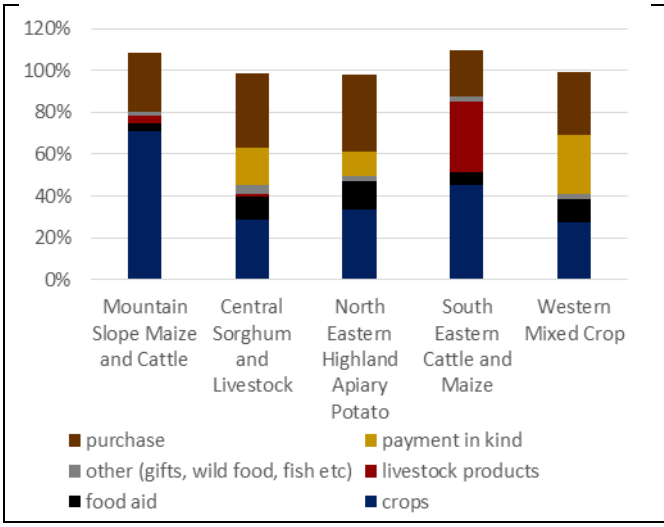
other areas of Uganda. Households in Karamoja also participate in petty trade, involving manufactured goods (nonfood items) that are obtained through trade with Turkana (Kenya). The factors that constrain the participation of local populations in markets and marketing activities also constrain their ability to earn cash income directly and indirectly through cross-border trade activities.

## 3.4 Food sources

Three key food sources meet yearly household food needs: crops, milk and meat, and market purchase (Figure 17 through Figure 22). Food assistance (school feeding and food-for-work initiatives) and food gifts account for marginal food sources (FEG 2014). As a whole, Karamoja is a structurally deficit zone in terms of staple food production, as even the best production years do not result in significant local marketable surpluses. Karamoja imports a significant proportion of staple foods (cereals, specifically sorghum and maize) from surplus-producing areas of Uganda and is a net exporter of livestock (to other areas of Uganda and neighboring Kenya). While most households in Karamoja engage in some level of subsistence production and consume wild foods as a supplementary dietary component, market purchase is a primary food source upon which many households are totally dependent during poor production years (ICF International 2014). Household-level crop production is nevertheless a prominent factor influencing local livelihood stability and food availability. In summary, the market is an extremely important source of food across other wealth groups.

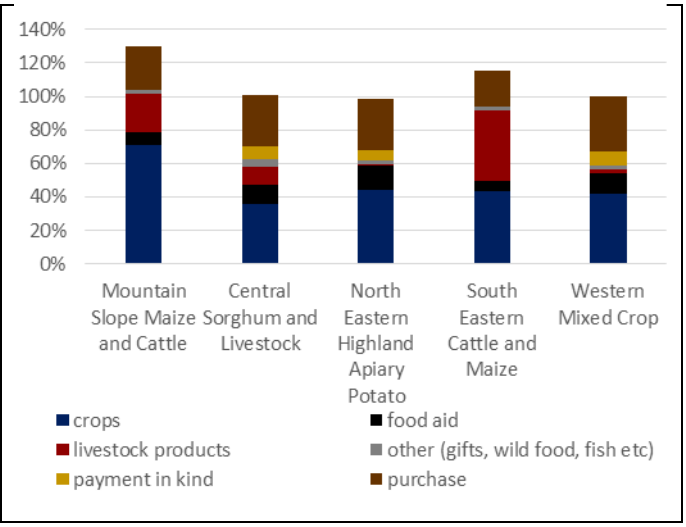
- **Agricultural production**, while important at the household level, is impaired by multiple endemic and systemic constraints, resulting in low- or poor-quality production and a preference for cereals from neighboring regions.
- While almost all households across all livelihood zones and wealth groups engage in some level of production, **market purchase** remains prominent, particularly during the lean season, and especially among the poor and very poor. Across all livelihood zones, market purchase dominates household consumption of staple foods (especially maize and sorghum) in terms of money spent and kilocalorie contributions. Dry beans, edible oil, and sugar are also widely purchased (FEG 2014). Households within rural areas of Karamoja engage with local markets to meet very basic and supplemental food needs, selling small amounts of crops to obtain cash for the purchase of other staple food items. Households participate in market activities as needed, and typically for the purpose of supplementing own production, with the degree of market engagement often correlated with the performance of the rainy season, agricultural outcomes, and the intensity of the lean season.
- **Food assistance** ("food aid" in Figure 17 and Figure 22) contributes to consumption across livelihood zones and wealth groups and plays a particularly important role (as a percent of calories consumed) in the western, central, and northeastern livelihood zones.

**Figure 17 Food sources among very poor households**



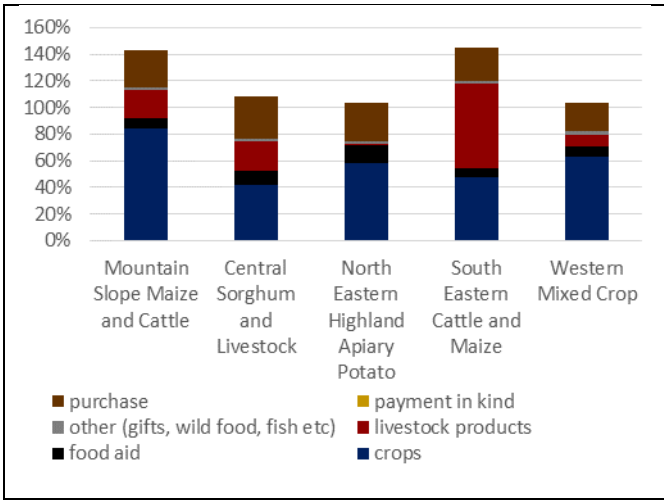

*Source: Author's calculations based on data from FEG (2014).*

**Figure 18 Food sources among poor households**



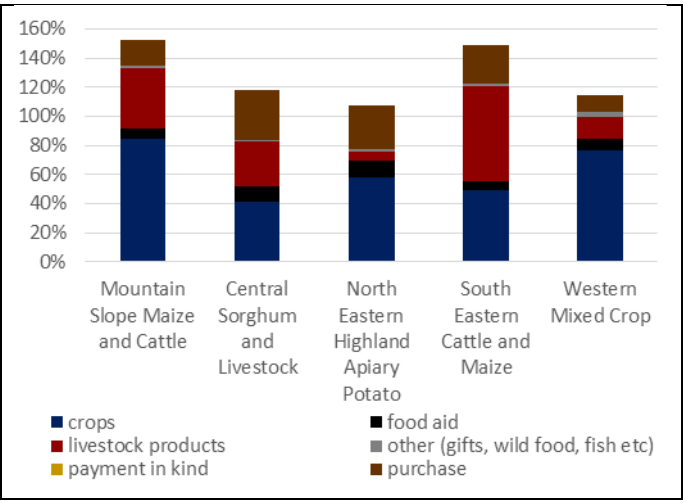

*Source: Author's calculations based on data from FEG (2014).*

**Figure 19 Food sources among middle-wealth households**



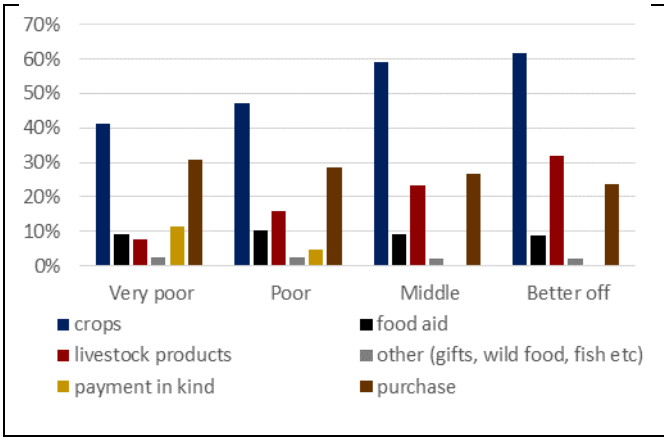

*Source: Author's calculations based on data from FEG (2014).*

**Figure 20 Food sources among better-off households**



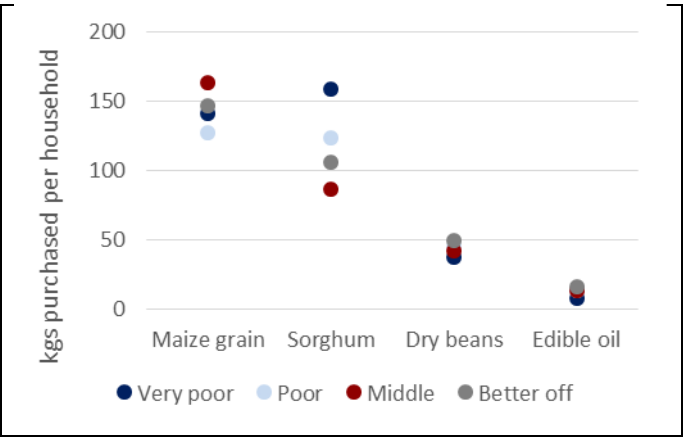

*Source: Author's calculations based on data from FEG (2014).*

**Figure 21 Average contribution of food sources to consumption**




*Source: Author's calculations based on data from FEG (2014).*

**Figure 22 Average quantities of staple foods purchased by households (kg/household)**




*Source: Author's calculations based on data from FEG (2014).*

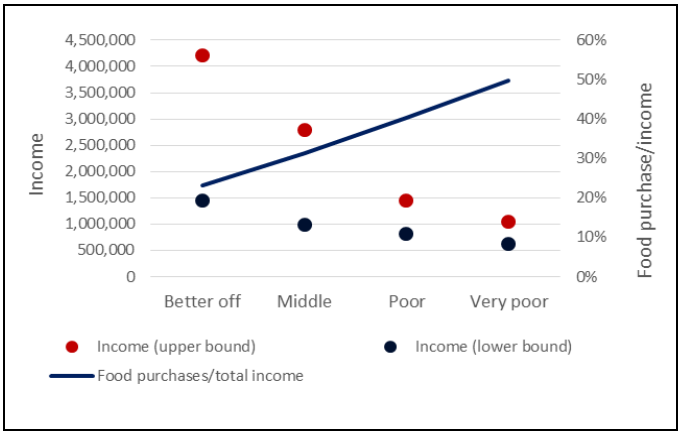
## 3.5 Staple foods consumed

Karamoja is unique from other areas of Uganda, where matooke/bananas are the most commonly consumed staple food. In Karamoja, household diets rely heavily on maize as well as beans or peas and wild greens. Maize is commonly consumed as posho (region-specific name for a dish made from maize flour and water, also called ugali, sima, or sembe). Sorghum and millet are likewise consumed, but more in the central and northern districts and livelihood zones of Karamoja (Table 4). Refined edible oil (sourced exclusively from outside of Karamoja) as well as local oilseeds such groundnuts, sunflower, and sesame (simsim) are important plant-based sources of fat. All of the major domestically produced refined edible oil brands can be found in Karamoja. The majority of dry beans consumed in Karamoja are sourced from other areas of the country, and household preferences are more associated with lowest price than a particular preferred bean type.

One of the main differentiating characteristics of foods consumed by poor and very poor households versus other wealth groups is related to source of dietary fat. While poor and very poor households certainly buy edible oil (Figure 22), they are much more likely to consume locally produced oilseeds (which they crush and grind themselves) than are better-off households (FEG 2014). These oilseeds come from their own production, and, to a lesser extent, market purchases.

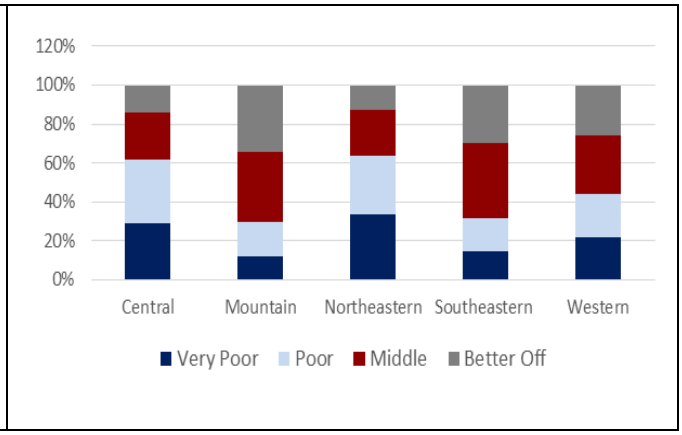
As measured by the Household Dietary Diversity Score (HDDS), dietary diversity is higher in southern Karamoja program areas (HDDS=2.7) than in the northern Karamoja (HDDS=2.2). Roughly 75–80 percent of households consume foods made from cereal grains such as maize, rice, sorghum, and/or millet. Vegetables is the second most commonly eaten food group, followed by pulses, legumes, and nuts (ICF International 2014). The proportion of animal products consumed as part of normal dietary intake decreased as livestock holdings decreased over the years, reducing household supply of milk, although milk was historically a strong component of household diets. Milk (and to a lesser degree, meat) is of particular importance in the Southeastern Cattle and Maize livelihood zone, providing over 20 percent of annual calories for very poor households and over 60 percent of calories for better-off households. High levels of milk consumption reflect a poor marketing infrastructure, as milk that is not consumed or sold is wasted. In Karamoja, poor market infrastructure and limited cold storage result in lost production (FEG 2014). Gendered nuances also arise in dietary diversity. Female-headed households reported a less diversified diet (only 42 percent at more than four food groups in a week versus 52 percent of male-headed households), and a lower weekly average consumption of all food groups with the exception of pulses (WFP, UNICEF, and Republic of Uganda 2016).

**Figure 23 Household income and food expenditure as a percentage of income, Uganda, 2013**




*Source: Author's calculations based on data from FEG (2014).*

**Figure 24 Percentage of households in each wealth group by livelihood zone, Uganda**




*Source: Author's calculations based on data from FEG (2014).*

## 3.6 Food gap

Local food gaps vary widely within Karamoja by wealth, livelihood zone, and season (Table 5). In the Central Sorghum and Livestock and Western Mixed Crop livelihood zones, poor and very poor households are unable to meet 10–12 percent of annual food requirements through their own means. The gap increases to 15–16 percent in the relatively more isolated North Eastern Highland Apiary Potato livelihood zone, located in northern Kaabong district. Even poor households do not face food gaps during a normal year in two livelihood zones: Mountain Slope Maize and Cattle and South Eastern Cattle and Maize. This is based on average information from each wealth group, which means some households may still face gaps in those livelihood zones even during a good year.

**Table 5 Estimated size of annual household-level food gap as a percentage of requirements and in grain equivalent (kg), Uganda**

| Livelihood zone | Months with largest difficulty accessing food | Food gap | Very poor | Poor | Middle-wealth | Better-off |
|---|---|---|---|---|---|---|
| **Central Sorghum and Livestock** | January and August | Food gap (%) | 12 | 10 | 3 | 0 |
| | | Food gap (kg) | 150 | 125 | 40 | 0 |
| **North Eastern Highland Apiary Potato** | January, April, and August | Food gap (%) | 16 | 15 | 10 | 4 |
| | | Grain needed to fill gap (kg) | 210 | 200 | 150 | 75 |
| **Western Mixed Crop** | January, June, July, and August | Food gap (%) | 12 | 12 | 5 | 0 |
| | | Grain needed to fill gap (kg) | 150 | 150 | 65 | 0 |

Note: Two livelihood zones did not indicate a food gap during a normal year: Mountain Slope Maize and Cattle and South Eastern Cattle and Maize. This is based on average information from each wealth group, which means that some households may still face gaps in those livelihood zones, even during a good year. This considers only food sources that households are able to access through their own means (own production, purchases, in-kind payments, and gifts/transfers via social ties) and omits food aid (food-for-work, school feeding, and relief grain), which is typically available to households throughout the consumption year.

*Source: Author's calculations based on data from FEG (2014).*

# 4 Markets in Karamoja

## 4.1 The national and regional market context

The agriculture sector is the backbone of the Ugandan economy, employing about one-third of the working population and contributing to 23 percent of gross domestic product (GDP) (UBOS 2015). Favorable climatic conditions and agricultural potential across much of central and western Uganda facilitate the cultivation of diverse food and cash crops (UBOS 2014a; MoFPED 2015).

On aggregate, Uganda is a surplus producer of maize and beans, exporting to regional markets (Table 6). Uganda imports crude vegetable oil from the international market for local processing. However, the spatial distribution of surpluses and deficits varies by crop. For instance, the eastern and western regions are surplus-producing areas for maize, while the western region produces important bean surpluses (FEWS NET 2016b). The northern region (where Karamoja is located) contributes the least to the total volume of crops harvested. Cattle production is concentrated along the "Cattle Corridor," which extends from the northern to the central region of the country. The Karamoja subregion is the most important source of livestock in Uganda (Stark 2011; UBOS 2008).

**Table 6 National Commodity Supply and Demand for Selected Commodities, Uganda, 2014**

| | Maize (MT) | Beans (MT) | Millet (MT) | Sorghum (MT) | Palm oil (MT) |
|---|---|---|---|---|---|
| **Production** | 2,868,000 | 1,011,000 | 236,000 | 299,000 | 145,300 |
| **Imports** | 615 | 3,504 | 418 | 2,274 | 266,845 |
| **Exports** | 246,948 | 31,056 | 4,572 | 66,955 | 31,626 |
| **Apparent domestic consumption** | 2,621,667 | 983,448 | 231,846 | 234,319 | 380,519 |

Note: Cooking bananas and tubers (cassava and sweet potato) are the main staples in Uganda in terms to their contribution to national calorie intake (IFPRI 2008; FAO n.d.). However, as discussed in the Livelihoods context (Chapter 3), populations in Karamoja are more reliant on cereals such as sorghum and maize (FEWS NET 2015a) and are therefore the focus of this report.

*Source: Maize data are authors' calculations based on UBOS (2015) and Chemonics (2010); beans and cassava data are authors' calculations based on data from UBOS (2015) and Muyonga et al. (2014); millet and sorghum data are authors' calculations based on data from UBOS (2015); palm oil data are authors' calculations based on data from FAOSTAT (2016) and COMTRADE (2016) data.*

Most agricultural production in Uganda takes place at the smallholder and subsistence level, with low use of agricultural inputs and in rainfed conditions. Sufficient rainfall is a key factor for agricultural productivity. As indicated earlier, rainfall patterns largely determine the seasonality observed in food availability and trade (FEWS NET 2015a). Large-scale agribusinesses, including grain and edible oil processors are concentrated in the central and eastern regions of Uganda. The northern region hosts less than three percent all agricultural businesses in the country (UBOS 2011).

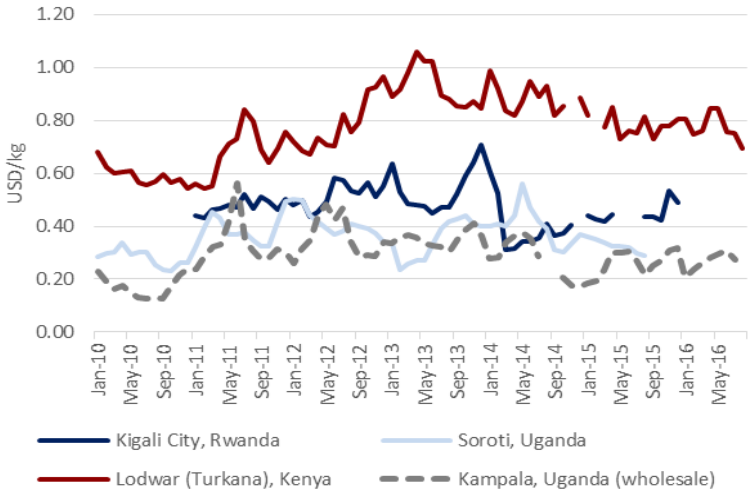
Institutional buyers such as WFP and the GOU are an important source of food demand. Local purchases (particularly of maize and beans) by institutions supply school feeding programs, the military and police forces, prisons, hospitals, as well as some food assistance programs (IFPRI 2008). Areas afflicted by conflict in the northern region of Uganda, areas suffering from the impact of natural disasters, and areas hosting refugees and internally displaced populations received food assistance in the past. WFP has purchased over 24,000 metric tons (MT) of dry beans, sorghum, maize, and maize meal from surplus-producing areas of Uganda since 2011 for Karamoja response efforts alone (WFP 2016) (see Chapter 6 for more details).

In addition to serving the domestic market, the Ugandan agriculture sector plays a major role in the regional (East African) food supply. Staple foods are regularly exported to neighboring structurally deficit countries such as Kenya

In addition to serving the domestic market, the Ugandan agriculture sector plays a major role in the regional (East African) food supply. Staple foods are regularly exported to neighboring structurally deficit countries such as Kenya and South Sudan. Uganda's participation in regional food trade is facilitated by the existence of regional trade agreements and policies in the framework of the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA), as well as by competitive prices (Figure 25 and Figure 26). Macroeconomic factors and sociopolitical events among neighboring trade partners (such as the depreciation of local currencies and social unrest/conflict) affect countries' capacity to ensure their food supply through production or trade. This has implications for trade dynamics in Uganda (FEWS NET 2016c; IFPRI 2008; FEWS NET 2015b).

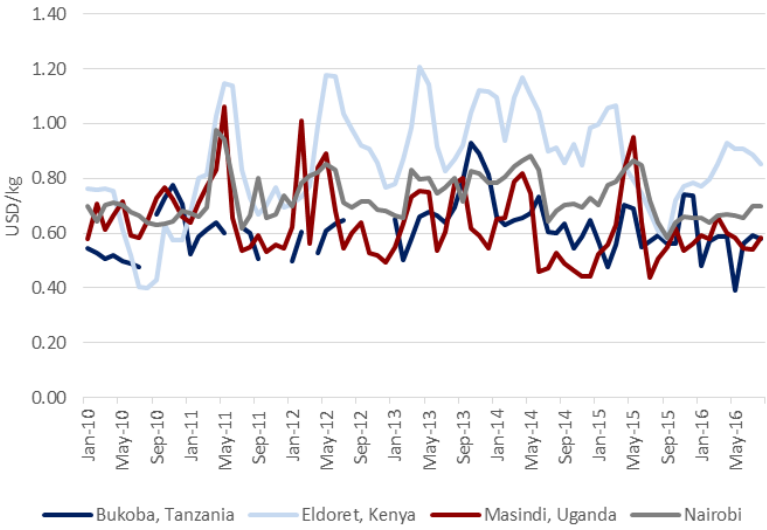
Commodities exported from Uganda are competitively priced in Kenya and South Sudan. For instance, the retail price of maize in Lodwar, Kenya is about two times the retail price in Soroti and about three times the wholesale price in Kampala. Prices in South Sudan are considerably higher than those observed in Kenya, Uganda, or Rwanda. Between 2010 and 2016, retail prices in Juba, South Sudan ranged between US$0.6/kg and US$2.7/kg.

**Figure 25 Maize prices in selected markets in East African countries, Uganda, 2010-2016**




*Source: Kenya data are authors' calculations based on data from Kenya Ministry of Agriculture, Livestock and Fisheries (2016); Uganda data are authors' calculations based on data from MIS/Farmgain Africa Ltd & Uganda Bureau of Statistics (2016); Rwanda dataare authors' calculations based on data from Rwanda Ministry of Agriculture (2016).*

**Figure 26 Dry bean prices in selected markets in East African countries, Uganda, 2010-2016**



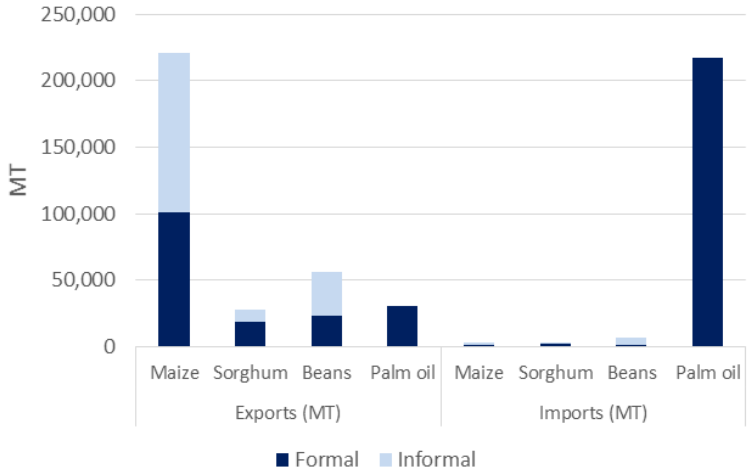

*Source: Kenya data are authors' calculations based on data from Kenya Ministry of Agriculture, Livestock and Fisheries (2016); Tanzania data are authors' calculations based on data from Tanzania Ministry of Industry, Trade and Marketing (2016); Uganda data are authors' calculations based on data from MIS/Farmgain Africa Ltd & Uganda Bureau of Statistics (2016).*

Uganda engages in both formal and informal trade with neighboring countries (Figure 27). The volumes traded through informal channels considerably surpass formal trade flows (UBOS 2014b). The Karamoja subregion is

relevant in commercial exchanges with Kenya since it serves as a gateway for products such as sorghum, maize, and dry beans exported toward markets in western Kenya.

Among the commodities studied, maize and palm oil are the most heavily traded (Figure 27 and Annex 8). Total grain exports are considerable larger than imports and informal trade is often larger than formal trade. For informal exports, maize is the main agricultural product exported, accounting for about 20 percent of the value of all agricultural exports between 2010 and 2013 (UBOS 2014b).

**Figure 27 Formal and informal trade (MT), Uganda, 2010 – 2014**




*Source: Authors' calculations based on data from UBOS (2015) and COMTRADE (2016).*

## 4.2 Food availability context in Karamoja

### 4.2.1 Key foodstuffs in Karamoja

Cereals and pulses constitute the main components of diets in Karamoja, including maize, sorghum, millet, and dry beans (FEG 2014; USAID 2014). Other products such as pigeon pea, groundnuts, sweet potatoes, potatoes, cassava, vegetables, and fruits are also consumed and usually found in the markets, albeit in lower volumes. Sources of dietary fat include refined edible oil and locally produced oilseeds. Karamoja is structurally deficit in terms of staple food supply and depends heavily on food imports from other parts of Uganda. Refined edible oil is sourced exclusively from the central and western areas of the country. Karamoja is a net exporter of livestock.

### 4.2.2 Local production environment and food supply

#### *4.2.2.1 Local production*

Up-to-date agricultural production estimates at the district or subcounty level are scarce. The most recent complete and official data are from the 2008–2009 Uganda Census of Agriculture (2010) and presented in Table 7, along with estimated per capital production estimates of maize, sorghum, and beans. In 2008–2009, Kotido district had the largest aggregate production of those crops. Per capita production was highest in Abim for maize and beans, and in Kotido for sorghum. Other crops cultivated in Karamoja include groundnuts, sesame, sunflower, cassava, and sweet potatoes. Production levels vary by district, with the greatest diversity of crops is grown in Abim and the areas of Nakapiripirit and Napak, where growing conditions are more favorable (WFP et al. 2014).

**Table 7 Production volume of maize, sorghum, and beans, Uganda, 2008–2009**

| District | Population estimate 2009 | Maize | | Sorghum | | Beans | |
|---|---|---|---|---|---|---|---|
| | | MT | kg/capita | MT | kg/capita | MT | kg/capita |
| Abim | 54,800 | 2,645 | 48.27 | 2,440 | 44.53 | 3,466 | 63.25 |
| Kaabong | 324,500 | 3,618 | 11.15 | 8,764 | 27.01 | 3,342 | 10.30 |
| Kotido | 192,800 | 6,703 | 34.77 | 14,429 | 74.84 | 8,085 | 41.93 |
| Moroto | 282,800 | 3,736 | 13.21 | 11,332 | 40.07 | 526 | 1.86 |
| Nakapiripirit | 232,300 | 1,730 | 7.45 | 7,368 | 31.72 | 402 | 1.73 |
| Total | 1,087,200 | 18,432 | 16.95 | 44,333 | 40.78 | 15,821 | 14.55 |

Note: No disaggregated data are available for Amudat and Napak districts, since they were only formally recognized as districts in 2010. Amudat was previously part of Nakapiripirit and Napak belonged to Moroto district; these are therefore included in the data for those districts here.

*Source: Authors' calculations based on data from UBOS (2010).*

The availability of improved seeds is limited in the Karamoja subregion. Traditional varieties are considered to be more tolerant of drought and disease than improved varieties and are more frequently cultivated. Seeds for cereals and pulses are usually available across the region, but cassava cuttings and sweet potato vines are found primarily in the wetter areas (WFP et al. 2013). Several initiatives stemming from a variety of actors (Government of Uganda, local universities, Consultative Group for International Agricultural Research centers, FAO, and most lately the Northern Karamoja Growth, Health, and Governance (GHG) Project) promote and support the cultivation of improved varieties in Uganda. The success of these type of initiatives is limited by a variety of factors, including consumer preferences for traditional varieties, lack of accompanying services (credit, extension) that facilitate producers' adoption of new technologies, limited knowledge of new varieties among input dealers, and challenging environmental conditions (Ssebuliba 2010; Shiferaw et al. 2010).

Low and poorly distributed rainfall during flowering affects grain filling and yields in Karamoja. Maize and pulses are usually planted early in the rainy season since they have longer cycles. Therefore, low and poorly distributed rainfall after planting affects crops during the growing stages. Crops planted later (June/July), such as short-cycle sorghum and millet, may experience delayed planting or no planting at all.

**Table 8 Average yield levels for major staples, Uganda**

| Crop | Average yield (kg/ha) | | |
|---|---|---|---|
| | Uganda (normal year) | Northern Uganda (normal year) | 2013 Karamoja (drought year) |
| Sorghum | 900 | 1,100 | 210 |
| Maize | 2,000 | 1,300 | 206 |
| Beans | 400–1,500 depending on variety | 600 | 97 |

*Source: Authors' calculations based on data from WFP et al.( 2014); MAFAP (2013); UBOS (2015); Kilimo Trust (2012).*

Agricultural production takes place at the smallholder level and generally for subsistence consumption, although local sales do take place, especially during the postharvest period. Compared to other places in Uganda, yields of maize and beans in northern Uganda tend to be lower (Table 8). In 2013, a year in which a dry spell in the Karamoja subregion impacted crop production, yields were recorded at very low levels (WFP et al. 2013).

Agricultural production in Karamoja is compromised by several factors: erratic rainfall, occurrence of dry spells, dependence of agricultural production on rain, low soil fertility, infrequent use of suitable inputs, low use of technology, poor land use, inadequate crop management, limited resources, lack of tillage, pervasive pests, animal

disease, lack of access to veterinary inputs and animal health care (vaccinations, tick control, parasites), and ineffective storage (WFP et al. 2013; WFP et al. 2014).

#### 4.2.2.2 Seasonal rainfall and production patterns

Karamoja has only one rainy season and harvest over the course of the year. Planting occurs between April and May and harvesting takes place from August to December (Table 9). The lean season extends from March to July (FEWS NET 2015a). This marked seasonal pattern is reflected in local food supply and in the overall marketing system. (Table 9) shows the periods of occurrence of the rainy and dry seasons in Karamoja, and their overlap with key stages of the production cycle.

**Table 9 Seasonal patterns in Karamoja, Uganda**

| Seasonal Events | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rainfall | Rainy season | | | | ■ | ■ | ■ | ■ | ■ | ■ | | | |
| | Dry season | ■ | ■ | ■ | | | | | | | | ■ | ■ |
| Production | Cultivation | | | | ■ | ■ | ■ | ■ | ■ | ■ | | | |
| | Harvest | | | | | | | | ■ | ■ | ■ | | |
| | Lean season | | | ■ | ■ | ■ | ■ | ■ | | | | | |

*Source: FEWS NET (2016a)..*

#### 4.2.2.3 Self-sufficiency

The degree of self-sufficiency varies considerably by product, district, and livelihood zone. Based on the typical production outcomes, Karamoja districts are estimated to be self-sufficient in maize about four months of the year, six months for sorghum, and two to three months for dry beans (FEWS NET 2016b). Nakapiripirit, Amudat, and Abim have higher levels of self-sufficiency (Table 10). Nonetheless, as a whole, Karamoja is structurally deficit in staple food supply and depends on food supplies originating from elsewhere in Uganda to meet requirements. While some local oilseed production and cottage processing take place, the majority of edible oil in Karamoja originates from other areas of the country.

**Table 10 Months of self-sufficiency, Karamoja, Uganda**

| District | Maize | Sorghum | Dry beans |
|---|---|---|---|
| Abim | 2 | 7 | 3 |
| Kotido | 2 | 6 | 1 |
| Kaabong | 3 | 5 | 1 |
| Moroto | 3 | 5 | 1 |
| Nakapiripirit | 5 | 7 | 4 |
| Amudat | 7 | 9 | 5 |
| Napak | 4 | 5 | 2 |

*Source: FEWS NET (2016b).*

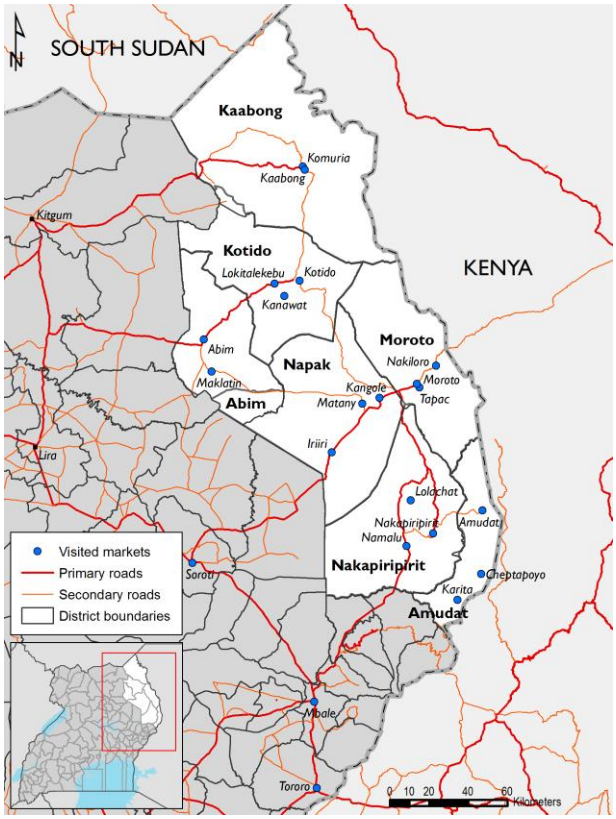
While on the aggregate, the districts may be qualified as self-sufficient for a period of time, dynamics are varied at the household level. Most Ugandan households are net buyers of food and depend on markets as their main source of food (FEWS NET 2015). This situation holds for the Karamoja subregion, as even agricultural households source their food from a combination of own production and market purchases. The proportion of food sourced from own production and from the market varies by district and by time of the year, with market purchases increasing as harvested stocks decline and the lean season sets in (Chapter 3).

## 4.3 Market structure

### 4.3.1 Types of markets present in Karamoja

Markets in Karamoja are diverse with respect to their size, location, accessibility, frequency, and mix of products traded (food and nonfood). The FEWS NET assessment team visited three types of markets in Karamoja to compare their structure, conduct, and performance (Figure 28).

**Figure 28 Location of markets visited in Karamoja subregion, Uganda**




*Source: FEWS NET (2016a).*

**Town center markets**. These markets are located within town centers across Karamoja. They offer a wide array of food and nonfood products. The majority of these markets play a role in assembly and retail. Examples of these markets are the Kotido central market and Kaabong (Worrier Street) market. Town markets operate on a daily basis and are accessible by road. Generally, these markets host over 100 traders and have some permanent infrastructure, including storage facilities, and livestock slaughter and processing facilities.

**Primary markets.** Primary markets are usually the second most important markets in the districts in terms of the volume and value traded and are usually located near larger towns. They are generally accessible via local roads. Primary markets are also large, hosting more than 100 traders. A variety of food and nonfood products are traded in these markets. Beyond retail activities, primary markets may also serve as assembly markets. Examples of these markets are Kangole in Napak district and Namalu in Nakapiripirit district. Livestock trade is an important component of these markets. Market activities usually take place during a specific day during the week, but some more limited activities may take place during other days.

**Secondary markets**. These markets represent the broad majority of markets in Karamoja and are located in subcounties. These type of markets present considerable variation across the region in terms of their size and extent of market activity and accessibility. Access to these markets is often constrained by poor road conditions and the relatively long travel distances and time covered on foot taken by consumers to reach them. The occurrence of moderate or heavy rains can block access over a period of time. Food and nonfood products are offered to buyers predominantly on a weekly basis. While some markets operate only seasonally, others may operate daily. While smaller secondary markets may not surpass 20 vendors, larger secondary markets may host over 100 traders on the market day. This type of market predominantly serves as a retail market. Nakapelimoru in Kotido district (weekly market) and Nakiloro in Moroto district (seasonal market) are examples of secondary markets.

When considering the marketing system as a network of interconnected markets, town center markets as well as some primary markets, such as Kanawat in Kotido or Namalu in Nakapiripirit, serve as hubs that: 1) link their districts to other major markets in the country; and 2) develop links to smaller markets scattered across the region.

Compared to other major markets in Uganda, such as those in Gulu, Lira, Soroti, or Mbale, town center and primary markets in Karamoja are considerably smaller in terms of the volume of products traded. The type and size of large-scale wholesale transactions present in the main Ugandan markets are not observed in Karamoja.

With regard to market physical infrastructure, primary and secondary markets may have some permanent structures (stalls that can be locked up) in the market or nearby. The FEWS NET field assessment team found that these facilities were not typically in use. Town/central markets have permanent structures, including small shops and stalls. In many of the markets visited, products were displayed in the floor directly over sacks, tarps, small containers, or large cans (Figure 29).

**Figure 29 Examples of infrastructure present in Matany Market, Uganda**

*Source: FEWS NET (2016a).*

Livestock trade is predominantly of live animals and therefore usually takes place at a nearby location separate from food and nonfood product markets. Some livestock markets have fences and loading ramps used to aggregate the animals, as well as stalls where veterinary medicines and other supplies are offered (Figure 30)

**Figure 30 Examples of infrastructure present in Kotido livestock market, Uganda**

*Source: FEWS NET (2016a).*

To participate in marketing activities on market days, traders are required to pay market fees and taxes. These fees can be paid annually or on a daily basis, but the general preference in the markets visited is to pay the daily fee (Table 11). Fees due in larger markets amount up to 500 UGX per day per 100-kg-bag of produce. Annual licenses cost between 100,000 and 115,000 UGX. Livestock traders pay for animal movement permits between 1,000 and 5,000 UGX per head. Fees for cattle are higher than fees for sheep and goats. Loading fees are other general market fees paid by traders. Taxes paid to the municipality were reported in most markets. These reached values up to 1,000 UGX per bag for crops, 5,000 UGX per cattle head, and about 1,500 UGX for sheep and goats. Tax/fee collection varies by type of market and by district.

**Table 11 Local market taxes and fees**

| Product | Market fee (annual) | Market fee (daily) | Taxes |
|---|---|---|---|
| **Crops** | 100,000-115,000 UGX/person | 500 UGX/bag | 500–1,000 UGX/bag |
| **Livestock** | 100,000-115,000 UGX/person | 1,500-5,000 UGX/head | 1,500-5,000 UGX/head |

*Source: FEWS NET (2016a).*

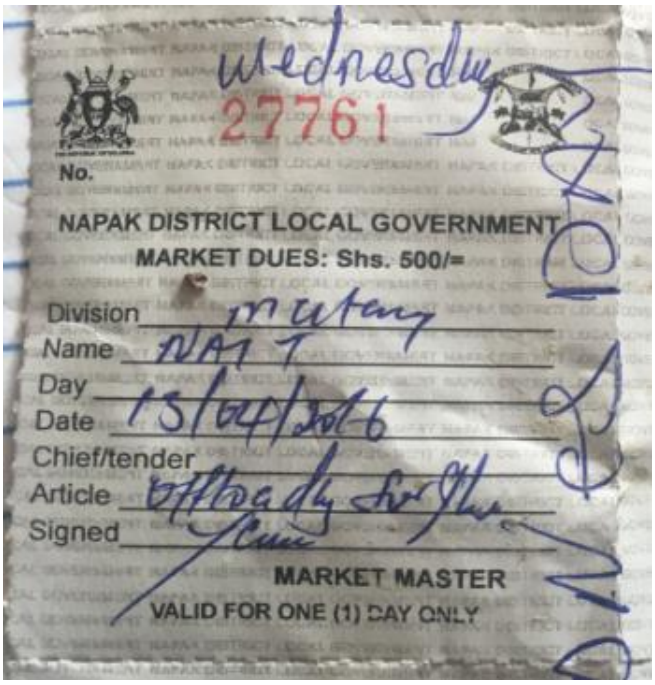
**Figure 31 Examples of infrastructure available and unused market infrastructure in Abim, Uganda**

*Source: FEWS NET (2016a).*

**Figure 32 Examples of infrastructure available for slaughter in Kotido, Uganda**

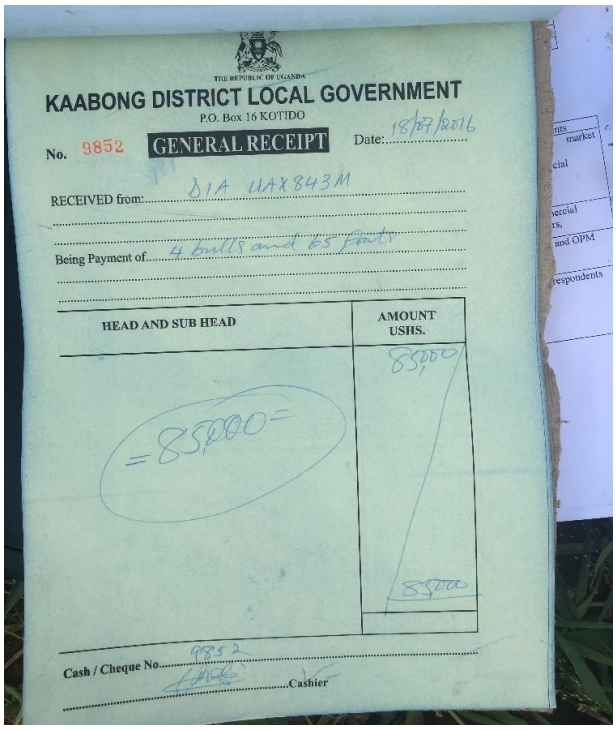
*Source: FEWS NET (2016a).*

**Figure 33 Example of market fee receipt in Matany Market, Uganda**




*Source: FEWS NET (2016a).*

**Figure 34 Sample of market tax receipts in Kaabong market, Uganda**

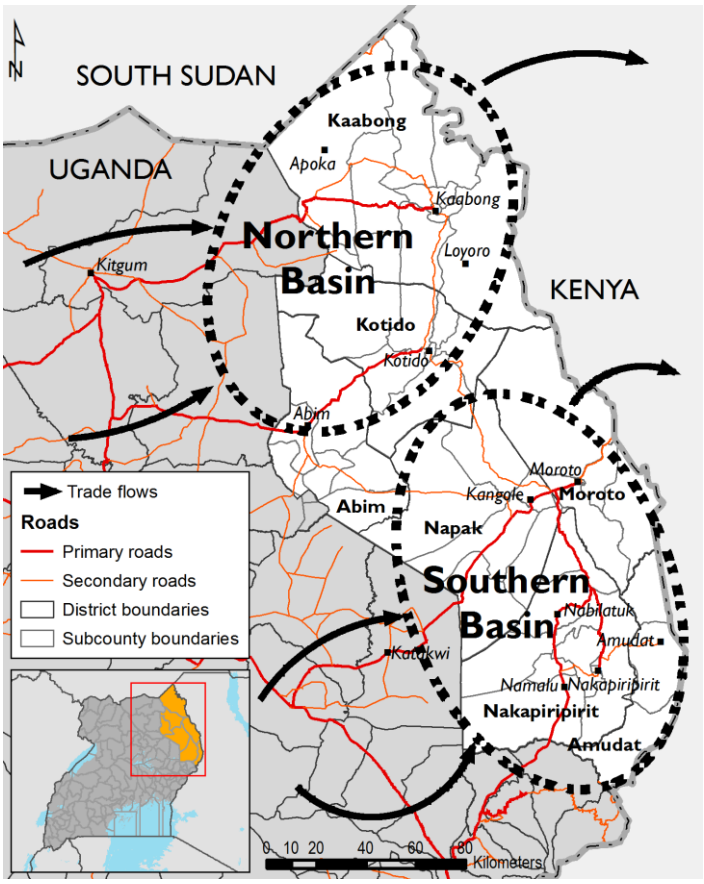



*Source: FEWS NET (2016a).*

### 4.3.2 Marketing basins

Karamoja has two broad marketing basins (Figure 35): a southern basin includes the districts of Amudat, Napak, Nakapiripirit, and Moroto; and a northern basin includes Kotido, Kaabong, and Abim (FEWS NET 2016b). Trade linkages with the rest of Uganda and neighboring Kenya vary by basin. For instance, the northern basin of Karamoja has clear market linkages with Gulu and Lira in northern Uganda and with markets such as Lokichogio in Kenya. The southern basin has trade linkages with Soroti and Mbale in eastern Uganda and with Lodwar and Lokiriama in Kenya. [8] While road infrastructure connects both basins and allows the flow of commodities within Karamoja, market linkages between the two basins are weaker than those to their corresponding linkages with other areas of Uganda and neighboring Kenya.

**Figure 35 Karamoja marketing basins, Uganda**




*Source: FEWS NET (2016a).*

### 4.3.3 Marketing actors

A wide variety of actors participate in the staple and livestock marketing system in Karamoja. These actors can be categorized into two broad groups with either direct or indirect involvement in trade. Contextual actors (individuals or institutions) are indirectly involved in trade but who nevertheless influence the functioning of the local marketing system (Table 12). Persons external to Karamoja, as well as locals, are included in this category of actors. Local contextual actors assure cross-cutting and supporting services that are important to the smooth and efficient functioning of markets. Generally these actors are men, however women are noticeably present as translators/facilitators of market transactions. External actors are more prevalent for some services (veterinary services) and among police force members. Other market actors are directly engaged in activities that affect the commodity supply and distribution chain either through production, processing, or trade (Figure 36 and Figure 37).

Noticeable variations exist within Karamoja and even within markets in terms of the way in which foodstuffs are supplied to consumers. Within Karamoja, producers sell directly to retailers or to local assemblers. These local assemblers in turn sell to larger traders or wholesalers, who then sell to retailers, millers, or institutional buyers. Some producers might acquire inputs from local input providers. Small-scale millers provide grinding services to consumers in exchange for a fee (more details below). Traders are a diverse group, ranging from local traders handling a few bags of product on intradistrict exchanges, to larger interdistrict traders and wholesalers that handle larger volumes (several tons). Interdistrict traders source their goods primarily from areas outside of Karamoja, such as Soroti, Lira, and Mbale. Itinerant traders handle smaller loads since they move them from market to market. Beyond offering production inputs, some input suppliers in both cereal and livestock marketing chains also offer technical support and advice on production-related questions that producers might have. While

[8] See production and trade flow maps in Annex 6.

they are not formally extension agents, they often constitute the sole source of technical information for producers.

The dry beans marketing chain is rather simple. Larger traders source the commodity from other parts of Uganda. and bring it to major town markets. Local traders and retailers source from these markets and sell to other traders or to final consumers. Alternatively, local retailers go to their source market outside Karamoja and bring the product directly to their retail locations. Large edible oil processing firms (Bidco and Mukwano, which jointly supply over 75 percent of the national refined edible oil market), have their own domestic distribution networks, on which local retailers in Karamoja rely for supplies.

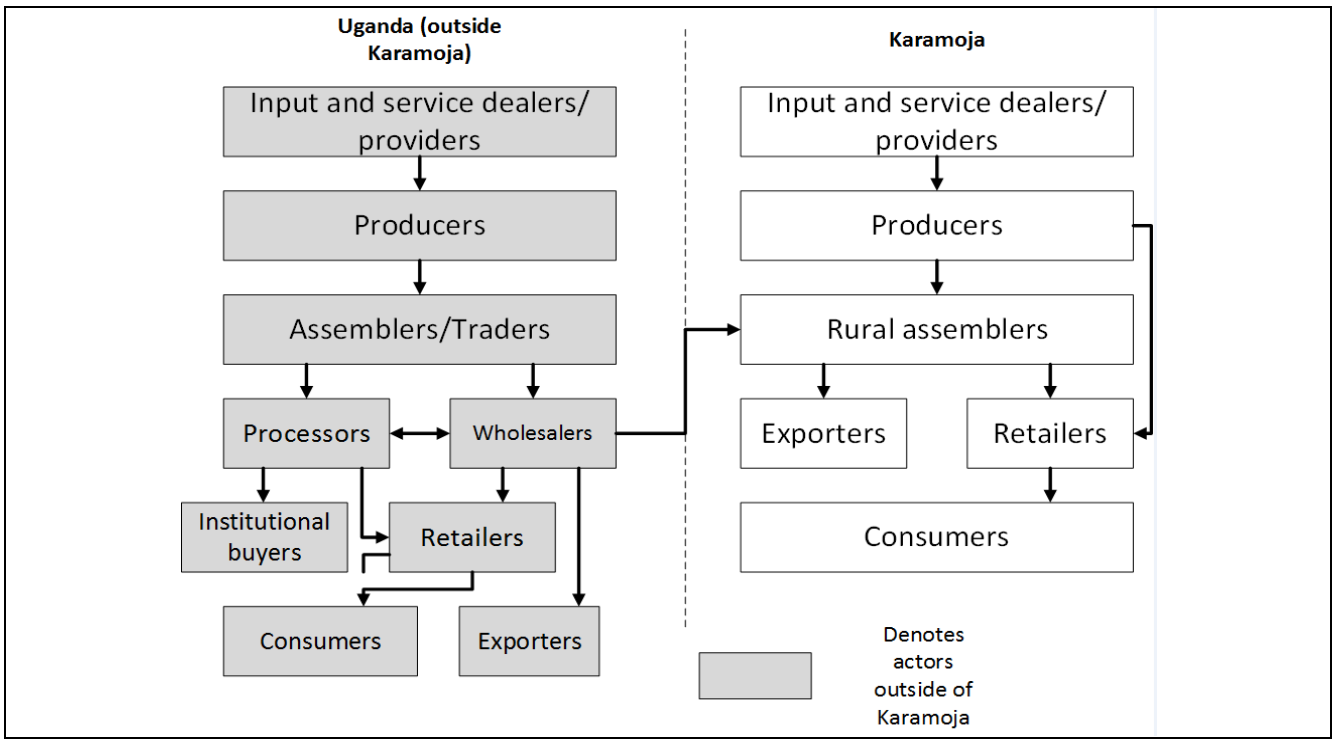
Compared to contextual actors (who are mostly men), women have a relatively larger role in food production and marketing in Karamoja. Women are engaged in crop production, the sale of poultry and milk, and retail activities. Men participate all along the value chain and are particularly dominant among inter-district traders and in all livestock-related activities (including both local populations and those from outside of Karamoja). Indigenous populations to Karamoja participate in nearly all marketing activities to some extent, but constitute a minority among traders. It is estimated that less than 20 percent of all traders belong to the local indigenous population (FEWS NET 2016a). Overall, trade is dominated by traders from other parts of Uganda (external). Kenyan traders also engage in commercial activities in Karamoja, particularly on activities associated with cross-border trade in areas with strong cross-border linkages, such as Amudat and Moroto districts (FEWS NET 2016a). Indeed, Kenyan traders have a large presence in these markets.

**Table 12 Contextual actors in Karamoja and their main functions, Uganda**

| Actor | Functions | Local | External |
|---|---|---|---|
| **Elders** | Verify ownership of livestock taken to the markets | | |
| **Community development organizations** | Train (youth), develop market linkages | | |
| **National and international development organizations (FAO, NGOs)** | Facilitate access to inputs, to markets, and to infrastructure | | |
| **Local government leaders and staff (chiefs, revenue collectors, veterinary personnel, extension agents)** | Organize market activities<br>Collect taxes and market fees<br>Ensure law and order, security, and control of cattle theft<br>Conduct conflict resolution<br>Formulate market bylaws and ordinances<br>Verify livestock ownership<br>Provide services (extension, animal health)<br>Issue certificates and permits (that is, animal health)<br>Enforce regulations and quarantine | | |
| **Service providers and national level government and police staff (veterinary personnel, extension agents, police)** | Ensure law and order, security, and control of cattle theft<br>Provide services (extension, animal health)<br>Enforce regulations and quarantine | | |
| **Service providers** | Translate and facilitate negotiation between buyers and sellers<br>Load and offload commodities and livestock<br>Walk animals to and from the market<br>Rent market stalls | | |
| | Denotes functions mainly performed by men | | |
| | Denotes functions performed by men and women | | |

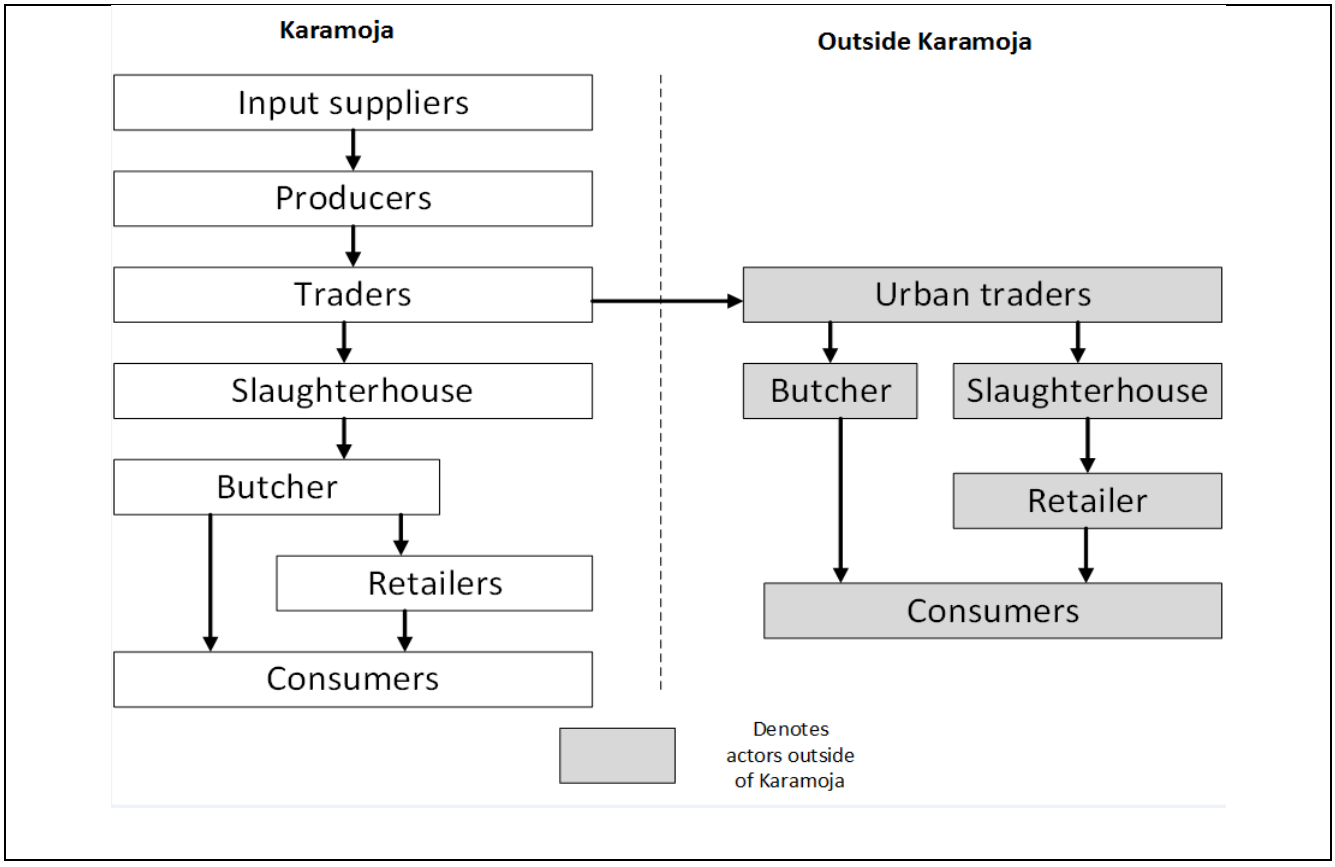
*Source: FEWS NET (2016a).*

**Figure 36 Maize/sorghum marketing channels, Uganda**




*Source: FEWS NET (2016a).*

**Figure 37 Livestock marketing channel, Uganda**




*Source: FEWS NET (2016a).*

Overall, a large number of traders were present in the markets visited during the assessment. The lack of market power by individual actors applies even to the relatively smaller and more isolated markets visited. Collective trading through traders' associations or other formal or informal groups is practically nonexistent in Karamoja. With the exception of a couple of organized activities in Moroto, it appears that no trade-based associations are well established in the region.

With respect to consumers (those going to negotiate and buy on markets), women tend to purchase household food items. The exception to this is livestock, which are purchased by men. Consumers may travel or walk long distances, sometimes over 20 km, to reach the market. With such distances it is likely that vulnerable populations (the elderly, sick people, pregnant women) may face constraints accessing the market. Otherwise, market days represent a social opportunity in Karamoja that transcends daily life beyond the mere sale and purchase of goods.

### Barriers to entry for trading activities

Households in Karamoja are marginally integrated in the markets, either as sellers of surplus production or as consumers. Aside from market day fees and taxes, no formal factors prevent persons from engaging in trading activities, but social and contextual limitations exist. As sellers, households' participation is constrained by the low level and short duration of their marketable surplus, as well as their physical access to markets. As consumers, households are limited by the difficulty of earning cash (lack of liquidity), which results in low effective demand, and by potential market access constraints, particularly during the rainy season. The assessment identified several other barriers to participation in trading activities that can be categorized as personal and contextual (Table 13).

**Table 13 Barriers to trading activities in Karamoja**

| Type | Barriers |
|---|---|
| Personal | Lack of capital for purchasing commodities and covering transaction costs. |
| | Dislike for long-distance travel, particularly among some ethnic groups. Traders often need to travel long distances either for sourcing or for selling their goods. Travelling far from the community area is deemed not desirable by some. |
| | Lack of trust among the different ethnic groups/tribes. Given the experience of social tensions and conflict, a sense of distrust persists toward others from different backgrounds. |
| Contextual | Cultural norms that dictate men's and women's type of participation in the marketing system for specific commodities. For instance, the trade of livestock is exclusively a men's activity. |
| | Security concerns, particularly in the case of livestock trading. Cattle theft occurs within the region. Persons moving/walking animals toward market locations can be a target of theft |
| | Poor road conditions, especially during the rainy season. These impede traders from accessing certain markets over a period, and/or force them to increase stocks to be better positioned to supply the demand. Transport costs are the main transaction costs incurred by traders. |

*Source: FEWS NET (2016a).*

### Traders' access to storage and duration of stocks

The availability of storage for private sector actors is limited and varies by market, with town markets generally having the largest capacity (Table 14). Permanent infrastructure for storage activities (stores, lock-up stalls, sheds) is available in town markets and in some primary and secondary markets. However, this infrastructure is often left unused, especially if managed by a community-

**Table 14 Examples of storage capacity by market type, Uganda**

| Market type | Capacity |
|---|---|
| Town market | 20-40 MT |
| Primary market | 5-10 MT |
| Secondary market | < 5 MT |

*Source: FEWS NET (2016a).*

based organization. While some traders access lock-up stalls for storing their merchandise, itinerant traders simply carry their loads from market to market. In most markets visited, traders reported holding stocks for a maximum of two to three months, but often much less. This is done either in formal structures in town and market centers or in the place of residence.

### 4.3.4 Local milling

Milling in Karamoja is limited and mills are not specialized in a specific commodity. Maize, sorghum, and cassava are milled locally using the same machines. Households typically pay millers for their services, rather than local millers taking ownership of the crops and participating directly in marketing. Maize flour is the exception and is processed using modern industrial methods in other areas of Uganda, such as Kampala, Jinja, and Mbale. Maize flour is regularly retailed in markets in Karamoja, where wholesalers often play a dual role as miller/processor.

**Figure 38 Milling equipment available in Karamoja, Uganda**

*Source: FEWS NET (2016a).*

The assessment team found local small-scale, diesel-powered milling machines (Figure 38) in Kotido, Kaabong, and Abim town centers, as well as in Iriri (Napak). Flour quality is variable, with some locations producing finer flour, which is preferred by consumers. The peak milling season takes place between August and November, during the harvest period. The amount milled varies depending on the season and client. For example, WFP engages with some local millers for school feeding programs. The cost of grinding is uniform across millers, amounting to 300 UGX for 3 kg. Milling activities are constrained by high fuel prices and technical issues related to the functionality of the equipment (maintenance, access to spare parts, machine breakdown).

## 4.4 Market conduct

Market actors in Karamoja display a number of conduct and behavioral practices that affect local marketing systems in Karamoja, such as: price setting and discovery; grades, quality standards, and units of measure; sources of market information and associative behavior; and cost-reduction strategies.

### 4.4.1 Price setting and discovery

The large number of traders participating in the markets encourages competitive behavior and reduces the risk of collusion among traders, both in staple and livestock markets. Commodity prices are determined by the forces of supply and demand, and respond to the seasonality inherent in food production. The only exception to this observation is Nakiloro market in Moroto, where traders reported jointly setting prices to achieve higher profits.

Commercial transactions in Karamoja are predominantly spot transactions framed by negotiations (bargaining) between buyers and sellers. This approach often leads to lengthy price discovery situations that result in higher transaction costs (time) for the actors involved. Transactions related to livestock sales by producer households are particularly prone to long negotiations due to the high value attached to the animals. Indeed, the entire family is often involved in negotiations as livestock are a core component of household assets in Karamoja.

### 4.4.2 Grades, quality standards, and measurement units

Commodities sold in Karamoja markets are not standardized. There is no adherence to grades or quality standards, nor price premiums for them, that could help differentiate higher-quality from lower-quality produce. For staples such as maize or sorghum, higher- and lower-quality grains are mixed in the bulk. Beans of different varieties are often sold together. Livestock quality is assessed considering weight (estimated by traders) and animals' physical condition. This pattern applies to both local transactions and those involving exports to Kenya. The only situations where consideration of grades and standards was reported were cases of consignments made to WFP and to a small number of large-scale traders. In terms of measurement units, cereal trade often occurs by the cup, the jug, the USAID edible oil tin, the basin, or the 100-kg bag (Table 15). Edible oil is traded in 1-, 3-, and 20-liter jericans. In some locations, it is also possible to find oil in 330-ml soda bottles or other smaller bottles.

**Table 15 Common units of measurement used in Karamoja, Uganda**

| | | |
|---|---|---|
| **Cereals and pulses** | **Wholesale** | 100-kg bag |
| | **Retail** | Cup |
| | | Jug |
| | | USAID edible oil tin |
| | | Basin |
| **Edible oil** | **Wholesale** | 3-liter jerican |
| | | 20-liter jerican |
| | **Retail** | 1-liter jerican |
| | | 330-ml soda bottles |
| | | 100–200-ml bottles |

*Source: FEWS NET (2016a).*

Vendors may use a variety of strategies to gain a profit margin. For example, it is common practice for traders and retailers to underfill containers, but still charge the full agreed upon spot price. Sales involving smaller units (cups, bottles, etc.) are often more expensive for consumers than sales involving standard units (kilograms or liters). Rural buyers may also behave in an analogous way and overfill bags when making purchases in rural markets.

### 4.4.3 Market information and associative behavior

In the absence of a formal market information system, traders in Karamoja typically access market and price information through their business network (partners, other traders). This network is very important to traders given that very few traders' associations or collective activities exist in Karamoja to support their trading activities. Cell phones are a key tool for business activities. Traders access information and coordinate purchases, transport, and sales with their network of contacts through their cell phones. During the field assessment, network coverage/phone signal was available in all markets visited. Producers on the other hand have little access to any type of market information. This usually results in information asymmetries during commercial transactions, to the disadvantage of producers (FEWS NET 2015a).

At the retail level, price information is not readily available for consumers. Consumers typically engage in potentially lengthy price negotiations with vendors. Refined edible oil is the exception, in that prices appear to be set and enforced through a network of vendors throughout the country. For this reason, there is little price variation for edible oil compared to other products sold on markets in Karamoja (Section 4.5).

### 4.4.4 Cost-reduction strategies

Traders implement different cost-reducing strategies with the purpose of reducing transaction costs and/or increasing their profit margins. The assessment team found that in Karamoja, traders typically engage in back-/front-hauling, tax and trading fee evasion through cattle smuggling, and conduct of commercial activities right outside the market space.

Taking advantage of the market linkages of Karamoja with other markets in Uganda, traders and transporters frequently back- or front-haul commodities between markets. For instance, some transporters bringing food and nonfood items into the region collect livestock that is transported back to other markets in and outside of Karamoja. The objective of back- and front-hauling is to reduce costs by ensuring that the truck is full during all routes into and out of Karamoja. Hauling activities were reported to take place most frequently between Amudat, Moroto, Nakapiripirit, Kaabong, and Kotido and the rest of Uganda.

Cereals (particularly maize) and pulses constitute the most common food items brought into Karamoja. Soap, clothing, shoes, cement, beer, and general household items were reported as the most common nonfood items arriving to the region. Cattle is the most important product collected by back-haulers who transport commodities out of Karamoja.

Evasion of trading taxes and fees through cattle smuggling was reported to occur in Kaabong district. It is uncertain whether similar actions occur in other places of Karamoja. In Kaabong, traders purchase cattle across the district and graze it en route to Kotido market. They target arrival on the market day. This behavior allows traders to avoid incurring taxes and fees and engaging in formal processes related to the movement of animals and health certification (permits). To avoid paying market fees, some retailers remain outside the market space area and conduct business from trucks from which commodities are held and displayed to consumers.

Finally, cattle are often stolen and sold on markets. Cattle theft occurs regularly, but increases during the dry season when household stocks are at their lowest. Communities (and markets) make large efforts to oversee and verify cattle ownership and to ensure the integrity of the herds. Nevertheless, theft still takes place. When caught, the involved person is subject to high penalties.

## 4.5 Market performance

### 4.5.1 Seasonal Variability in local food availability and prices

Local production is generally available in local markets for a limited time during the harvest and post-harvest period. Traders therefore rely heavily on external produce to supply markets (Annex 6). Interruptions in the supply chain are mainly associated with heavy rains that result in seasonal flooding. As harvests begin, the local availability of crops increases and prices reduce to their lowest levels (Table 16) As local food supply reduces, prices increase, reaching their highest in June–July, toward the end of the lean season.

The highest sale volumes and prices for cattle are observed concurrently in the fall months after the rainy season when pastures are in good conditions and animals are well fed and in good physical condition, fetching higher market prices. Livestock sales during the spring and lean season are typically low. During this time, the dry season is still ongoing and pastures are in a poorer condition. Animals are not at their best shape and thus fetch lower prices. Furthermore, given that many households may need to sell cattle to cover other immediate needs as the lean season continues, they tend to accept low prices in the pressure to sell (FEWS NET 2016a).

**Table 16 Seasonal patterns in the marketing of key commodities in Karamoja, Uganda**

| Seasonality | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Production | Crop harvests | | | | | | | | ■ | ■ | ■ | ■ | ■ |
| | Livestock fattening | | | | ■ | ■ | ■ | ■ | ■ | | | | |
| | Livestock sales | | | | | | | | | ■ | ■ | ■ | ■ |
| | Lean season | | | ■ | ■ | ■ | ■ | ■ | | | | | |
| Price of crops | Highest prices | | | | | | ■ | ■ | | | | | |
| | Lowest prices | ■ | | | | | | | | ■ | ■ | ■ | ■ |
| Price of livestock | Highest prices | ■ | ■ | | | | | | ■ | ■ | ■ | ■ | ■ |
| | Lowest prices | | | | | | ■ | ■ | ■ | | | | |
| | Larger cattle sale volume | | | | | | | | | ■ | ■ | ■ | |

*Source: FEWS NET(2016a)*

Market demand reduces during the harvest months when households have access to their own supply. Households without access to own production (that is, urban households) have a more stable food demand. Limited aggregate effective demand is a constraint to marketing, however. Insufficient market pull in the area, coupled with poor infrastructure that complicates trade and makes transport more expensive, translates into limited amounts and diversity of products traded and prohibits markets from functioning in certain areas. In the absence of local well-functioning markets, populations living in more isolated areas are forced to travel longer distances to acquire food, to incur higher transaction costs, and often, to pay higher prices.

With respect to price levels for the commodities analyzed, retail prices of maize and sorghum in key markets of Karamoja were considerably higher than the wholesale prices in the markets of Soroti and Lira, which are known to supply markets in Karamoja (Figure 39 to Figure 41). Figure 44 Prices in the Moroto market (a reference market in the Karamoja subregion) are higher between March and August, the lean season (Figure 40). Annex 5 shows the price variation in the markets visited, by periods of high and low availability (volume). During the low availability period, prices can reach up to three times the price registered in periods of high availability. As expected, price differentials between primary and secondary markets are larger in the period of low availability compared with the corresponding differential in the period of high availability. While prices in secondary markets are higher prices than in primary/town markets, the degree of price variation is not indicative of price gouging or price inflation. Price differentials of sorghum between primary/town and secondary markets are smaller than the maize price differentials in the same markets. During the high availability (volume) period, most secondary markets visited sold sorghum for 100 UGX/kg more than primary markets did. During the low volume period, prices were two to three times the high volume prices, widening the differential between markets to as much as 500 UGX/kg.

**Figure 39 Retail (white) maize prices in Karamoja markets and reference markets (UGX/kg), Uganda, 2013-2015**

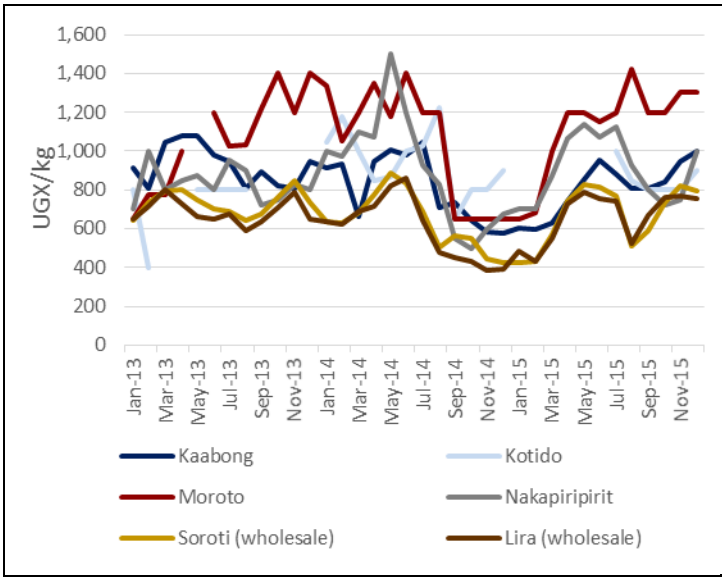
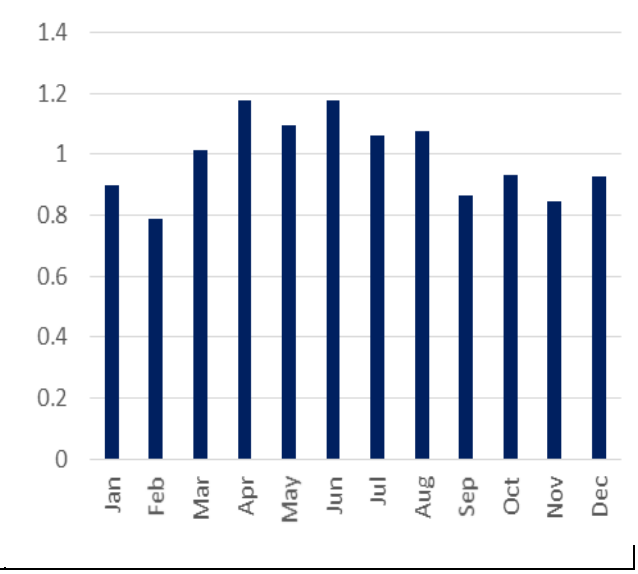



**Figure 40 Seasonal index for Moroto (white) maize retail prices, Uganda, 2013-2015**




*Source: Author's calculations based on data from WFP Uganda; Farmgain Africa and UBOS (2016).*

**Figure 41 Retail (white) sorghum prices in Karamoja markets and reference markets (UGX/kg), Uganda, 2013-2015**

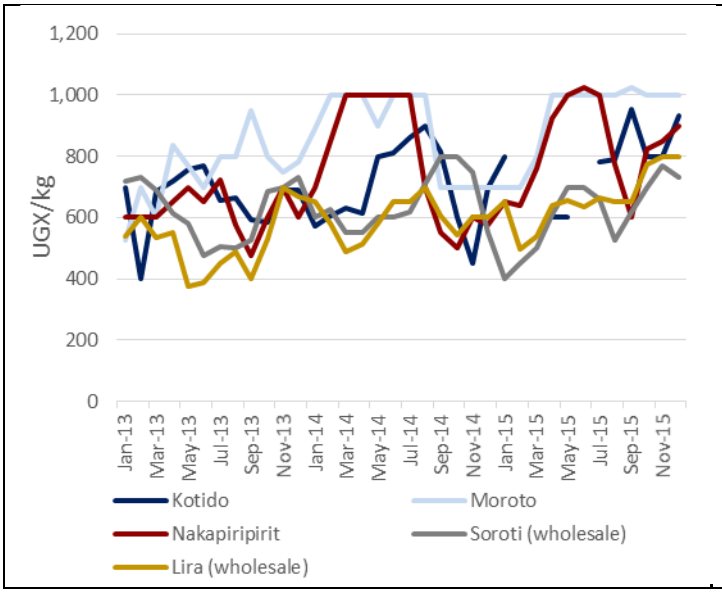
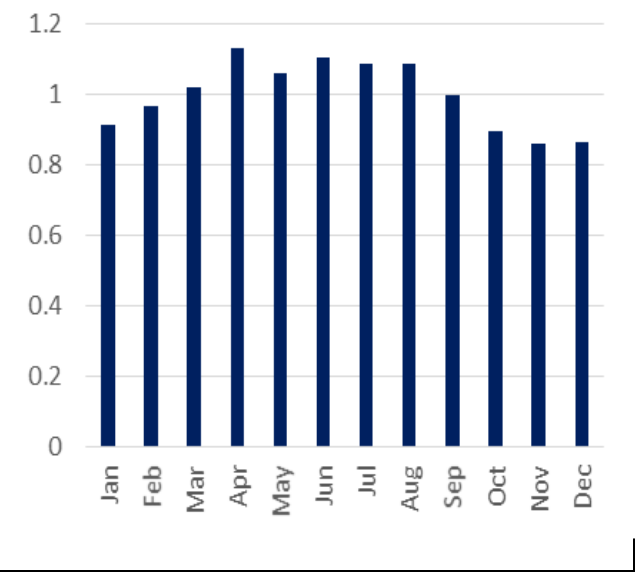



**Figure 42 Seasonal index for (white) sorghum retail prices in Moroto, Uganda, 2013-2015**




*Source: Author's calculations based on data from WFP Uganda; Farmgain Africa and UBOS (2016).*

Dry beans display similar variability as sorghum across the selected Karamojan markets (Figure 43 and Figure 44). Prices in Kaabong are noticeably higher than in other markets within the region for which price data are available. Prices increase between January and June, reaching their highest values in May and June. Considerable price differentials in dry beans exist between primary and secondary markets, with secondary markets charging 500 UGX/kg more than primary markets. Prices are at their lowest in the August–December period (Annex 5, and Figure 44).

**Figure 43 Retail dry bean prices in Karamoja markets and reference markets (UGX/kg), Uganda, 2013-2015**

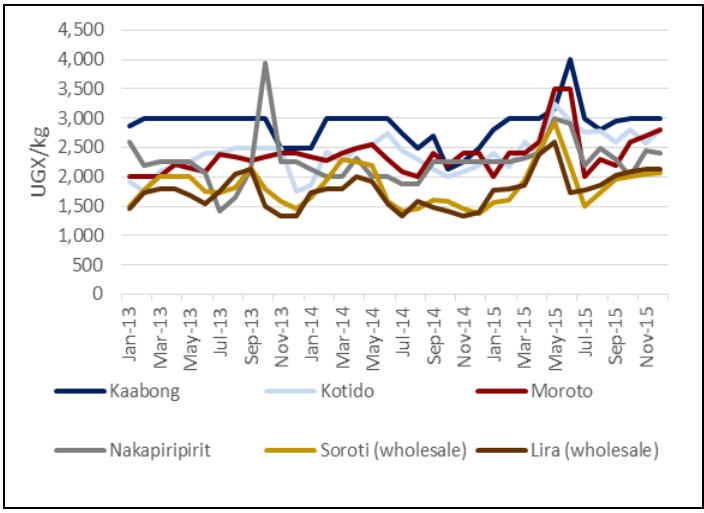
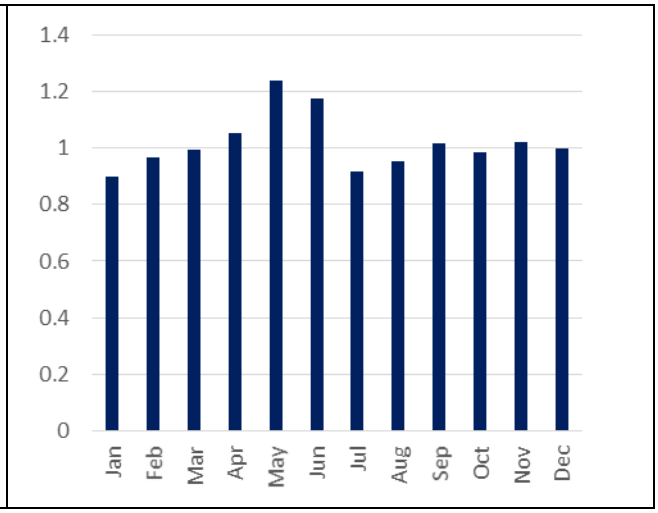



**Figure 44 Seasonal index for dry bean retail prices in Moroto, Uganda, 2013-2015**

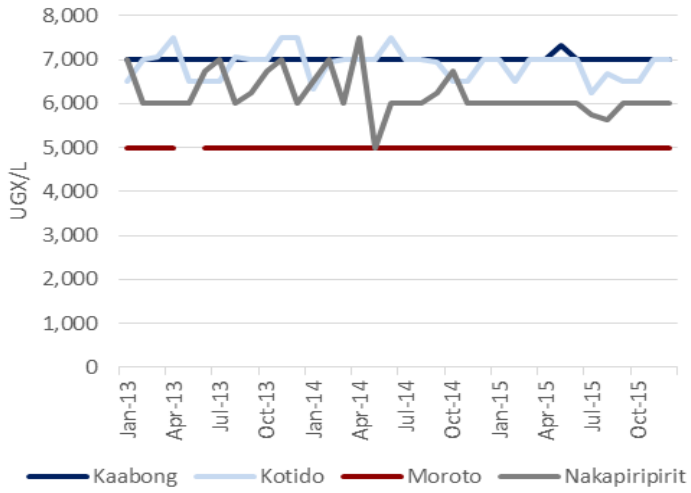



Note: Prices correspond to beans of the type K124/Nabe 4

*Source: Author's calculations based on data from WFP Uganda; Farmgain Africa and UBOS (2016).*

Refined vegetable oil traded in the Karamoja subregion is sourced externally. During past years, prices remained at constant levels in some markets within the region (Figure 45). Overall, no differentials arose in the price of 1 liter of oil between the primary/town and secondary markets visited during the assessment.

**Figure 45 Refined vegetable oil prices in Karamoja markets (UGX/L), Uganda, 2013-2015**




*Source: Author's calculations based on data from WFP (2016).*

Livestock (cattle) prices vary over the year (Figure 46 and Figure 47). As mentioned above, higher prices are observed at the end of the rainy season. While this general trend observed in the price data is consistent with the field observation, it is important to recall that livestock prices vary significantly depending on age, sex, and physical condition of the animal (size, weight, and health). For instance, at the time of the assessment, bulls in the Kaabong market sold for 1,200,000 UGX, while cows sold for 600,000 UGX, bull calves for 450,000 UGX, and heifers for 550,000 UGX. Due to the heterogeneity in the characteristics of animals traded that contribute to price determination, it is difficult to assess the price differential between primary/town and secondary markets. Annex 5 shows price ranges paid per animal during the low-volume and high-volume seasons.

**Figure 46 Cattle prices in Karamoja markets and Turkana, Kenya (UGX/head), Uganda and Kenya, 2013-2015**

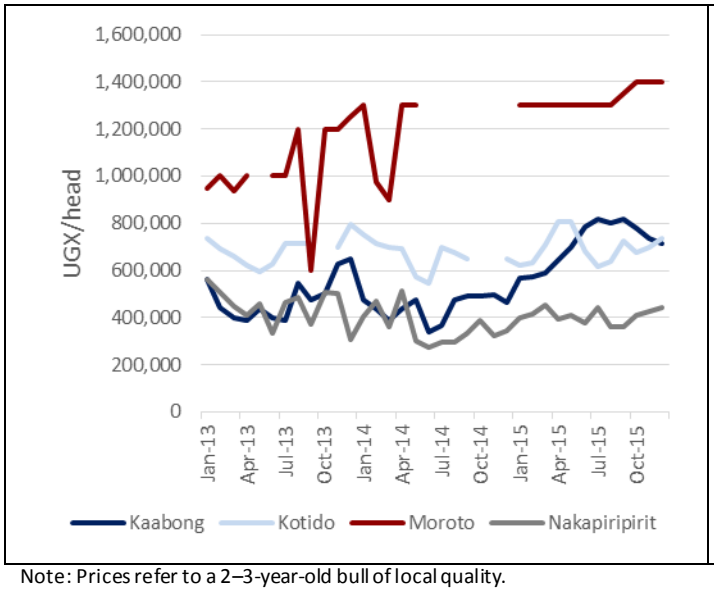
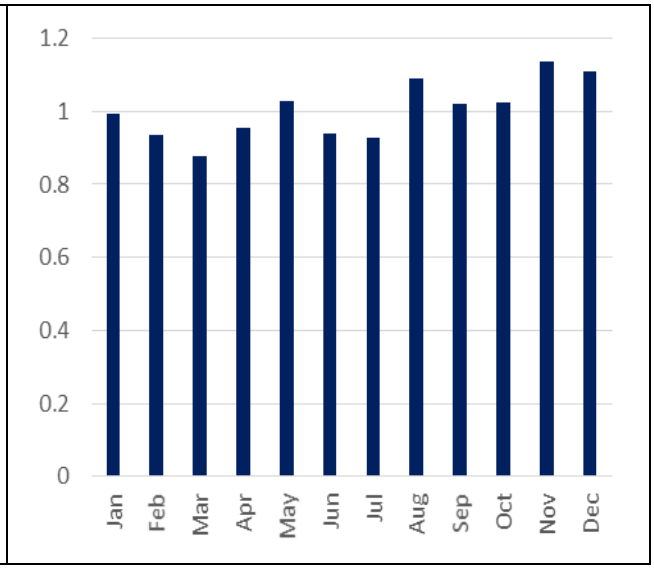



**Figure 47 Seasonal index for cattle prices in Kaabong, Uganda, 2013-2015**




Note: Prices refer to a 2–3-year-old bull of local quality.

*Source: Author's calculations based on data from WFP Uganda; Farmgain Africa and UBOS (2016)*

### 4.5.2 Market integration

Markets in Karamoja are connected to other markets within the same district, to markets in other districts within the region, to markets in other districts in Uganda, and to markets in other countries (particularly Kenya). Table 17 shows the main markets through which the different commodities analyzed flow within and outside the region.

**Table 17 Markets involved in Karamoja's commodity trade flows, Uganda**

| | Maize | Sorghum | Dry beans | Refined vegetable oil | Livestock |
|---|---|---|---|---|---|
| **Markets within Karamoja** | Abim, Kaabong, Kotido, Moroto, Namalu, Amudat | Agim, Kaabong, Kotido, Kangole, Moroto, Nakapiripirit | Abim, Kaabong, Kotido, Moroto, Nakapiripirit, Amudat | Abim, Kaabong, Kotido, Moroto, Nakapiripirit, Amudat | Abim, Kaabong, Kotido, Moroto, Namalu, Amudat |
| **Outside Karamoja** | Kitgum, Lira, Masindi, Amuria, Mbale | Kitgum, Pader, Agago, Lira, Soroti, Amuria, Mbale | Kitgum, Lira, Soroti, Mbale | Kitgum, Lira, Soroti, Mbale | Pader, Kampala, Lira, Soroti, Iganga, Busia, Mbale |
| **Outside Uganda (Kenya)** | Lodwar | Lokiriama, Lokichogio | Lokiriama | Lokiriama | Kapenguria |

*Source: FEWS NET (2016b).*

Two broad marketing basins exist in Karamoja, as mentioned earlier. The northern basin connects the northem districts of Karamoja (Abim, Kotido, and Kaabong) to markets in Kitgum, Pader, Gulu, and Lira, and to Lokichogio in Kenya. The southern basin connects the southern districts with Soroti, Amuria, and Mbale, and to Lokiriama in Kenya. Trade between the basins occurs following the main road, but the size of the flow is relatively smaller and largely seasonal . The production and trade flow maps present the specific details (Annex 6).

**Table 18 Strength of price correlations between Karamojan markets, Uganda**

| Product | Strong correlation | Weak correlation |
|---|---|---|
| **Cattle (2–3-year-old bull of local quality)** | Moroto–Kaabong | |
| **Maize (white)** | Moroto–Kaabong<br>Moroto – Nakapiripirit<br>Moroto – Lira<br>Soroti –Kaabong<br>Soroti–Moroto<br>Soroti–Nakapiripirit<br>Soroti–Lira | Kaabong–Nakapiripirit<br>Lira–Kaabong<br>Lira–Nakapiripirit |
| **Sorghum (white)** | Soroti–Lira | |
| **Dry beans (k124/Nabe 4)** | Kaabong–Kotido<br>Moroto - Lira<br>Soroti–Kaabong<br>Lira–Kotido<br>Soroti–Kotido<br>Soroti–Moroto<br>Soroti–Lira | Lira–Kaabong<br>Lira–Moroto |
| **Edible oil** | Price correlations were not calculated for edible oil. Prices tend to be constant for long periods of time and increase occasionally in a stepwise manner. Prices show little variation across other markets. | |
| Note: All correlations shown are statistically significant. | | |

*Source: Author's calculations based on data from WFP Uganda; Farmgain Africa and UBOS (2016)*

The degree of price correlation (co-movement) across main markets in Karamoja is most evident for maize. The markets in Moroto and Nakapiripit registered the strongest correlations. For the rest of the commodities analyzed, the markets in Lira and in Soroti displayed medium to weak price correlation with the markets in Karamoja (Table 18)

Trade in border areas with Kenya often occurs using both Ugandan and Kenyan shillings. Traders in markets involved in cross-border trade in Amudat, Moroto, and Kaabong districts regularly conduct transactions in both currencies. The exchange rate is communicated freely among traders.

### 4.5.3 Factors that affect market performance

As in the rest of Uganda, several factors constrain the performance of staple food markets in Karamoja:

- Limited participation of input traders, which further lowers the use of external inputs such as fertilizer.
- Information asymmetries and lack of trust between different actors (producers and traders), resulting in what is perceived by many as excessively long negotiation time (or time to price discovery).
- Use of unstandardized units of measurement, affecting both producers and consumers.
- Limited possibilities for engaging in formal contract arrangements (possible only for interactions with institutional buyers).
- Disregard for standardization and product grading based on quality.
- Postharvest losses due to poor crop management practices and postharvest management.

- Lack of or limited availability of storage infrastructure, which prevents farmers and traders from storing product and releasing it under favorable market conditions.
- Limited accessibility to certain areas of the region, complicated by poor road infrastructure and/or heavy rains.
- High transport costs due to poor road infrastructure and long distances.
- Limited processing and value addition due to insufficient and/or inadequate equipment.
- Low effective demand complicated by consumers' liquidity constraints and difficult access to certain areas within the region, creating a disincentive for any marketing initiative.
- Animal diseases that lead to quarantine and restrictions on the movement of animals.

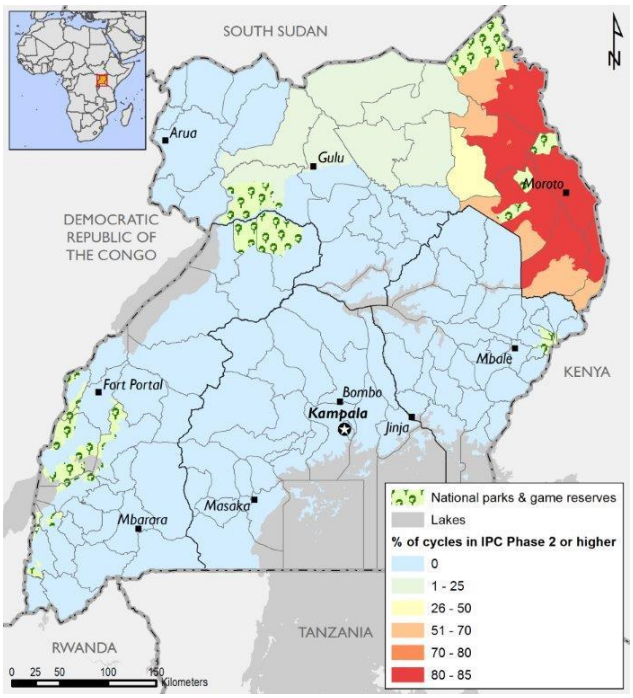
### 4.5.4 Capacity of market to respond to increased demand

In a scenario of increased demand, traders were confident about their ability to increase their stock. Large traders indicated a response time of three days for being able to source additional product to their current stocks. Small-scale traders operating in secondary markets face more difficulties for increasing stock, and estimated a period of a month for being able to adjust to a 30–50 percent increase in demand.

# 5 Food security and assistance context in Karamoja

Due to chronic drought, prolonged conflict, and high poverty levels, Karamoja was long the recipient of multiple humanitarian programs, development initiatives, and institutional social assistance. Support to the subregion includes food assistance, health care, education, asset replacement, livelihood regeneration, nutrition assistance, and agricultural support. The 2014 WFP Food Security Assessment indicates that approximately 34 percent of households surveyed across all districts reported benefitting from some assistance; for 50 percent, the highest reported percentage, the assistance took the form of free healthcare (WFP et al. 2014). School feeding programs are extensive throughout the region (FEG 2014). A number of food assistance agencies currently operate in various capacities in both southern and northern Karamoja.

**Figure 48 Historical IPC phase classification, Uganda, 2011–2015**




*Source: FEWS NET (2016e).*

Over the last four decades, WFP provided a significant level of in-kind assistance and still plays a substantial role in the emergency and development assistance community in Uganda (WFP 2016). World Vision, ACDI/VOCA, Andrea Food Consult, Samaritan's Purse, Caritas, Mercy Corps, Community Action for Health, Danish Refugee Council/Danish Demining Group (DRC/DDG), and Action Against Hunger (ACF) have ongoing activities in Karamoja. With the exception of ACF and Mercy Corps, which work in partnership with WFP through World Vision, these agencies are direct distributors of food assistance to the community.

## 5.1 Food gap and food security indicators

The 2016 Food Security and Nutrition Assessment (FSNA) conducted in Karamoja points to a stronger-than-average correlation between poverty and malnutrition in some districts, namely, Moroto, Napak, and Abim. Poverty status is clearly connected to livelihood strategies in Karamoja, as the most marginalized and impoverished segments of the population subsist on food assistance, begging, gifts, pensions, and allowances (WFP, UNICEF, and Republic of Uganda 2016). The FSNA established a noteworthy relationship between the number of income sources in a household and childhood stunting.

### 5.1.1 Importance of in-kind food assistance in meeting local requirements

Food assistance (school feeding, cash-for-work, and relief distributions) plays an important role in preventing the escalation of acute food insecurity from year to year in Karamoja (Chapter 3). This applies even during good years, across wealth groups and livelihood zones. Largely due to sporadically productive growing seasons and variable harvests, food assistance throughout the subregion supplements available food and household coping strategies. Food assistance has arguably prevented complete and consistent escalations of food insecurity to acute levels. UNICEF further supports this point in the 2016 FSNA, observing that steady levels of food security and associated indicators are attributable to food assistance. Specifically, the FSNA assessment asserts that improved food

consumption trends between July and December 2015 at the regional level can be largely attributed to the impact of food assistance and responsive expansion of food aid initiatives during this period by the GOU, UN organizations, and NGOs.

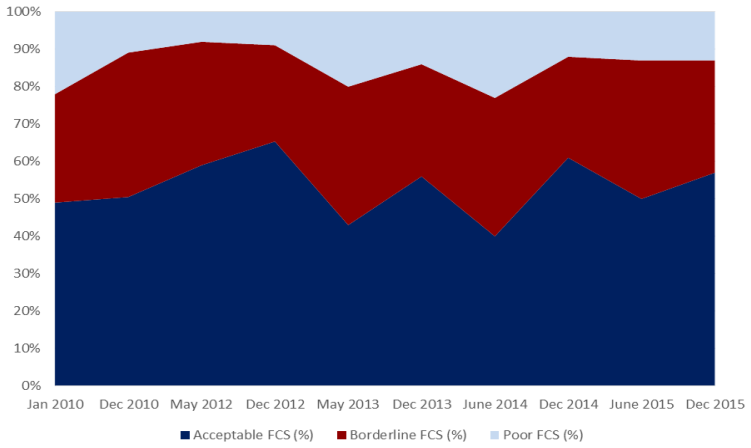
### 5.1.2 Food security indicators

Nearly half of the Karamojan population is vulnerable to chronic food insecurity. Fourty-six percent of Karamoja's estimated 950,000 to 1.3 million total inhabitants are characterized as "food insecure" or "moderately food insecure" (WFP, UNICEF, and Republic of Uganda 2016). Chronic food insecurity is endemic, and all livelihood zones share interrelated causes of food insecurity: 1) climatic variability; 2) endemic hazards to productivity, such as crop and livestock diseases; 3) civil insecurity (although this has improved and is now characterized by more localized and opportunistic events); and 4) poor sanitation practices and child-feeding methods. Summarizing the data from FEWS NET Food Security Outlook reporting between 2011 and 2015, many areas of Karamoja are listed as IPC (Integrated Phase Classification) Phase 2, classified as "Stressed" (Figure 48), or higher for 80 percent of reporting cycles. Central Karamoja frequently experiences Crisis (IPC Phase 3) acute food insecurity, presenting the most chronic and severe food insecurity in the subregion over the past five years (FEWS NET 2016e; RAU 2015).

### 5.1.3 Malnutrition

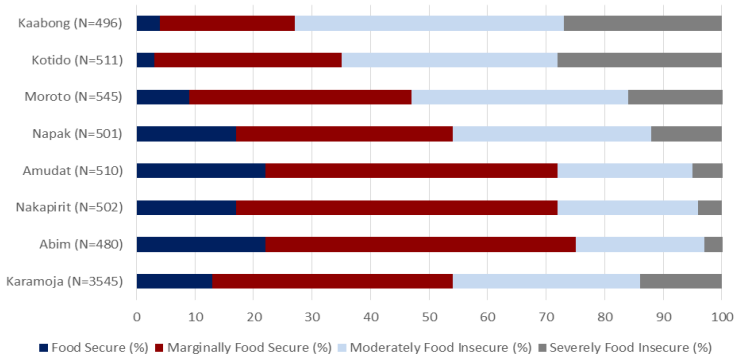
Karamoja's historically poor malnutrition indicators do not show obvious signs of improvement in recent years (Figure 49). Poor sanitation and hygiene are a major contributing factor to malnutrition rates. Other health-related root causes, such as the prevalence of vector-borne diseases (primarily malaria), poor use of treatments

**Figure 49 Food consumption score trends in Karamoja, Uganda, 2010-2015**



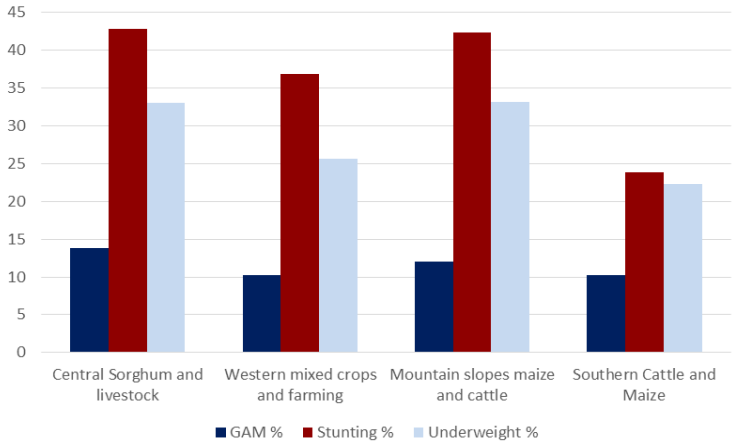

*Source: Author's calculations based on data from WFP, UNICEF, and Republic of Uganda (2016).*

**Figure 50 Severity of food insecurity by district, Karamoja, Uganda**




*Source: Author's calculations based on data from WFP, UNICEF, and Republic of Uganda (2016).*

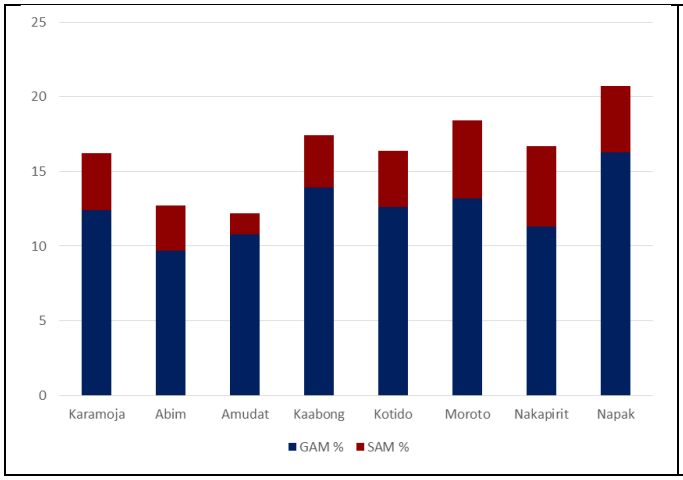
**Figure 51 Prevalence of GAM and stunting and underweight among children 6–59 months by livelihood zone, Uganda, December 2015**




*Source: Author's calculations based on data from WFP, UNICEF, and Republic of Uganda (2016).*

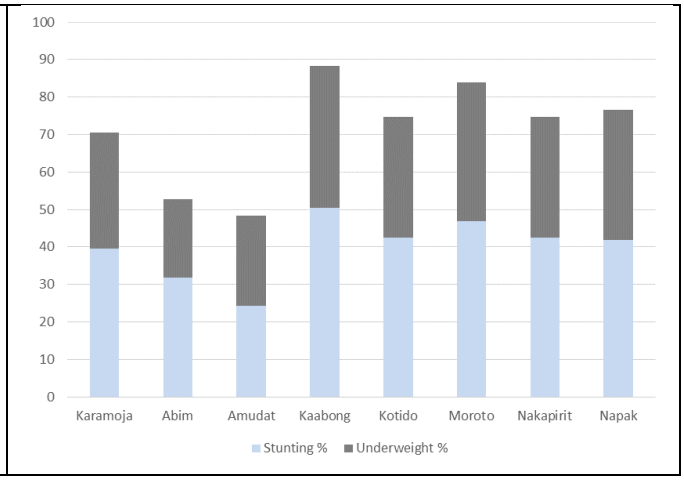
and preventative measures (such as insecticide-treated nets), and endemic maternal malnutrition and feeding practices, perpetuate a cycle of malnutrition. Additionally, the population as a whole faces low dietary diversity and poor vitamin A supplementation. Karamoja's global acute malnutrition (GAM) level is 11 percent versus a national average of 6 percent (RAU 2015). The wasting prevalence in most Karamojan districts is serious (>10 percent), nearly triple the national average. The highest prevalence of underweight (severely wasted and wasted) among mothers is seen in Amudat, Napak, and Kaabong districts.

**Figure 52 Prevalence of GAM and severe acute malnutrition (SAM) among children 6–59 months by district, Uganda, December 2015**




Source: *Author's calculations based on data from WFP, UNICEF, and Republic of Uganda (2016).*

**Figure 53 Prevalence of stunting and underweight among children 6–59 months by district, Uganda, December 2015**




Source: *Author's calculations based on data from WFP, UNICEF, and Republic of Uganda (2016).*

### 5.1.4 Role of social and cultural practices

Social and cultural practices and traditions are very important in Karamoja and influence food assistance distribution channels as well as individual and household consumption practices. These social structures are relevant to food security dynamics and the design of food assistance implementation strategies as they impact the distribution and consumption of food among a given group, and the availability and use of critical resources such as water and pasture.[9] In some communities, local traditions dictate which types of foods can or should be eaten based on sex and age (ICF International 2014). Karamojan society is organized into two primary subgroups: *manyattas*, semi-permanent villages inhabited by men, women, children, and the elderly, which are often family-based and typically situated near farmed space; and *kraals*, semi-mobile livestock camps that follow the grazing patterns of the group's cattle. Population movement (of kin and family members, as well as livestock) between *manyattas* and *kraals* provides an exchange of food items (meat for grain, and vice versa). The literature notes that livestock frequently move between *kraals* and *manyattas* to meet food needs in *manyattas,* especially in response to livelihood stress. Another social structure of particular relevance to Title II programming in Karamoja is the Food Management Committee (FMC). The FMC reflects a community-based structure integrated into assistance programming for the purposes of streamlining transparent, trusted, and effective in-kind assistance into vulnerable communities.

[9] The Feinstein International Center (2016) notes that prior to disarmament, *manyattas* had their own pasture areas (known as *aperos*) but that post disarmament, several *manyattas* may share a pasture. This is largely related to decreased herd size although pasture shortages in some areas were recorded by the survey.

***Manyatta***

A *manyatta* is a social unit comprising primarily kin, who reside in a formal compound. The *manyatta* anchors some aspects of pastoralist households in a given area that is encircled by fencing and includes formal dwelling structures. Men, women, children, and the elderly reside in the *manyatta* and manage their livelihoods and food needs through somewhat diversified livelihood strategies. Livestock play an important role in food access, basic household needs, and coping strategies. In the *manyatta* structure, which also manages milking animals, women may have more leverage in the management of animal resources than in the *kraal*, where patriarchal systems are dominant and resources are controlled by men (FIC 2016). A single *manyatta* is likely to host multiple extended families that reside together. These social structures are more likely to rely upon individual or family resource-sharing (including rations) among a broader group of people, with considerable implications for the use of both targeted in-kind food aid and cash-based food assistance, as sharing is nearly inevitable (Mercy Corps 2015).

***Kraal***

The *kraal* system acts as both a protective and limiting factor in the restoration of livestock assets and herd sizes among pastoralist populations. The Feinstein International Center (2016) notes that four kinds of *kraals* currently exist in Karamoja: mobile unprotected *kraals*, mobile protected *kraals*, stationary protected *kraals*, and urban or peri-urban *kraals*. The study asserts that the diversification of *kraals* and associated livelihood patterns are indicative of both urbanization and a change in security dynamics since the period when stationary protected *kraals* were enacted as a primary means of protecting (for better or worse) livestock populations. [10] The implications of the evolving *kraal* system on food assistance and livelihood programming are clear, given the associated shift in livestock practices pre-and post-demobilization (following the disbanding of large *kraals*), herd sizes, marketing behaviors and infrastructure, family and social dynamics within the *kraal*, and mobility trends. The complexity of the livestock exchanges and social dynamics between *kraals* and *manyattas* is also likely to influence the allocation of resources provided by in-kind assistance programs.

**Food Management Committees (FMC)**

In-kind food assistance is frequently delivered through FMCs, which include community members from beneficiary villages. This approach is widely implemented by WFP as a means of engaging beneficiary communities in the delivery and distribution of in-kind commodities. In Karamoja, FMCs play an important role in building community trust and investment in the management of transparent in-kind distribution.

In Karamoja, FMCs comprise community members from the target population in the program area who are typically nominated by their peers. FMC members also receive food assistance . FMCs have a variety of community leadership duties, including identifying eligible beneficiaries for additional registration by implementing partners, mobilizing communities for food aid distribution, identifying central locations that are suitable for distributions and accessible by all benefitting villages, leading conflict resolution at distribution sites, and mitigating tension or complaints arising from distribution activities. FMCs also verify the quantities of commodities received at the distribution site and the amounts that have to be restocked. FMC members describe a strong sense of pride in their work and garner respect from the communities they represent as part of their function in the management and supply chain of in-kind assistance.

[10] The literature repeatedly points to massive losses in livestock holdings due to rampant disease and poor care in government-managed *kraals* during the peak of the conflict and as these systems were phased out in the region following disarmament.

## 5.2 Policy context – An effort to shift from food aid to food assistance

With the "relative peace" and stability in Karamoja, social dynamics shifted in ways that are relevant to Title II programming, and that have implications for future livelihood systems, economic opportunity, and social cohesion. The correlation between increasingly sedentary livelihoods and the changing needs of community systems is evident, as the expansion of *manyattas* into larger compounds and the more stable settlement of pastoral groups resulted in more competition for natural resources and available income-earning opportunities. In the years following demobilization and with the gradual disintegration of the *kraal* as a universal security and livelihood protection measure, humanitarian and development actors faced a complex evolution in terms of providing suitable and well-targeted assistance to the population emerging from near decimation of its core livelihood strategy: pastoralism and animal husbandry.

The secure *kraal* system that predominated through 2010 was widely criticized as contributing to major losses of livestock assets. This assertion is well documented in the literature. As a result, the aid environment was tasked with adapting to the ever-changing and challenging operating environment, as pastoral populations attempted to recover in a remote setting where resources (natural and economic) are low, education and technical skills are nascent or lacking, and the agroclimatology is erratic and inconsistent. Additionally, the population is in the process of a larger livelihood transition that includes changes in migration and local movement and a lack of access to markets and economic systems, as well as the resources and capacities to recover pre-conflict livelihoods. During the conflict and in the years immediately preceding disarmament, assistance efforts focused primarily on meeting the emergency and acute food needs of displaced and otherwise vulnerable populations emerging from decades of instability and dependence on in-kind assistance to meet basic household needs.

One of the initial flagship programs to introduce and institute an intentional and planned shift from "food aid" to "food assistance" in the subregion was WFP's Karamoja Productive Assets Program (KPAP), implemented in 2010/2011. Since that time, the aid and development portfolio has expanded to incorporate more transitional relief to development initiatives that include direct in-kind transfer but widely focus on establishing self-reliance in terms of food production, livestock management, income-earning, and market participation.

The community of international food assistance providers is diverse and complex, with several key agencies that comprise the bulk of programming currently underway and planned (Table 19). These include: the Government of Uganda, IGAD, United Nations (UN) agencies, particularly WFP (either "delivering as one," in joint strategies, or independently), the World Bank, the Department for International Development (DFID), USAID, ECHO (European Community Humanitarian Aid Office), Irish Aid, German Society for International Cooperation (GIZ), Danish International Development Agency (DANIDA) and a number of other donors and international and local NGOs (RAU 2015). These agencies all operate with some degree of coordination, and oversee initiatives that are streamlined with larger regional and national objectives, particularly the UN Joint Resilience Strategy. Some of the most prominent and ongoing policy-driven initiatives are described below.

**National Development Plan (NDP)**: Initiated during the 2016–2017 fiscal year and currently in its second phase, NDP II is the second in a series of six five-year NDPs structured under the Comprehensive National Development Planning Framework (CNDPF), aimed at achieving the Uganda Vision 2040. The goal of this plan is to move the country toward middle-income status by 2020 through strengthening national competitiveness for sustainable wealth creation, employment, and inclusive growth. The next iteration of PRDP III prioritizes improvement of household income in line with the NDP II to address socioeconomic imbalances. The PRDP III framework is to focus on improving incomes and livelihoods of poor and vulnerable communities and contribute to the revitalization of the local economy. PRDP remains the umbrella framework under which KALIP programs previously operated.

**Peace, Recovery, and Development Plan (PRDP III) and Karamoja Integrated Development Program (KIDP III):** The Government of Uganda is currently in the process of drafting these follow-on initiatives to the European Development Fund's Karamoja Livelihoods Program (KALIP), which ended in 2015. The overall development objective of KALIP was to "promote development as an incentive to peace in the region by supporting livelihoods, including agropastoral production and alternative income generation opportunities, for the people of Karamoja." Its purpose was to "protect and enhance incomes and food security of agropastoral communities and support them in building up their productive asset base."

**Uganda Nutrition Action Plan (UNAP)**: The goal of this five-year plan (2011–2016) is to improve the nutritional status of all Ugandans, with emphasis on women of reproductive age, young children, and infants. The plan is intended to reduce the prevalence of malnutrition in Uganda and its impact on individuals, households, communities, and the country at large.

**UN Joint Resilience Strategy:** The Strategy is a collaborative effort by FAO, UNICEF, and WFP to improve the general well-being in Karamoja, to transform vulnerability over the course of a multi-year initiative. The Strategy aims to support the local population to recover, reorganize, and move forward after experiencing external stresses and disturbances, including droughts or

**Table 19 Selected assistance initiatives, Karamoja, Uganda**

| Initiative | Donor/Country | <2011 | 2012 | 2013 | 2014 | 2015 | 2016> |
|---|---|---|---|---|---|---|---|
| National Development Plan (NDP) | Government of Uganda (GOU) | | | | | | |
| Peace, Recovery, and Development Plan (PRDP II-III) / Karamoja Integrated Disarmament and Development Program (KIDP II-III) | GOU Office of the Prime Minister | | | | | | |
| Uganda Nutrition Action Plan (UNAP) | GOU | | | | | | |
| Social Assistance Grants for Empowerment (SAGE) | GOU Ministry of Gender, Labour and Social Development | | | | | | |
| Dry Land Integrated Project (DRIP) | GOU Office of the Prime Minister | | | | | | |
| Second Northern Uganda Social Action Fund (NUSAF 2) | World Bank Uganda Karamoja | | | | | | |
| FAO-UNICEF-WFP Joint Resiliency Strategy | DFID Uganda | | | | | | |
| Karamoja Livelihoods Program (KALIP) | European Union Uganda Karamoja | | | | | | |
| Third Northern Uganda Social Action Fund (NUSAF 3) | World Bank, GOU | | | | | | |
| Expanding Social Protection Program | DFID Uganda | | | | | | |
| Protracted Relief and Recovery Operation (PRRO) | WFP | | | | | | |
| World Bank Regional Pastoral Livelihood Resilience Project | World Bank Regional | | | | | | |
| IGAD drought disaster resilience and sustainability initiative | IGAD | | | | | | |
| Northern Karamoja Growth, Health and Governance | USAID (Mercy Corps consortium) | | | | | | |
| Resiliency through Wealth, Agriculture, and Nutrition in Karamoja (RWANU) | USAID (ACDI/VOCA consortium) | | | | | | |
| Uganda Country Program | Irish Aid | | | | | | |
| Food and Security and Conflict Management in the Karamoja Sub-Region' | GIZ | | | | | | |

*Source: Author's compilation based on data from FAO, UNICEF, and WFP (2014); RAU 2015; Mercy Corps (2015); ACDI/VOCA (2015)*

floods. The Strategy focuses on four areas: diversifying livelihood strategies and intensifying production to increase household income and improve food security; improving basic social services to strengthen vulnerable households' human capital; establishing predictable safety nets; and strengthening disaster risk management support.

**Northern Uganda Social Action Fund (NUSAF):** This project is currently transitioning to the third phase of implementation (NUSAF 3), a five-year $130 million successor to NUSAF 2 project.[11] The objective is to contribute to income support and to build the resilience of poor and vulnerable households in Northern Uganda. Building on previous efforts, the third phase will improve incomes and livelihoods of poor and vulnerable communities and contribute to the revitalization of the local economy in Northern Uganda where poverty levels remain high. The project includes four main components: labor-intensive public works and disaster risk financing; livelihoods investment support; strengthening transparency, accountability, and anti-corruption; and safety-net mechanisms and project management.

These ongoing assistance efforts appear to endorse an overarching framework that prioritizes empowerment and sustainability in the context of transition from protracted humanitarian food aid needs to adaptable , supportive, community-driven food assistance strategies. With an emphasis on establishing and bolstering resilience among the local population, the collection of current international actors and associated programs generally follow a complementary and consistent approach to supporting household autonomy and self-sufficiency, including designated program resources to address continued acute food needs that arise in the region through in-kind support as needed. In all of the current ongoing programs, as with Title II initiatives, food security appears to be integrated through both direct and indirect programmatic initiatives. Increasingly, food assistance programming appears to support greater programmatic objectives of sustainable and strategic livelihoods establishment, and self-sufficiency with respect to longer-term food access, rather than direct transfers of food aid as the predominant focus. In other words, as vulnerabilities within the Karamojan population evolve and change in line with adaptive livelihood strategies, so do food security and nutrition objectives, and the proportionate application of direct and indirect food assistance.

Title II partners identified challenges and influential factors in the implementation of resilience-focused, empowerment-based relief and development programming in this evolving assistance context. Mercy Corps notes this phenomenon in the FY2015 Annual GHG report, highlighting land resources as a particularly sensitive issue in the current operating environment. Supporting communities to navigate access to natural resources, particularly land, water, and grazing rights, will likely continue to be an important component of aid and development programming moving forward. Similarly, the Feinstein International Center (FIC), a member of the GHG consortium, notes that the evolution of *kraal* system dynamics reveals important implications for pastoral populations within Karamoja, for herd dynamics, and for the overall presentation of the nomadic, livestock-based economy within which the regional population livelihood strategies (and food access and availability) are rooted (FIC 2016).

In the years following disarmament (2008), pastoral livelihoods were slow to recover, largely due to diminished herd sizes and restructured settlement and migration patterns. The long-term impact of insecurity, conflict, and livestock depletion, coupled with institutional and political pressure to move toward more sedentary, agriculture-based livelihoods, is a structurally poor population straddling two primary livelihood strategies in an agroclimatic

[11] At the timing of writing, NUSAF III is being implemented by preparing administratively and training staff in the new districts, while the household income components and disaster risk financing have not been implemented. In Kaabong, FEWS NET was told that WFP was still implementing the extension of NUSAF II which was abridged for 7-9 months during the transition to NUSAF III, although all funds have been committed and available for expenditure.

and economic environment that is frequently prohibitive for both. The level of underdevelopment in markets, economic activity, individual skills and education, and technical expertise in both agriculture and animal-based livelihood strategies emerges as a major consideration in the current aid and development framework. Title II partners point to some challenges that emerged during implementation of the GHG and RWANU programs. In the latter phase of GHG implementation (FY 2015 Annual Report), Mercy Corps notes that in an economy as underdeveloped as Karamoja's, a facilitative approach is difficult to implement, identifying some challenges encountered in the delivery of some program components. While Mercy Corps cites incorporation of an adaptive strategy that further extended program activities into capacity building and enabling local participation, the level of underdevelopment in both economic and agricultural terms is highlighted as a continuous challenge in the operational environment.[12] ACDI/VOCA's FY 2015 Annual Report for the RWANU program observes similar challenges regarding efforts to enable and strengthen a more market-based economy, pointing to low levels of agricultural productivity as a key prohibitive factor in food availability and stocking, household savings strategies, and meaningful engagement with the marketing system as a whole.

Coordination with ongoing programs should consider the various programmatic strategies that have been integrated to address household and community vulnerabilities, not just from a direct food access standpoint, but to complement and bolster multi-sectoral program activities, both direct and indirect. Concepts of resilience and sustainability in the current policy environment in Karamoja appear to be rooted in community and household livelihood stability as a means of accessing food needs in the medium- to long-term period that typically defines the transition from emergency to development. While the initiatives cited to date include direct, in-kind food assistance to meet the needs of acutely vulnerable populations and to address (as needed) severe cyclical food shortages, these components have increasingly varied importance in the overall assistance strategy.

## 5.3 Food assistance programs

The Karamoja subregion received food aid from WFP for over 40 years, and has a long history of food assistance addressing both acute and chronic needs. WFP joins the community of significant in-kind commodity distribution, primarily through NUSAF 2 and the upcoming third iteration (NUSAF 3). At the time of writing, the key Title II agencies in the region implementing food assistance programs include an ACDI/VOCA-led consortium under the Resiliency through Wealth, Agriculture and Nutrition in Southern Karamoja (RWANU) project and a Mercy Corps-led consortium under the Northern Karamoja Growth, Health, and Governance (GHG) project. Collectively, these food assistance programs prioritize measured improvements in nutrition and livelihood stability, as well as food access and diversity among vulnerable communities. The core beneficiary groups targeted through these programs are lactating mothers, pregnant women, children under the age of two, and extremely vulnerable persons such as orphans and the elderly. Additionally, food assistance programs are available for individuals and households who can contribute human capital and labor for public improvement projects, such as ponds and roads, in the form of food-for-work schemes. At the timing of writing, the primary transfer modality for all direct food assistance initiatives remains food-in-kind delivered directly to beneficiary households. The most obvious exception to this approach is Mercy Corps's GHG program, which provides vouchers to facilitate access to quality seeds.

[12] Mercy Corps notes that efforts to maintain a facilitative presence included extending the reach of program actors more deeply and substantively into the market system as a means of compensating for the limited capacity of the market and businesses operating in program areas, and that this process also required a reorientation among staff and project partners.

| Table 20 In-kind assistance distributions on Karamoja (MT), Uganda, 2015 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Districts** | **Corn-soy blend (CSB)** (MT) | **Lentils** (MT) | **CSB++** (MT) | **Sugar** (MT) | **Dry beans** (MT) | **Edible oil** (MT) | **Cornmeal** (MT) | **Beneficiaries** |
| **WFP** | All Karamoja districts | 1,757.35 | 0.00 | 546.63 | 46.57 | 1,114.55 | 474.54 | 10,625.63 | 211,525 |
| **Mercy Corps (Title II)** | Kaabong, Kotido, Abim | 530.00 | 494.40 | 0.00 | 0.00 | 0.00 | 290.00 | 1,227.78 | 77,573 |
| **ACDI/VOCA (Title II)** | Moroto, Nakapiripirit, Napak, Amudat | 524.40 | 415.51 | 0.00 | 0.00 | 0.00 | 159.70 | 903.54 | 31,103 |
| Note: Other commodities distributed by Title II partners include green peas and yellow split peas. Title II numbers consider FY 2015 (October 2015–September 2014) while WFP numbers consider calendar year 2015. All Title II in-kind distributions are sourced through transoceanic procurement; WFP distributed commodities are a mix of LRP and transoceanic products. | | | | | | | | | |

*Source: Author's calculations based on data from WFP (2016); Mercy Corps (2015); ACDI/VOCA (2016).*

Food assistance programs are implemented in a difficult operating environment highly influenced by unreliable supply chain and market systems, with limited infrastructure and storage capacity as well as time-consuming procurement strategies. This environment creates a more collaborative and interdependent relationship among in-kind assistance providers, which is strategic and may mitigate pipeline interruptions. WFP engages in LRP for most commodities, centrally procuring food items (specifically, maize grain, flour, and dry beans). USAID-funded commodities destined to serve beneficiaries of Title II programs are imported internationally almost exclusively. Specifically, USAID imports split yellow peas, cornmeal, corn-soy blend (CSB), and fortified cooking vegetable oil, which are brought into Uganda by international freight and national or regional ports before transport to Karamoja Title II program areas. Typically, food aid is transported through Tororo to Karamoja (see Chapter 6 for more details). Table 20 provides a summary of the quantities distributed by Title II partners in northern and southern Karamoja.

Food assistance programs in Karamoja adopt a two-pronged approach to supporting increased food security in an environment where agroclimatic instability, isolation (from markets, technologies, and technical expertise, such as extension agents), and low skill and agricultural literacy compound endemic obstacles to self-sufficiency in food production and consistent access. Programs combine both indirect and direct assistance strategies to mitigate vulnerabilities and food insecurity. Indirect support to household food security is achieved through activities that: enhance diverse livelihoods and income sources (and subsequently, increased access to markets , a primary food source for much of the region during a large part of the year) ; increase household-level production of diverse and nutritious foods; and support streamlined marketing of food commodities to the benefit of local producers and consumers.

Food assistance program participants are most familiar with, and expressed a strong preference for, direct in-kind transfers over other cash-based mechanisms such as hard or electronic transfers of funds or voucher programs (FEWS NET 2016a). Specific reasons for local communities' preference of in-kind food assistance are that it: offsets lean season food gaps; offers a more balanced diet; allows more rapid preparation of in-kind foods compared to local foods; brings transparency to the distribution of food rations, using scales and other measurements; is perceived to have fair and balanced targeting and distribution processes; reduces the need to travel to markets; and absorbs price fluctuations in staple commodities. In-kind rations are not easily fungible, reducing the likelihood that households will sell food commodities to purchase nonessential goods such as alcohol (FEWS NET 2016a). The latter point was evidenced by very minimal presence of distributed food commodities in local markets.

### 5.3.1 Current Title II programs

#### *5.3.1.1 Northern Karamoja Growth, Health, and Governance (Mercy Corps-led consortium)*

The overarching goal of the GHG project is to improve peace and food security in Karamoja through an integrated, gender-sensitive approach (Table 21). The project is led by Mercy Corps and is implemented through a consortium consisting of World Vision Inc. (in charge of supplementary feeding activities under Strategic Objective 2 (SO2), community-level public health initiatives, and water, sanitation and hygiene programming) and Kaabong Peace and Development Agency (KAPDA, a local organization that supports conflict reduction activities and institutional engagement). The program also incorporates the Feinstein International Center for impact evaluation and assessment. The core philosophical and practical lynchpin of the program is a facilitative approach that, per Mercy Corps, "pushes local actors out front to sustainably provide the products (e.g., seeds and energy) and services (e.g., land opening, animal husbandry, transport, security, finance and healthcare) that make life productive." Under this program, food assistance includes both direct and indirect support to household food access. The program aims to provide lactating women and children with direct in-kind rations (supplementary and protective), while providing a larger level of indirect food assistance programming through a combination of agropastoral support (technical, in-kind and financial), market-based capacity building for increased economic engagement in the greater market system, and improvements in health and wellness infrastructure, as well as behavior change.

**Table 21 Program Details: Mercy Corps and Consortium–Northern Karamoja Growth, Health, and Governance**

| Program element | Details |
|---|---|
| **Implementation Timeline** | July 2012 to July 2017 |
| **Strategic Objectives** | SO1: Livelihoods Strengthened – focused on pro-poor market development to build local capacity to provide vital products and services on a commercially sustainable basis<br><br>SO2: Nutritional Status among Children under Five (CU5) Improved – focused on improving local public and private healthcare, promoting improved household food consumption, and improving water infrastructure and sanitation and hygiene behaviors<br><br>SO3: Reduced Incidences of Conflict – focused on helping local conflict mitigation structures adapt to the current conflict dynamic, while supporting traditional authority structures and male and female youth to play more constructive roles in improving security |
| **Target Districts** | Kaabong, Kotido, Abim |
| **Total Targeted Population** | 540,000 individuals across all districts |
| **Beneficiary Criteria (in-kind assistance)** | Pregnant women between 3–9 months.<br>Mothers with children 0–6 months who are lactating.<br>Children between 7–24 months |
| **Food Basket** | Activities that target lactating mothers and pregnant women provide the following: 4.5 kg of CSB++, 1.35 kg of oil, 1.5 kg of lentils. Children under the age of two get 2.25 kg of CSB and 0.69 kg of oil. |
| **Protection Ration** | Cornmeal totaling 15 kg, 5 kg of lentils, and 1.15 kg of oil are provided for the purpose of assuring supplementary nutrition and energy sources for other members of the household to assure that pregnant mothers and young children are not compelled to share their ration. |

*Source: Mercy Corps (2015).*

Mercy Corps recorded some challenges in implementation through a facilitative lens given the level of poverty and underdevelopment across economic, pastoralist, and agriculture sectors. The GHG program made efforts to adapt program activities to the local context and the level of engagement with various segments of the local and regional market. Some of these efforts include intensive peer-based learning and example-setting, and extensive training and capacity building and education. Provision of agricultural inputs and equipment and access to quality seeds are a core component of the GHG program, and emerge as one of the central strategies to support increased market integration and economic expansion to include local producers, vendors, suppliers, and service providers.

#### *5.3.1.2 Resiliency through Wealth, Agriculture, and Nutrition in Southern Karamoja (ACDI/VOCA-led consortium)*

The overarching program objective of the RWANU project is to reduce food insecurity among vulnerable people in 16 subcounties of southern Karamoja (Table 22). Food commodity distributions, including conditional food rations, are presented as a component under SO2. This program is implemented with consortium partners, chiefly, Concern Worldwide and Welthungerhilfe, with ACDI/VOCA as the lead agency overseeing all program activities. The consortium divided up the major program components as follows (per the ACDI/VOCA FY13 Annual Report): ACDI/VOCA is responsible for overall program management and leads implementation of most activities under SO1, specifically those related to crop production, alternative livelihoods, increased resiliency through promotion of group savings, and improved market linkages. Welthungerhilfe activities center around livestock, including the conduct of technical training and input provision. Concern Worldwide manages activities supporting nutrition, health, and hygiene activities covered under SO2, although ACDI/VOCA manages food aid distribution and rations. ACDI/VOCA integrated food assistance delivery with health initiatives, coordinating with Marie Stopes to deliver food packages to food distribution points where beneficiaries receive health services and food rations.

**Table 22 Program Details: ACDI/VOCA and Consortium – Resiliency through Wealth, Agriculture and Nutrition in Southern Karamoja**

| Program element | Details |
|---|---|
| **Implementation Timeline** | August 2012 to August 2017 |
| **Strategic Objectives** | SO1: Improved access to food for men and women<br>SO2: Reduced malnutrition in pregnant and lactating mothers and children under five years old |
| **Target Districts** | Napak, Nakapiripirit, Moroto, Amudat |
| **Total Targeted Population** | 44,7700 households and 70,688 individuals across all districts |
| **Beneficiary Criteria (in-kind assistance)** | Includes a focus on children under two years of age, pregnant women, lactating mothers. Adult men and women are also included as targeted populations for food assistance. |
| **Food Basket** | 4 kg of CSB, 1.5 kg of pulses, and 0.5 liters of oil for pregnant and lactating women, and 2.25 kg of CSB and 0.5 liters of oil for children |
| **Protection/Lean Season Ration** | Households of these beneficiaries received a lean season ration of 12 kg of corn meal and 4 kg of pulses |

*Source: ACDI/VOCA (2016).*

ACDI/VOCA notes that the overall program strategy endeavors to adapt to overall low production levels, which are as a constraint to market-based programming and integration of local producers, suppliers, and vendors into the larger economic system. The FY15 Annual Report notes an effort to "transition most activities to market-oriented approaches with putting in place a stronger market facilitation and sustainability and exit strategy."

### 5.3.2 Experience with market-based interventions in Karamoja

The current assistance framework includes significant attempts to integrate market-based approaches and enabling technology to facilitate core livelihood strategies, such as agricultural production, and also to mitigate vulnerability among marginalized populations. While a full analysis of cash-based interventions is not a primary focus of this document, three relevant initiatives merit additional attention when considering the application of voucher programs and electronic cash transfers in Karamoja.

#### *5.3.2.1 Mercy Corps's Northern Karamoja Growth, Health, and Governance (seed vouchers)*

The GHG program currently underway in northern Karamoja includes a seed improvement program, enhancing access to quality seeds through a voucher mechanism. While this is one of the few known voucher programs to be implemented in Karamoja, the program's modality and evolution of voucher mechanisms is relevant to current and future cash-based or market-oriented programming in the region. Key informants from the GHG program indicate that the program enables farmers' access to more diverse and higher-quality seeds, which were not previously available on local markets.

**Design**

The voucher program was conceived as a means of enabling farming households to increase food production and maximize growing potential, and to replace in-kind distributions. Improved seed varieties sourced from regional- or national-level vendors were incorporated into the voucher program, and selected beneficiaries were required to match the amount of the voucher (3,250 UGX) to use the voucher in local shops. Vouchers were distributed once per year, to coincide with the growing season. Through the GHG program network, paper seed vouchers were initially provided to beneficiaries, which were exchanged for seed packets in vendors' shops. Once cashed, vendors would submit vouchers for payment directly from Mercy Corps. In this initial distribution phase in the voucher program, vendors had to physically collect and present redeemed paper vouchers to Mercy Corps for payment.

**Impact**

The FEWS NET assessment points to several positive impacts stemming from the seed voucher program. Key informants from the GHG program indicate that impacts range from increased beneficiary production and crop diversity to better market integration in seed and inputs markets.

**Challenges and adaptations**

A major adaptation was incorporated to streamline voucher use and minimize fraud and misuse of vouchers by vendors and beneficiaries. Following concerns regarding graft and general inefficiency, Mercy Corps staff adapted the voucher program to include an electronic transfer component, which was rolled out in a second voucher distribution. For this adaptation, vouchers include a serial number entered electronically by vendors during the voucher exchange. Vendors use their mobile phone to enter the serial number directly into a system that verifies the number and provides payment automatically to vendors.

Another challenge noted by the FEWS NET field assessment was a disparity among and selection bias for vendors. The assessment noted that in Kotido, the number of vendors was significant, but a major dividing line existed between the profitability of vendors with increased capacity, and vendors with less capacity (lower literacy and organization, management systems). Other issues included vendor dropout due to the inability to maintain an appropriate stock, or unwillingness to do so given lack of working capital.

During the implementation period, poor climatic conditions (drought) led to lower crop production, including for farmers participating in the voucher program. The assessment found that farmers viewed the failure of seeds to grow as a disadvantage of using improved seeds rather than attributing the failure to the drought, reinforcing the difficulty of mainstreaming improved agricultural technologies and practices in a drought-prone area.

**Use of technology**

The Mercy Corps field offices in Kotido, Kaabong, and Abim use MTN as a service provider for vendors to access payment for sold seed through electronic mobile money transfer. The FEWS NET assessment found that the use of electronic mobile-based technology in the voucher program increases accountability, ensures more accurate accounting, and allows the lead agency to cross-check vendor activity to assess the types and quantities of seeds redeemed. While no publicly available assessment of MTN was identified, this seems to have been a useful and efficient delivery mechanism (FEWS NET 2016a). Further detailed assessment of the MTN network function and reliability for this component is merited.

#### *5.3.2.2 Government of Uganda's Social Assistance Grants for Empowerment (electronic cash transfers)*

The SAGE is an institutional safety net program designed to mitigate further vulnerability among already marginalized segments of the community. The program primarily targets elderly and sick individuals. SAGE includes a Senior Citizens Grant implemented under the Expanding Social Protection Program in the Ministry of Gender, Labour and Social Development. The program provides monthly grants of 25,000 UGX to older persons (60 years and above in Karamoja) to enable them to access basic services, and to initiate income-generating activities. The SAGE scheme was first piloted in Moroto and Nakapiripirit, where it has been implemented since 2010. In 2016, the program is expanding to Kaabong, Abim, and Kotido districts. MTN was the previous payment service provider, but PostBank Uganda is now delivering electronic cash payments.

**Design**

According to the Consultative Group to Assist the Poor and the World Bank (CGAP and World Bank 2013), to receive cash, recipients must present their national or resident identification card with the designated SIM card to a designated MTN agent located or assigned to the target area. Beneficiaries must provide a personal identification number (PIN). The transaction also requires a PIN. In the initial conceptualization of the program, MTN delivered cash payments using a SIM-embedded, card-based payment model in which recipients inserted their cards into portable pay phones, entered a PIN, and transacted with an agent who then received authorization to pay out the cash grant (CGAP and World Bank 2013). The program allowed beneficiaries to leave money on the SIM, in theory allowing them to use it wherever their phones were operational and accepted by vendors, or, more specifically, at designated pay points with operational phones.

**Impact**

A 2016 evaluation report of the SAGE program reported that 83 percent of beneficiaries received the expected amount of money, which reflects some success in the range of implementation modalities supporting a cost-effective social transfer (Merttens et al. 2016).

**Challenges and adaptations**

Beneficiary interaction with technology was referenced as a challenge during the 2013 program review, in which staff noted that elderly patients had difficulty remembering PIN numbers and even engaging with the e-payment mechanisms, despite many training opportunities. Insufficient reach and operation of the mobile network was a major obstacle during the first phases of program implementation. During the early years of the program, the MTN mobile network was unable to accommodate the full need and demand for availability in the network; program staff also elaborated an alternative for cash transfers using SIM technology. Corruption at a national level forced a temporary halt in program operations, which were then decentralized to allow for more transparency and monitoring.

**Use of technology**

The technology used for the program at the time of the CGAP assessment (2013) faced many obstacles due to limited infrastructure. In the early phase of the program, cash transfer activities were delayed due to breakdowns in electricity and other barriers to smooth functioning of phone-based money transactions. During a field evaluation SAGE field staff, implementing partners, and recipients cited MTN's weak and, in some cases, nonexistent mobile network in SAGE districts as the number one challenge to mobile money-based e-payments (CGAP and World Bank 2013). One in five (19 percent) respondents under the SAGE evaluation program assessment said they did not receive their cash entitlement for some months during the implementation period due to a breakdown in the network and electricity systems. Some beneficiaries found the pay points closed when they reached them due to lack of connectivity. Other challenges included: lack of mobile money network coverage and agent depth; agents' control over the payment process (entering the PIN, operating the phone); the limited time window within which to withdraw payments; and the lack of sufficient recipient training (CGAP and World Bank 2013). While some of these obstacles were addressed, the lack of reliable technology to support financial transfers remains a consideration for mainstreaming electronic payments and cash transfers.

#### *5.3.2.3 GIZ's Food and Nutrition Security and Conflict Management Project (cash and cash value vouchers)*

Cash and cash value vouchers were implemented within the context of the GIZ Food and Nutrition Security and Conflict Management Project (2009 – 2012) in selected settlements of Moroto and Nakapiripirit districts over the course of three months in 2011 (Harmer 2013). The primary objective of the program was to improve livelihoods by addressing temporary household food insecurity while supporting key construction and rehabilitation activities (Nabokat pond and the Iriiri-Nabwal road).

**Design**

Community members participated in casual, unskilled, intensive labor activities. GIZ identified two intensive public works activities in and around the new settlements: rehabilitation of a road connecting a settlement and a trading center, and rehabilitation of a water pond located near a major trading center. Workers were paid twice per week and provided either with direct cash or with a cash value voucher that could be used with an individual trader (DDN Enterprises) identified by the program in Iriiri. The hybrid coupon/cash modality was initially designed to allow households to save any leftover cash from the voucher transaction (Harmer 2013). However, given that vouchers and cash were almost considered interchangeable for the purpose of the project, using a cash amount would have achieved the same result. For the rehabilitation of the water pond, a total of 575 participants were paid a total of USh 26,350,000 (an average of 19 USD per person). The road rehabilitation project included 1,013 participants who were paid USh 4,000 for every 55 square meters of road cleared of bush. Most of the workers for both projects were women and youths. The total amount paid out to the community, and injected into the market systems over the course of three-month implementation period was less than $50,000.

**Impact**

Beneficiaries expressed consistent benefits of participation. Overall the study found that GIZ's combined cash and cash voucher intervention had a positive impact on the beneficiaries targeted. This was both due to the immediate results from cash earned, and the investments made through the voucher scheme, and also the longer-term impacts on livelihoods from the infrastructure projects themselves (Harmer 2013). Based on the design of the program, staff could not dictate how beneficiaries used their cash and value vouchers. However, household items, including food, made up the majority of household purchases. Of those surveyed by GIZ (63 people in total), 48

percent used their money for household items like buying food and clothes (during a holiday period). The second most important use for the cash and cash voucher income was school fees and supplies (24 percent). Only 14 percent was spent on small-scale income-generating activities such as selling charcoal or food and brewing businesses. Households invested in agriculture as a food security strategy. Vouchers allowed for families to plan and coordinate spending, and in the case of the program, they invested in agriculture through increased seed purchase, which, in turn, spurred households to make land available for planting. Approximately 74 hectares of land were estimated to have been planted through seeds purchased in the voucher program. Flash Inflation was negligible. The study reports that the influx of cash on the market was small scale enough to avoid major price shocks, although some prices did increase due to a spike in market demand during implementation period, which coincided with end of year holiday period.

**Challenges and Adaptations**

The program faced a number of challenges and, given the short-term nature of the intervention, only limited adaptations were feasible. The use of vouchers to promote small-scale savings had a relatively limited impact given the cash value of the vouchers and the short-lived nature of the intervention. However, they did allow for more planning within families than would have occurred had beneficiaries received only cash transfers (Harmer 2013). This may have been avoided if the program was implemented outside of the end of year (Christmas) holiday period. Project staff also had difficulty identifying willing and able vendors to participate in the voucher scheme, resulting in the participation of only one vendor. This created problems as many beneficiaries would seek to buy from the one vendor on market days immediately following voucher payments, leading to long lines and frustration. More distant households from the Iriiri trading center expressed a preference for receiving in-kind transfers, in order to cut down on travel and transaction times at the market.

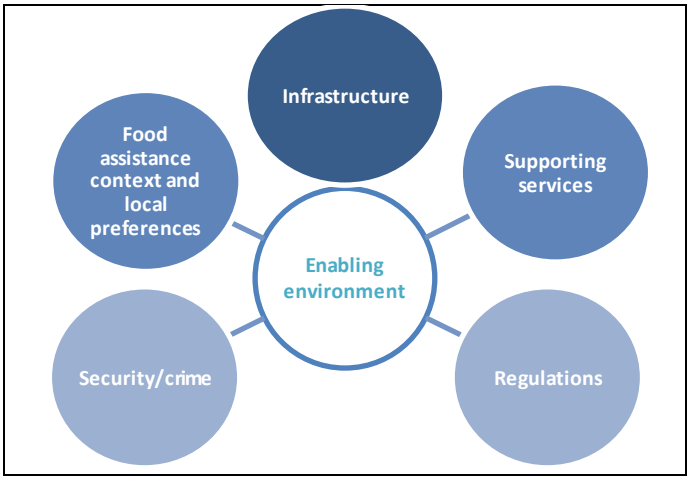
**Use of Technology**

Hard currency and paper vouchers were used during this program. Harmer (2013) indicates that program participants and implementers recommended exploring electronic transfer options for future activities.

# 6 Enabling environment in support of market-based food assistance programs

To determine the feasibility of different market-based response options, it is important to understand the local enabling environment within which implementing partners work. In Karamoja, this includes the status of local infrastructure (transportation, ICT, and storage), the availability of supporting financial services, regulations (local taxes and fees associated with local commodity procurement, as well as import procedures and processes for regional procurement), and security and crime (Figure 54). Other considerations include previous experience with food assistance modality options and household preferences (due to cultural and social norms), as discussed in previous sections.

**Figure 54 Indicative elements of the enabling environment to support market-based food assistance programs**




*Source: Authors.*

## 6.1 Inland transportation

### 6.1.1 Road networks

Well-documented and stark differences exist between the extent and quality of road networks within Karamoja and the rest of the country (Figure 55). This constrains the activities of both private sector and humanitarian/development partners in the movement of goods and livestock into and out of Karamoja. Key informant interviews with implementing partners, WFP, and transporters indicate that physical access to Karamoja is still challenging. Although some improvements were made over the last few years, conditions in northern Karamoja have not changed much, especially during or after the rains.

#### *6.1.1.1 Within Karamoja*

The only one paved and sealed road in Karamoja, which is 92 km long, runs between the towns of Moroto and Nakapiripirit.[13] This is despite ongoing projects and efforts to reduce the level of physical isolation of the subregion (Uganda Roads Authority National Roads Maintenance and Development plan, cited in MoWT 2012).[14] Private transporters, implementing partners, and WFP indicate that physical access to and within Karamoja remains a challenge, especially during and after the rains (FEWS NET 2016a). Most secondary roads are accessible during the dry season, except in localized instances when bridges and/or culverts at streams break down. During the

[13] The road was recently completed (National Planning Authority, personal communication).

[14] NDP II also prioritizes improving roads and other types of infrastructure in Karamoja.

rainy season, however, secondary roads regularly face flooding and waterlogging, especially in the wetlands and at stream crossings. After flash floods, roads are very slippery and the culvert/drainage systems are problematic, resulting in areas being temporarily cut off (Figure 55). Physical access constraints (seasonal isolation due to poor road conditions) are most severe in the following areas: northern Kaabong (north of Kalapata and Kapedo), the sparsely populated span of land that cuts east-west and separates northern and southern Karamoja through national parks and reserves; and much of Nakapiririprit, Napak, and Moroto, where flooding and waterlogging can present major challenges to the movement of vehicles, especially during the rainy season (Livercot Impex Limited Operations staff, personal communication, August 2016) (Figure 56 and Figure 57).

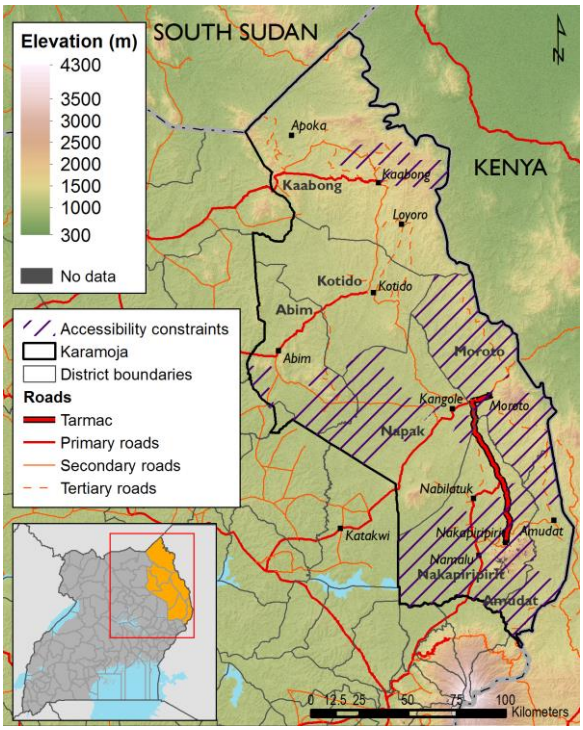
In addition to the physical access constraints, the perception of insecurity creates challenges for organizations involved in food distribution. This issue appears to be most problematic in Kaabong district. Some transporters perceive that traveling along the roads in Kaabong is dangerous, which affects the ability of organizations to have a guaranteed pipeline. Implementing partners indicated that instances occurred when transporters refused to travel to Kaabong district during the contract negotiation process (World Vision staff in Kampala and Karamoja, personal communication, August 2016). In other instances, transporters stopped partway during a delivery, and refused to proceed even after being contracted.[15]

According to Uganda Road Authority (URA) municipal road engineers in Soroti and Tororo, regular road maintenance is programmed to be done on rural roads to maintain access. The URA, however, is heavily under resourced and cannot guarantee that maintenance is carried out as frequently as it should be or to the required levels. Road access will therefore continue to be a major constraint for new and existing programs for some time.

#### *6.1.1.2 Elsewhere within Uganda*

Roads linking major production centers with warehousing/storage and bulking centers that serve Karamoja (Soroti, Mbale, Lira, Gulu, Jinja and Tororo) are in better condition (Figure 55). However, during the field assessment, the roads linking Jinja to Mbale and Tororo to Mbale were being upgraded with new culverts. Local key informants indicated that the roadwork had been ongoing for some time (Uganda Road Authority staff, personal communication, August 2016), but the assessment team found no workmen visible on site. The risk of trucks getting stuck and the possibility of accidents at detours during the rainy season appear to be high and should be taken into consideration during the planning process.

**Figure 55 Physical accessibility constraints, Uganda**




*Source: FEWS NET (2016a).*

[15] This perception is likely not helped by the findings of a Mercy Corps study of local District Security Committees in Kaabong that found local institutions to be relatively weak, poorly organized, and less effective than in other districts in northern Karamoja (Vaughan and Gurung 2013).

**Figure 56 Rainy season road conditions in Amudat district, Uganda**

*Source: FEWS NET (2016a).*

**Figure 57 NGO field office truck getting towed from mud during rainy season road conditions, Nakapiripirit district, Uganda**


*Source: FEWS NET (2016a).*

#### *6.1.1.3 Planned upgrades*

In addition to the recent completion of segments of the Moroto to Nakapiripirit paved road, a number of projects are planned for the near future or are underway, which may alleviate some of the physical access constraint issues in Karamoja (Table 23). The status of these plans should be monitored regularly.

**Table 23 Physical infrastructure construction and rehabilitation plans, Uganda**

| Type | Location | Length | Status | Notes |
|---|---|---|---|---|
| **Road** | Soroti–Katakwi–Moroto–Lokitanyala | 208 km | Procurement underway | |
| **Road** | Muyembe (Mbale)–Nakapiripirit | 93 km | Construction to start soon | |
| **Road** | Kapchorwa–Suam | 77 km | Unknown | The project will be funded by African Development Bank as a regional project between Uganda and Kenya |
| **Road** | Kotido–Kaabong | Unknown | Design stage | |
| **Bridge** | Lopei | - | Procurement underway | |
| **Bridge** | Kangole | - | Procurement underway | |
| **Bridge** | Kaabong | - | Procurement underway | |
| **Bridge** | Nakalasi | - | Procurement underway | |

*Source: National Planning Authority staff, personal communication, August 2016.*

### 6.1.2 Transportation providers

The transportation sector within Uganda as well as in neighboring Kenya and Tanzania is growing fast, with increased investment opportunities and improved infrastructure (Clark 2012; Musyimi 2016; Obita 2015). Well-established trucking firms within Uganda and East Africa (Kenya in particular) facilitate the transport of goods from the region's ports and surplus-producing areas to central distribution points (CDPs) for commodity storage within Uganda. Domestic transporters include Kampala-based Aponye Uganda Limited and Livercot Limited as well as Soroti-based Kakise Holdings Limited, among others (Table 24). The most recent DLCA (Digital Logistics

Capacity Assessment) asserts that "trucks available in Uganda currently are sufficient to meet the local demands including for humanitarian organizations in case of any influx" (Obita 2015).

**Table 24 Examples of transportation firm capacity in Uganda**

| Firm | Location | Fleet | Total capacity (est.) |
|---|---|---|---|
| **Aponye Uganda Limited** | Kampala-based | 40x30 MT | >1,200 MT |
| **Livercot Limited** | Kampala-based | 25x30 MT | >750 MT |
| **Kakise Holdings Limited** | Soroti-based | 2x25 MT<br>4x15 MT<br>1x12 MT<br>2x10 MT | ~ 150 MT |
| **Mansons Uganda Limited** | Kampala-based | 100x30 MT | >3,000 MT |
| **Abamwe Transporters** | Kampala-based | 65x30 MT | >1,950 MT |
| **KK Transporters** | Kampala-based | 50x30 MT | >1,500 MT |
| **Green Traders** | Operate in Karamoja | -- | -- |

*Source: Key industry informants, personal communication, August 2016; Obita (2015).*

Despite the available capacity, finding willing and reliable transporters from end distribution points (EDPs) to field distribution points (FDPs) remains a challenge for two main reasons: relatively poor road conditions within Karamoja and the relatively smaller tonnages at that point in the distribution system, which are less attractive to transporters. Transporters are paid on either a MT/km basis or per route, but this varies by company and by implementing organization.[16] The security concerns mentioned earlier affect this dynamic as well. For distribution within Karamoja, private firms are required to position satellite fueling posts/tanks in strategic areas to keep costs low. Firms have expressed concerns over establishing fixed rates at the start of a contract that do not take into account fuel price changes as is not often possible to negotiate escalations.[17]

### 6.1.3 Axle load limits and overloading fine schedule

Despite efforts to facilitate and expand trade through EAC and COMESA (see below), axle load limits vary between Uganda and neighboring countries. For example, the 4-axle load limit in Tanzania is 30 MT while in Kenya it is 28 MT. Authorities within the region are starting to enforce these load restrictions more carefully and trucks over 30 MT are subject to fines (Aponye Uganda Limited staff, personal communication with August 2016; Livercot Limited staff, personal communication, August 2016). These local regulations are updated and enforced by the Kenya National Highways Authority, the Tanzania National Roads Agency, and the Uganda National Roads Authority.[18]

## 6.2 ICT coverage and access

ICT coverage continues to expand rapidly in Uganda. Eight mobile phone network operators are present in Uganda, including MTN Uganda, Airtel Uganda, Uganda Telecom (UTL), Africell Uganda (Orange), Smile Telecom, K2 Telecom, Smart Telecom, and Vodafone Uganda. Of these, MTN and Airtel jointly are the best established and have the most coverage in Karamoja. Although cell phone operator presence is not as active as in other areas of the country, the assessment team found that network coverage was generally good and acceptable apart from a few areas in Napak, Kaabong, and Nakapiripirit districts, where the services of some networks are poor due to either hilly conditions or delays in operator upgrades. MTN appears to be most reliable operator (Table 25). Assessment interviewees in all locations visited indicated that local populations know where to go to get mobile

[16] For example, WFP pays transporters on a MT/km basis, while ACDI/VOCA negotiates with transporters by route.

[17] WFP establishes three-month contracts (WFP Tororo staff, personal communication, August 2016).

[18] Readers are encouraged to refer directly to the national authorities in question for the most up-to-date information. The DLCAs recently conducted in the region contain some of this information but appear to be outdated.

phone service if it is not immediately available in a given village or trading center.[19] Although very few towns and villages have power in Karamoja, charging mobile phones does not appear to be a limiting constraint. Solar chargers are available and people can charge their phones for a small fee (500 UGX) from local vendors (Airtel staff, personal communication, August 2016). All SIM cards must be registered for use, a process that generally requires filling out a subscriber form, presenting a valid form of identification to the operator agent (that is, a passport, driver's license, national identification, student identification, or voter card, among others), and paying for the SIM card (2,000 UGX).

The main limiting factor for mobile phone use is the cost of buying a SIM card and airtime (Airtel staff, personal communication, August 2016).[20] Nearly all traders interviewed during the assessment regularly used mobile phone technology for communication purposes (see Section 6.4 for a discussion of mobile money use). However, the assessment team found that cell phone ownership and use were relatively low among poor and very poor households, and varied considerably by district, with the lowest use in Kotido and Kaabong and the highest use in Abim.

**Table 25 Subcounties with poor mobile phone service, Uganda**

| District | Subcounty | Notes | Operators present |
|---|---|---|---|
| Napak | Iriri | Airtel service is poor | MTN, Airtel |
| Kaabong | Kamion | Poor network because of hills | MTN, Airtel |
| Kaabong | Kathile | Poor network because of hills | MTN, Airtel |
| Nakapiripirit | Namalu | Airtel service is poor | MTN, Airtel |

*Source: FEWS NET (2016b); Airtel staff, personal communication, August 2016.*

## 6.3 Storage capacity (private, government, implementing partners)

As with the road infrastructure discussed above, stark differences persist between the extent and quality of storage infrastructure within Karamoja and the rest of the country. Adequate private and implementing organization-managed storage facilities and warehouse management and receipt systems exist within Uganda to support in-kind commodity distribution in Karamoja. Recently, development organizations have supported farmers and business owners to construct storage facilities for their grains. A number of such facilities are available in the surplus-producing areas of the country and are regulated by the Uganda Commodities Exchange (Obita 2015). The government has no public storage facilities (Obita 2015).

Within Karamoja, storage options are far more limited, especially for the private sector. The lack of investment in storage by the local private sector in Karamoja reflects the underlying structure of market dynamics. Some projects have emphasized the development of community-based granaries, but that is more for household-/*manyatta*-level commodity management rather than for aggregation and large-scale distribution (FAO 2013; Republic of Uganda 2009).

The humanitarian and development community has in turn organized its in-kind commodity procurement, storage, and distribution activities in response to the local context. Large-scale storage and bulking takes place in staging areas owned or leased by implementing organizations in Tororo, Mbale, Soroti, and Kampala. During the food distribution cycles, agencies transfer adequate quantities to locations in the program area to support the

[19] This was corroborated by partners during the FEWS NET stakeholder workshop in Moroto and is also referenced in Burns, Bekele, and Akabwai (2013).
[20] A monthly airtime fee generally applies to retain service. Airtel's fee is roughly 1,500 UGX/month.

distribution cycle on an as-needed basis. They typically also maintain a small stock in local Rubb halls. Some organizations even use space within schools and health centers on an as-needed basis. The extended nature of the warehouse and supply chain is vulnerable to interruptions and breakdowns in the procurement and delivery system due to long distances, poor transportation infrastructure during normal times of the year, and sometimes impassable roads during the rainy season.

### 6.3.1 Private storage capacity

Private facilities with adequate storage capacity exist and could be used as bulking facilities or as primary warehouses for a market-based response to support Karamoja (Table 26). Many of these facilities are excess storage capacity for private firms or cooperatives.

- **Bugisu Cooperative Union** is a coffee growers' cooperative with excess storage capacity during years of low coffee production and marketing. They also have additional space on their property to erect Rubb halls.
- **Soroti Grain Millers** was one of four beneficiaries of grain sorting, cleaning, and bagging machines under WFP's postharvest risk reduction program. This company leases space to ACDI/VOCA in Soroti.
- **AK Oils and Fats Limited (Mukwano)** is a bonded warehouse; it is expanding the facility with a new 14,000-square meter warehouse. The company is willing to build to tenants' specifications for any long-term leases. The bonded warehouse facility is a licensed caretaker for Uganda Revenue Authority (URA) (URA Mukwano Bonded Warehouse Station Manager, personal communication, August 2016).

Furthermore, many of the large private grain traders that sell to WFP's LRP program (Aponye, Premier, Export Trading, and Sunrise) as well as many of the logistics firms working with Title II partners (Livercot) have their own private warehouses in the Kampala area.

**Table 26 Private storage facility options in Uganda**

| Location | Owner | Available for rent | Capacity | Type | Condition |
|---|---|---|---|---|---|
| **Mbale** | Bugisu Cooperative Union (BSU) | Yes ($1/m2) | 9,000 m² | Brick structure with iron sheeting roof | Good |
| **Soroti** | Soroti Grain Millers (SGM) | Yes | 3,100 m² | Brick structure with iron sheeting roof | Good |
| **Tororo** | AK Oils and Fats Limited (Mukwano) | Yes (US$4/m2) | 10,000 m² | Brick structure with iron sheeting roof | Good |
| **Jinga** | AgroWays | Yes (public warehouse receipt system) | 15,000 MT | Brick structure with iron sheeting roof | Good |

*Source: BSU General Manager, personal communication, August 2016; SGM owners, personal communication, August 2016; Mukwano Operations Manager, personal communication, August 2016; Obita (2015).*

Within Karamoja, private storage remains a constraint at the household level, within the marketing system, and on a more macro level. Households participating in agriculture rely on traditional granaries and use more rudimentary systems for food storage, including communal drying slabs and free-hanging crops from trees. While just under 80 percent of households use some sort of storage technique (traditional cribs), postharvest losses range from 5–20 percent (WFP, FAO, and MAAIF 2014). The FEWS NET assessment team found that private sector storage capacity for bulk grains in permanent (or semi-permanent) structures is limited to stores and retail outlets in town centers. Due to the structure of trading dynamics (see Chapter 4) and the very low volumes traded on a

regular basis, no large-scale permanent private warehouses operate in Karamoja. Itinerant traders traveling from surplus-producing areas of Uganda often sell their grain directly from their trucks. Unlike NGOs and WFP, private traders do not pre-stock ahead of the rainy season.

### 6.3.2 NGO and WFP storage capacity

WFP Uganda has the largest storage capacity among the food assistance implementing partners, with a total storage capacity of over 73,350 MT in Uganda (WFP Tororo Staff, personal communication, August 2016).[21] Since 2010, WFP Uganda has handled just over 1.6 million MT of commodity in Uganda, including both imported and locally-procured goods (Table 27). Since 2011, over 24,000 MT of commodities have been procured locally for response efforts in Karamoja. The overwhelming majority (over 90 percent) consists of maize grain and meal (Figure 58).

The WFP Uganda Country Program CDP is located in Tororo and comprises a mix of three permanent structures of 6,000 MT each and eight Rubb halls with a total capacity of 4,050 MT. Two concrete foundations are prepared for additional Rubb halls to be erected if needed.

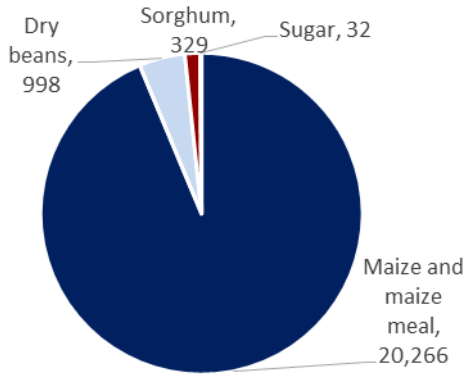
WFP has a long-term lease with Uganda Holding Company, the property owner. Commodities are transported from CDPs to EDPs in Karamoja. Kaabong, Kotido, and Moroto all have Rubb halls with no permanent structures. Sharing of Rubb hall space in Karamoja is common and occurs on an as-needed basis, as do commodity loans, during periods of pipeline breaks.

**Table 27 Tonnage handled from 2010 up to June 30, 2016, Uganda**

| Year | Tonnage |
|---|---|
| **2016** | 172,829 |
| **2015** | 236,232 |
| **2014** | 275,313 |
| **2013** | 222,872 |
| **2012** | 290,312 |
| **2011** | 159,590 |
| **2010** | 286,850 |
| **Total** | 1,643,998 |

*Source: WFP Uganda (2016).*

**Figure 58 WFP local commodity procurement for Karamoja response (MT), Uganda, 2011–2016**




*Source: WFP Uganda (2016).*

In addition to WFP, Title II implementing partners also have their own storage facilities. However, the tendency is to share space with WFP (via local Rubb halls) within Karamoja on an as-needed basis. As with WFP, Title II partners utilize staging areas outside of Karamoja and then transport commodities in, as needed, during the distribution cycle. Mercy Corps, operating in northern Karamoja, relies on World Vision for all of its commodity storage and distribution services.

[21] Of WFP's storage capacity, 30,000 MT is for the South Sudan program at its Tororo regional warehouse facility, located on the Malaba road. The facility is leased from Export Trading Group and WFP leases capacity for 30,000 MT from the total 37,000 MT available. The remaining 7,000 MT of space is not currently leased by anyone (WFP staff, personal communication, August 2016).

**Table 28 WFP's storage capacity in Uganda**

| Warehouse location | Type | Capacity (MT) | Leasing arrangement |
|---|---|---|---|
| **Central Distribution Points** | | | |
| **Kampala** | Permanent structure | 18,000 | US$12.75/MT |
| **Tororo** | Permanent structure | 18,000 | Property owned by Uganda Holding Company, sharing likely not an option; (US$10.60/MT) |
| **Tororo** | Rubb hall | 2,800 | Property owned by Uganda Holding Company, sharing likely not an option |
| **Tororo (South Sudan hub)** | Permanent structure | 30,000 | Rented from Export Trading Group (ETG), additional 7,000 MT capacity |
| **End Distribution Points** | | | |
| **Kaabong** | Rubb hall | 2,800 | Possible to share |
| **Kotido** | Rubb hall | 2,100 | Possible to share |
| **Moroto** | Rubb hall | 2,400 | Possible to share |
| Note: The team did not have the opportunity to visit the Kampala warehouse and was not granted access to enter either of the Tororo warehouses. From the outside, the warehouses looked structurally sound and well maintained. At the of this study, WFP warehouses were estimated to be at 50 percent of their holding capacity. The assessment team visited the Rubb halls in Karamoja, which looked well-maintained. | | | |

*Source: WFP Tororo staff, personal communication, August 2016; Obita (2015).*

**Table 29 Title II Implementing partner storage capacity in Uganda**

| Warehouse location | Type | Capacity (MT) | Leasing arrangement |
|---|---|---|---|
| **ACDI/VOCA** | | | |
| **Soroti** | Permanent structure | 5,000 | Long-term lease from Teso Agro Machinery; adequate area to expand with Rubb halls if necessary |
| **Moroto** | Rubb hall | | |
| **Tokora, Nakapiripirit** | Rubb hall | 1,600 (Tokora) | Leased from WFP |
| **World Vision** | | | |
| **Lira** | | | |
| **Kaabong** | Rubb hall | 350 | Possible to share |
| **Kotido** | Rubb hall | 350 | Possible to share |
| Note: Mercy Corps uses World Vision for all of its commodity storage and distribution. | | | |

*Source: ACDI/VOCA Soroti staff, personal communication, August 2016; ACDI/VOCA Kampala staff, personal communication, August 2016; World Vision Kampala staff, personal communication, August 2016; Mercy Corps Kampala staff, personal communication, August 2016; Obita (2015).*

## 6.4 Financial services coverage and access

The availability of formal financial services is relatively limited in Karamoja. Salaried employees (those working for government, hospitals, schools, NGOs, and international organizations) often travel to neighboring districts such as Mbale and Soroti to complete transactions and withdraw funds. Local farmers, traders, and retailers in Karamoja generally do not use formal financial services. Rather, village savings and loan associations (VSLAs) and local savings and credit cooperative societies (SACCOs) are far more solicited. However, people are often suspicious of savings cooperatives as they are seen to have political affiliations and are subject to mismanagement (Burns, Bekele, and Akabwai 2013). Accumulated savings and credit associations (ASCAs) were introduced to help facilitate both individual and group investments (ACDI/VOCA 2015). Burns, Bekele, and Akabwai (2013) found that group participants used the funds they had access to for livestock purchases, school fees, and food purchases when they had visitors. Local savings and loan groups are not believed to be widely used to finance staple food commodity trade. The FEWS NET assessment team most traders and retailers to be self-financed or to rely on loans from other known and trusted market actors, rather than on formal arrangements.

**Figure 59 Mobile money providers in Moroto town center, Uganda**


*Source: FEWS NE (2016a).*

The proliferation of mobile money services nationwide has facilitated NGO payments to staff (Airtel staff, personal communication, August 2016) as well as local vendors (personal communication, World Vision staff, August 2016) within Karamoja. Recent efforts by NGOs (Title II partners Mercy Corps and ACDI/VOCA, as well as others) have likewise linked local SACCOs and ASCAs to formal banks as well as mobile money providers. These efforts are believed to be actively improving the financial inclusion landscape within Karamoja. MTN mobile money has been used successfully to make payments by Mercy Corps (to seed vendors participating in its input voucher program) and by the SAGE program (to make payments to cash transfer program beneficiaries).[22]

## 6.5 Security and crime

The general security context in Karamoja is changing rapidly and is currently characterized as "prevailing" or "relative" peace (Burns, Bekele, and Akabwai 2013; Howe, Stites, and Akabwai 2015). The scale and frequency of armed and violent cattle raiding have greatly declined. The current context has been achieved through progressive disarmament and peacebuilding initiatives by the GOU to address insecurity, as well as by community-based efforts (RAU 2015). Security in communities is now enforced by Local Defense Units under the supervision of officers of the Uganda People Defense Forces. Despite this progress and these efforts, instances of opportunistic theft still arise and the fear of insecurity persists (a perception based on previous experience). Furthermore,

[22] Readers are encouraged to read the SAGE midline (2013) and endline (2016) reports to learn about the full spectrum of challenges encountered and adjustments made to this program, which sought to make almost exclusive use of e-payment options. The GHG annual reports highlight the challenges associated with paying vendors directly in hard currency and challenges encountered with the rollout of vouchers that are redeemed via mobile money transactions.

populations in border areas of Kenya (Turkana) and South Sudan remain armed. These dynamics jointly continue to affect market, trading, and commodity transportation and storage activities, albeit at a localized level (Burns, Bekele, and Akabwai 2013). Pervasive domestic and community violence against women persists and is addressed by other research (Hopwood, Porter, and Saum 2015; Howe, Stites, and Akabwai 2015; Mathys and Cashin 2016).

Examples of opportunistic theft, especially by local youth (*lonetia* or "thugs"), occur in various settings, and are considered a top security concern for residents in northern Karamoja (Hopwood, Porter, and Saum 2015). *Lonetia* steal directly from homes or surrounding agricultural areas. Furthermore, some households report having their food assistance commodities stolen by other households in the community who do not benefit from distributions (World Vision Kaabong staff, personal communication, August 2016). In other instances, implementing partners report that goods are stolen off trucks in transit while in Karamoja (World Vision Kampala staff, personal communication, August 2016). While disruptive at the micro level, the quantities of assistance stolen recently do not appear large enough to affect implementation of projects and the incidents were generally not violent.

## 6.6 Local taxes and fees

The standard valued added tax (VAT) rate in Uganda is 18 percent. In the past, all NGOs operating in Uganda were tax exempt. Today, tax and duty exemption requests by NGOs are evaluated and granted on a case by case basis (Obita 2015). Exemptions are processed by relevant government ministries and eventually the Ministry of Foreign Affairs. WFP is exempt in Uganda, and typically pays the vendor and then seeks reimbursement from the URA (URA staff, personal communication, September 2016). Local VAT rates and exemptions vary by country and should be consulted prior to planning local and regional commodity procurement.

## 6.7 Import procedures and processes

Uganda is part of the East Africa Single Customs Territory (SCT), which also includes Burundi, Kenya, Rwanda, and Tanzania. The SCT minimizes internal border controls on the movement of goods between partner states. The objective is to reduce the cost of doing business within SCT partner states by facilitating free circulation of goods. To do this, the SCT allows the following:

- Goods are cleared at the first point of entry;
- Customs declarations are made once at the destination country;
- Taxes are paid at the point of destination when goods are still at the first point of entry;
- Goods are moved under a single bond from the port to destination;
- Goods are monitored through an Electronic Cargo Tracking System (ECTS);
- An interconnected customs system;
- Internal controls/checks at internal borders are minimized.

As of May 2016, the Malaba border is a single-gate border post. This has resulted in greater efficiency, with goods clearing after spending less than 24 hours at the border. Goods can be cleared 24 hours a day, 7 days a week. Commodities coming from within the SCT are all duty free, but commodities coming from outside the SCT fall into two categories: preferential tariff treatment is given on imports from SADC (Southern Africa Development Community) or COMESA countries; and full tariffs apply for all other imports. Customs clearance is mandatory for all goods imported into the country (Obita 2015).

### 6.7.1 Documents required for regional imports

Several documents are required to import goods into Uganda. A Customs Bill of Entry (IM4) must be completed and signed by a customs agent. The IM4 is currently captured in the Direct Trader Input Terminal and details are obtained from the following documents:

- Commercial Invoice
- Bill of Landing (for imports by sea)
- Airway Bill (for imports by air)
- Railway Consignment Note (for imports by rail)
- Freight Invoice/Road Consignment Note
- Road Transit Customs Document (commonly known as C63, prepared at seaport and entry port in Uganda)
- Insurance Certificate (if goods were insured)
- Pro-forma Invoice
- Packing Lists
- Certificate of Origin
- Inspection Certificate (phytosanitary certificate)
- Certificate of Conformity (Pre-Export Verification of Conformity, PVOC)
- Permits (if necessary)

### 6.7.2 Details on Certificate of Conformity process and requirements[23]

A Certificate of Conformity (COC) is required for all imports into Uganda. The Pre-Export Verification of Conformity (PVOC) is an inspection and verification program carried out on goods by appointed inspection agents in the country of export. Verification of compliance with technical regulations and standards is provided for in Article 5 of the World Trade Organization (WTO) Agreement on Technical Barriers to Trade (TBT). PVOC was designed in accordance with the provisions of Article 5 of the TBT Agreement and in compliance with the notification requirements of WTO. PVOC was introduced in 2010 and implemented by East African countries at varying paces. For example, Uganda began enforcing this requirement in 2013 on the import of all goods in excess of US$2,000 in FOB (free on board) value.

The objectives of PVOC are to minimize the risk of unsafe and substandard goods entering Uganda, and to protect consumers against substandard and possibly dangerous imported products. The rationale behind PVOC is that as all products manufactured or processed in Uganda have to comply with standards established by the Uganda National Bureau of Standards (UNBS). It follows that every product imported into Uganda must also meet local standards. To ensure that all goods meet local standards, goods must been inspected prior to shipping from the country of origin and be issued a PVOC. The penalty for commodities/products arriving without a COC is 15 percent of the CIF (cost, insurance, and freight) value. Apart from this penalty, the commodity must be tested before it can legally enter the country, a process that can take up to a month to resolve in Uganda because all laboratory testing for the region is done in Mombasa, Kenya. Inspection fees are usually borne by the importer as they are

[23] This section was informed by personal communications with UNBS and SGS staff, August 2016.

paid in the country of export. The UNBS empowered three independent survey companies (Intertek, SGS, and Bureau Veritas) as its nominated agents to collect and test samples and issue PVOC certificates.

The process starts with the importer completing a Request for Certification Form (RFCF), attaching the commercial invoice and any other quality documents that make up part of the application depending on the product. The form should be completed with batch numbers if possible; sample tests are carried out and the COC is issued prior to loading. On arrival a physical inspection is carried out to ensure that the product's status is still the same as per the COC. The cost of the inspection is 0.5 percent of the FOB value for food items. The minimum fee is US$35 and the maximum is US$3,000, excluding VAT. The test result parameters must fall within UNBS limits. Laboratory test results often take one to five days from the date of submission and payment. Labels on products must include the product name, batch number, expiry date, and country of origin. Local products can also be tested; all tests done in Uganda take seven working days for results. The standards are available online and can be ordered and delivered electronically upon submission of proof of payment. The cost is currently 40,000 UGX for each standard.

All locally procured commodities should be compliant with these standards as well (Table 30), as the government, through UNBS, requires all food processors and their products to be ISO-certified to meet international standards. Other private bodies allowed to inspect and certify products are SGS, Chemiphar, Bureau Veritas, and Intertek. A number of buyers like WFP as well as private sector support groups like Abi Trust and Sasakawa 2000 support processors and farmers to ensure they meet specified standards to enable them compete to favorably within East African and international markets (Obita 2015).

**Table 30 UNBS Standards for selected commodities, Uganda**

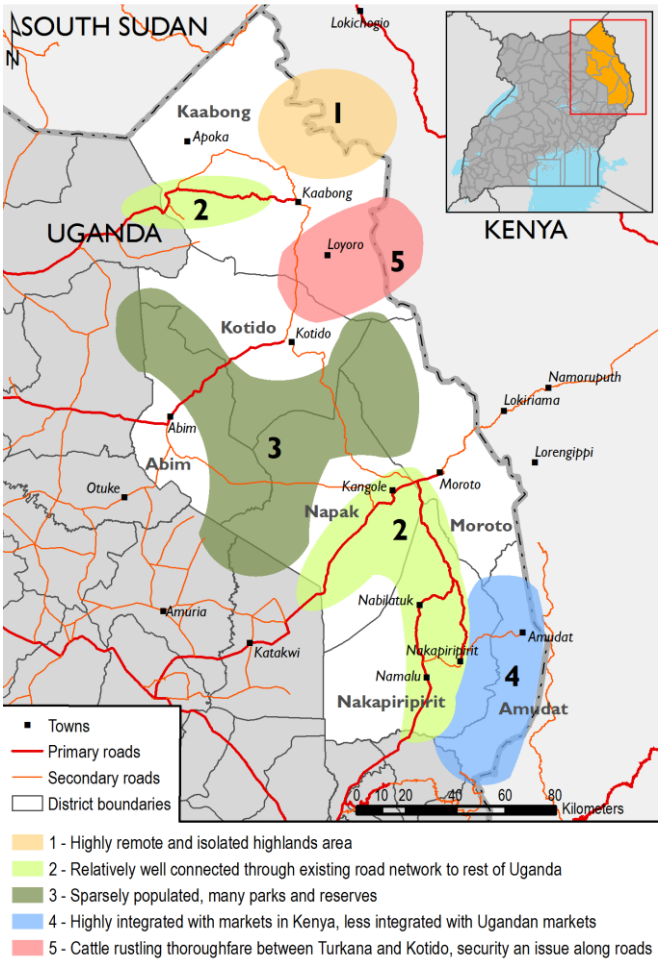
| UNBS standard | Other name | UNBS Standard number |
|---|---|---|
| **Milled Maize Product** | Maize meal | USEAS44:2011 |
| **Edible Vegetable Oil** | Fortified vegetable oil | US168:2006 |
| **Corn-soy blend** | CSB | No specific standard exists. Falls under Composite Flour USEAS782:2012 |
| **Labelling Standard for Prepacked Foods** | | USEAS38:2014 |
| **Good Hygiene Standard** | | US28:2002 |

*Source: Uganda National Bureau of Standards (2016).*

# 7 Opportunities and constraints in Karamoja

Findings from the FEWS NET assessment in Karamoja (including the review of existing data and literature, field assessment, and stakeholder workshop) highlight a number of constraints to and opportunities in support of market-based response modalities in Karamoja. Due to the highly variable local context in Karamoja (Figure 60), some interventions will be suitable in some areas but not in others. Furthermore, given the nature of the operating environment, instability of climate and physical access to markets and other communities, current Title II program partners emphasize the need for a slower, scaled approach to capacity building and incremental expectation setting to allow for skills, education, and participation to reach levels that support sustainability. Lessons learned from the current program cycle suggest that piloting program activities and carefully expanding and adapting the tested approach in similar environments may be more effective and community-driven than sweeping efforts at behavior change and/or livelihoods adaptation/transition.

**Figure 60 Geography of constraints and opportunities in support of market-based response modalities in Karamoja, Uganda**




*Source: FEWS NET (2016a).*

## 7.1 Agroclimatology

The unimodal rainy season and relative inconsistency of rainfall and distribution, combined with low-technology and low-input farming practices are major driving factors of chronic food insecurity. The literature associates food insecurity in Karamoja with low rainfall, unreliable rainfall, poor distribution and low soil fertility (GOU, 2010). Drought represents the most prominent threat to crop production, and is typically compounded by low yields, poor crop management, and unsuitable storage for post-harvest use. Regardless of whether the frequency of dry spells or the erratic nature of rainfall has increased or will continue to increase, this characteristic has been observed for many years; in 1987, Hudson referred to "extreme unpredictability" when describing rainfall in Karamoja (Dyson-Hudson 1987). Burns et al (2013) assert that rainfed crop production has and will continue to pose a high risk for the majority of people in Karamoja.

ACDI/VOCA notes that low agricultural productivity, likely coupled with inconsistency from year to year, is a barrier to local populations in Karamoja establishing meaningful food stocks and supplying local markets through local production (ACDI/VOCA 2015). Current productivity levels do not fully stock bulking centers and market supplies in Karamoja are assured through a marketing system that is closely linked with distant surplus-producing areas of the country. This situation therefore limits the extent to which local populations in Karamoja can participate in the initial stages of the commodity marketing system.

## 7.2 Social and community-based structures

The existing social and cultural structures and institutions (*manyatta*) are communal in nature. Working through these communal institutions may allow for more efficient and effective mobilization, behavior change, learning, and adaptation of new technologies and inputs. The latter is reflected in the degree of peer learning that has been integrated into both existing Title II programs, which has allowed communities to witness the benefit of new planting strategies, use of improved seeds, and the value of providing medicine and routine veterinary care to animals. Additionally, a recent study completed by the Feinstein International Center also suggests that the *manyatta* and *kraal* structures may be an appropriate focal point for support to the livestock sector, particularly in the marketing of animals (FIC, 2016). Current Title II implementing partners noted that food sharing practices within families and as part of the *manyatta* structure should be a consideration in the allocation of rations and food security objectives, as sharing is nearly inevitable. A group-based approach should not negate the need for individual capacity building and skills transfers, however.

Current Title II partners both emphasized the need to develop, nurture, and maintain productive and trusting relationships with local authorities (official government authorities and local elders) as strategic partners to the program implementation process. Though challenges accompany the introduction of FMCs into food assistance programs, the design and integration of the FMC in Karamoja is a key consideration given the complexity of existing cultural and social constructs.[24] FMCs are currently prominent local institutions for in-kind food distributions and may have a role in supporting market-based response modalities in future initiatives.

The presence of a variety of leadership figures, political actors, and institutional (government) operators integrated within the population of Karamoja also compounds the complexity of traditional social systems, particularly the dynamics of leadership and the management of local resources. Navigating the potentially narrow margin between local, traditional leaders and formal authorities is of particular relevance to program activities and initiatives that address conflict management and the allocation of natural resources and/or use or access rights. In Karamoja, the lack of role clarity and overlapping or unclear jurisdiction between customary and formal authorities are exacerbated by the lack of communication between actors, and by variations in the structures and composition of peace and security committees across administrative boundaries. Greater collaboration and communication between actors will lead to a more resilient and dynamic conflict management system, which will in turn support private sector activities, including trade. The implication of overlapping roles and responsibilities (such as a traditional leader who is also a formal government official) also poses a specific challenge for assistance programming, especially where the delegation and distribution of resources, benefits, and assistance activities require local input for targeting and engagement.

## 7.3 Livelihoods

The literature emphasizes social, political, and economic conflict to explain the slow evolution of agriculture-based livelihoods in a traditionally pastoral zone. The consistent efforts of many international agencies, donors, and the GOU to establish sedentary, farm-based livelihoods largely failed or did not yield consistently positive food security impacts. Most household food production in Karamoja is subsistence level, lacking quality and quantity sufficient to support income-earning and promote acceptable food security indicators. Importantly, the level of production does not allow households to withstand shocks – this is particularly the case in pastoral areas where agriculture is opportunistic and provides supplementary food to the household. While in a good year household production can contribute up to a third of household income across livelihood zones, the literature suggests that

[24] Title II implementing partners reported that FMCs have complained of low wages and remuneration, and that they are ill-equipped to reach rural communities (lack of appropriate transportation, footwear and rain gear, identifying uniforms or clothing), especially during the rainy season.

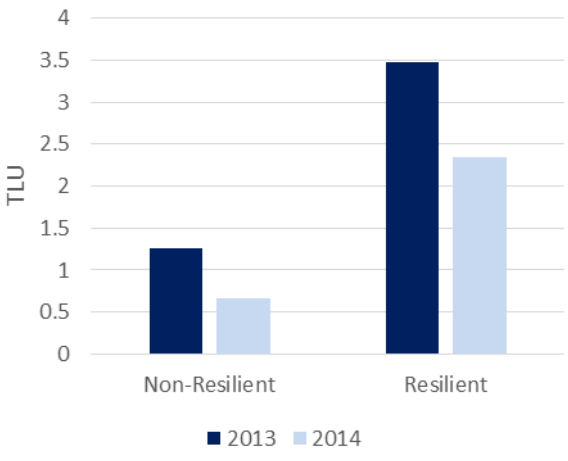
increased agricultural production is not resulting in improved food security outcomes overall (Burns, Bekele, and Akabwai 2013).

Evidence referenced from other studies in the region indicates that crop dependency is associated with increased vulnerability and food insecurity (Levine 2010; Mubiru 2010) and likely continued decline (Burns, Bekele, and Akabwai 2013). Community feedback provided during a USAID-funded baseline study of Karamoja pointed to limited indigenous knowledge on cropping, and observations that a general reliance on crop production increases vulnerability, particularly during extended dry periods or droughts (ICF International 2014).

Potential for pastoral livelihoods to expand is significant; however, barriers include some remaining localized, small-scale conflict and theft, institutional pressure to reduce pastoralism, poor access to animal health support, and widespread poverty. Poverty appears to be on the rise, at least when defined by livestock ownership, and from the point of view of communities in the region; whether livestock numbers decreased or whether a large-scale redistribution of livestock wealth/assets occurred, more people own fewer animals than in previous years, which has had a significant negative impact on food security and income-earning for most of the population (Burns, Bekele, and Akabwai 2013). Commonly owned livestock include: poultry (45 percent), goats (36 percent), and cattle (32 percent), though recent food security assessments observe that livestock animal ownership across the region is low, with most households that own livestock having low holdings ( Figure 13) (WFP et al. 2014).

Mercy Corps notes that pastoralism is an innate livelihoods foundation in the region, and that, in most cases, livestock-focused activities can have a more likely positive and sustainable impact than agriculture-based initiatives. This sentiment, which underlies the proposed approach, is echoed throughout the literature, and remains a common theme in the dialogue regarding how to break the cycle of chronic food insecurity and poverty in Karamoja. For example, the Resilience Analysis Unit (RAU) describes resiliency among populations in Karamoja in terms of the assets and resources that allow a particular household or group of people to withstand shocks (Figure 61). In the context of Karamoja, specifically, livestock assets were an indicator of resilience in a given household (RAU 2015).

**Figure 61 Livestock ownership in TLU as a Measure of Resiliency, Uganda, 2013,2014**




*Source: RAU (2015).*

Identifying and slowly expanding the adoption of physical adaptation measures that support agricultural production and development, water source management and protection, and ecosystem and environmental protection is a priority (GOU 2010). For agricultural production specifically, this would include integrating early maturing and drought-resistant crops (and livestock breeds), expanding mixed crop-livestock food production systems, intercropping, shifting and/or adopting different growing cycles and planting season timelines, soil and water conservation, and agroforestry. Both Mercy Corps and ACDI/VOCA programs have promoted adaptive approaches, including the exploitation of rainfall patterns and seasonal water availability. In the case of the RWANU program, ACDI/VOCA endeavored to introduce more drought-hardy goat breeds. Mercy Corps recommends education and mobilization within farming communities to adapt to shorter growing cycles and harvest periods. Similarly, training and asset building through permaculture and key-hole gardens increase diversity and provide a more controlled means of food production where rainfall

may not provide consistently acceptable water supply for larger agricultural production. Vegetable production was cited by the RAU as a key adaptive strategy for increased income and nutritious food access, particularly among women, who can use simple irrigation with available river water for cultivation all year long, regardless of seasonal rainfall. The GHG Livelihood Dynamics analysis suggests that cash crops may be advantageous but should be carefully selected and implemented in areas where the comparative advantage is obvious and proven, or to complement ongoing livestock-oriented activities.

## 7.4 Markets

Karamoja is structurally deficit in all staple foods. Even during years of relatively good or above average harvests, Karamoja depends on the wider Ugandan marketing system to meet local demand (effective). The preferred foods (maize, sorghum, edible oil, dry beans) consumed within Karamoja are widely available within the broader Ugandan national market during most years (Table 31). Today it would only be in extreme circumstances that this would not be the case.

The size of the local market compared to the existing program size varies by commodity and one's definition of the "local" market. The current program size is relatively larger when compared to the local markets in Karamoja than when compared to the national marketing system. Furthermore, given the importance of food assistance as a source of edible oil among populations in Karamoja, it is not surprising to see that the current volumes of distributed edible oil are relatively large compared to both the Karamoja and domestic markets.

**Table 31 Existing program size compared to Karamoja and National market (MT), Uganda, 2014,2015**

| Product | Total market purchases (MT/year) in Karamoja | Total Title II in-kind distributions in Karamoja (MT, 2015) | National supply (MT, 2014) |
|---|---|---|---|
| **Dry beans** | 15,759 | 910 | 983,448 |
| **Edible oil** | 4,657 | 450 | 380,519 |
| **Maize + sorghum** | 58,613 | 2,841 | 2,855,986 |

Note: National supply is defined as production plus net trade. Title II commodities are distributed in 2015 were in kind distribution from transoceanic shipments. In 2015, the Title II pulses were lentils, not dry beans. In previous years, green split peas have been distributed. Edible oil market purchases from FEG (2014) were adjusted upward based on high degree of variation in baseline data.

*Source: Market purchase data are from FEG (2014); Title II in-kind distribution data from Mercy Corps (2015) and ACDI/VOCA (2015); national supply data from UBOS (2015) and COMTRADE (2016).*

Poor information systems among and between market actors, physically inaccessible market centers and transportation routes, rudimentary and unsupportive infrastructure, and poorly adapted storage facilities all compound the obstacles faced by households and other market actors who wish to buy or sell goods (food commodities, livestock, agricultural inputs). Market infrastructure is a major disincentive to value chain development, as transportation into the region and coordination with local actors are costly and time-consuming. In addition to low productivity levels, local producers also lack sufficient processing and storage facilities that could support eventual expansion to greater market systems and increased incomes.

Market information is not widely available in Karamoja and knowledge of market prices between buyers and sellers is not symmetric. The FEWS NET assessment team found that traders, retailers, and consumers felt that negotiation times could be lengthy and a source of frustration. Mercy Corps reported that participants in the input voucher program also attempted to negotiate on price as well as the variety of input received through the voucher program. Sensitizing beneficiaries and vendors to transfer amounts, frequency, and other specifications is essential.

The FEWS NET assessment found that markets performed relatively well if market performance is defined as the number of buyers and sellers, the ability (or lack thereof) of a small number of actors to influence local prices, and the capacity of the local market to respond to an increase in effective demand. However, there are both social/cultural and financial barriers to participating actively in markets by local populations in Karamoja, as well as the challenges to participating in upstream marketing activities due to relatively low local agricultural productivity. Furthermore, due to very low local effective demand, markets are unable to fill local food requirements. They can and do, however, respond adequately to existing effective demand, an important distinction.

Market prices for most commodities vary seasonally in Karamoja and within Uganda more broadly (Table 32). The coefficient of variation of prices in Moroto is slightly higher than in Soroti. The degree of inter-annual price variation (average and median annual price spread between 2011 and 2015) varies by product. The largest differences in price variation between Moroto and Soroti is present for maize prices. Edible oil prices are fairly stable and typically increase in a stepwise manner after many months (or even years), while maize, sorghum, and dry bean prices show a high degree of seasonal variation.

**Table 32 Inter and intra annual price variation in Moroto and Soroti (UGX/kg), Uganda, 2011-2015**

| | Sorghum | | Maize | | Dry beans | | Edible oil |
|---|---|---|---|---|---|---|---|
| | Soroti | Moroto | Soroti | Moroto | Soroti | Moroto | Moroto |
| **Coefficient of variation** | 0.18 | 0.22 | 0.16 | 0.26 | 0.18 | 0.16 | 0.12 |
| **Average annual price spread** | 380.83 | 485.00 | 443.75 | 770.00 | 955.83 | 850.00 | 800.00 |
| **Median annual price spread** | 400.00 | 325.00 | 512.50 | 750.00 | 916.67 | 750.00 | 0.00 |
| Note: Considers retail prices from January 2011 through December 2015. Edible oil prices in Moroto were stable at 5000 UGX/kg in 2013 through 2015. | | | | | | | |

*Source: Author's calculations based on data from WFP Uganda; Farmgain Africa and UBOS (2016).*

Market linkages between Amudat District and neighboring Kenya are very strong (Figure 60). Indeed, both staple food and livestock markets in Amudat appear to be more strongly oriented and integrated with markets in Kenya than the national Ugandan marketing system. These linkages are so strong that transactions often occur in Kenyan Shilling (KES) rather than Ugandan Shilling (UGX), a practice the assessment team also found (albeit to a lesser degree) in border areas of Kaabong and Moroto.

Storage remains a constraint to food availability at the household level, within the marketing infrastructure, and on a more macro-level. Households participating in agriculture rely on traditional granaries, and also use more rudimentary systems for food storage, including: communal drying slabs and free hanging crops from trees. The 2014 WFP Food Security Assessment notes that while just under 80 percent of households use some sort of storage technique (traditional cribs), post-harvest losses range from 5-20 percent (WFP 2014).

Low levels of literacy, numeracy, and overall capacity to operate in the private sector remain constraints to expanding productivity, market vitality and stability, and securing strategies that increase livelihoods stability and food access. The ACDI/VOCA annual report asserts that low skill levels prohibit the meaningful and sustainable development of input traders and dealers at the local level, as well as the integration of local market actors as a conduit for affordable and high quality inputs and/or staple foods. Increased technical knowledge (agricultural or pastoral), combined with improved literacy and basic business acumen are likely to remain key factors in the potential for Karamoja's private sector to support stable market systems, functioning supply and demand (for food and inputs), and household access to critical livelihoods components.

## 7.5 Experience with local procurement in Uganda

Key preferred staple foods sold on markets in Karamoja are largely sourced from other areas of Uganda where they are widely available for the domestic market and regional exports. The World Food Programme has extensive experience in this area, including procurement in Uganda for distribution in Karamoja (largely maize grain and meal, but other commodities as well). However, WFP Uganda staff did not agree to meet with the assessment team to discuss these matters. It will be important for future program implementers to benefit from an in-depth technical discussion about lessons learned through existing LRP activities in Uganda.

With respect to the availability of storage for food assistance operations, private storage space is limited and sparse in Karamoja proper. During the food distribution cycles, agencies transfer enough to locations in the program area to support the distribution cycle, and then maintain a small stock in WFP or NGO Rubb halls. The majority of commodities are stored in Soroti and transported to the region as needed. The extended nature of the warehouse and supply chain is vulnerable to interruptions and breakdowns in the procurement and delivery system due to long distances, poor transportation infrastructure during normal times of the year, and sometimes impassable roads during the rainy season.

Local procurement from outside of Karamoja for the purpose of in-kind or cash-based food assistance may be procured in grain or milled equivalent. Procurement-based programming and activity, and the finalization of particular specifications of incorporated commodities may benefit from additional analysis of local preferences, absorptive infrastructure capacity, and utilization practices. For example, milling activities in Karamoja as a whole face specific obstacles, and most importantly high fuel prices and technical issues related to the functionality of the equipment (maintenance, access to spare parts, machine breakdown). Milling capacity at the village level, and the cost of milling for a beneficiary household may present an opportunity for functional support to local millers to meet new demand associated with in-kind grain distributions. Alternatively, procurement of flour equivalent of cereals might pose different challenges in terms of preserving the quality and value of milled products, with implications for local storage capacity and pest control, both of which are pervasive obstacles in the local marketing chain and at the household level. In both cases, analysis of the literature and assessment information, and anecdotal feedback during field research, endorse a careful and intentional alignment of procurement planning with local capacity (at the vendor, household, institutional level) to absorb, maintain, and appropriately disburse, market, and consume selected assistance commodities.

## 7.6 Physical road access and supportive infrastructure

### 7.6.1 Physical infrastructure

Physical road accessibility presents challenges during the rainy lean season, when market dependence is greatest. As discussed in Chapter 6, some areas are very remote. Despite some recent expansion, notably on the road between Nakapiripirit and Moroto, and planned improvements between Nakapiripirit and Sironko/Mbale, the poor and/or inconsistently functional road network is a prohibitive factor and perceived as a constraint to private sector extension into and expansion out of Karamoja. Agricultural trade is complicated by the poor road network (and high transport costs) and localized insecurity. During the rainy season many roads are impassable, a situation that contributes to the further isolation of many communities and subsequently, price volatility for staple goods. The Feinstein International Center points to poor infrastructure overall as a constraint not only to marketing and food security, but also suggests that a lack of reliable and sound infrastructure on a multi-sectoral level (including electricity, banking, etc.) is a prominent disincentive for private sector investment and engagement (Gelsdorf, Maxwell and Mazurana, 2012). Transaction costs derived primarily from transportation costs (time, distance, modality) for market actors, prospective market actors (i.e. local producers who may be motivated to expand their

marketing activities), and consumers are high and often untenable, particularly for poorer households and small-scale traders who are primarily engaged in village-level economic activities.

### 7.6.2 Finances and Banking

The introduction of and support to Savings and Credit Cooperative Societies (SACCOs) through current Title II programming has expanded the appreciation of savings and future planning among target communities, particularly women's groups. While increased adoption of financial services and mechanisms is an outcome of current programming, many constraints remain to broad social acceptance of and access to financial services. Lack of credit is a major constraint to production and marketing of local crops and commodities. Local farmers, traders, and retailers in Karamoja generally do not use formal financial services. Rather, Village Savings and Loan Associations (VSLAs) and local SACCOs are far more solicited. However, cultural barriers to engagement in financial services are rooted in distrust of savings cooperatives as they are seen to have political affiliations and subject to mismanagement (Burns et al. 2013). Accumulated Savings and Credit Associations (ASCAs) have also been introduced to help facilitate both individual and group investments (ACDI VOCA 2015). MTN mobile money has been successfully used to make payments by Mercy Corps (to seed vendors participating in an input voucher program) and the SAGE program (to make payments to cash transfer program beneficiaries). However, local savings and loan groups are not believed to be widely used to finance staple food commodity trade. Indeed, the FEWS NET assessment team found most traders and retailers to be self-financed or reliant upon loans from other known and trusted market actors, rather than formal arrangements. Structural barriers to credit and financing, and local capacity to engage with financial institutions (either physically or through mobile or remote technology) remain barriers to increased production and market engagement.

### 7.6.3 ICT use and Prevalence

Increasingly, mobile phone technology has been incorporated into assistance programming, with overall mixed results in the face of likely growth of this sector as a primary programming tool. Two mobile phone companies are ubiquitous in Karamoja (MTN and Airtel), with only a few sub counties where service is poor due to relatively mountainous terrain. In Karamoja, an estimated 65 percent of people have access to mobile phone services with most areas having good or acceptable quality of service (FEWS NET 2016a). The adoption and use of mobile phone technology and services is far more intensive among traders than among poor households. The literature and the FEWS NET assessment point to ever increasing expansion in mobile networks and functionality, although the cost-prohibitive nature of mobile phones and required access to electricity continue to be barriers for household adoption of these technologies on a general scale. For example, the cost of charging mobile phones, obtaining minutes, and associated transaction fees (for mobile-based transactions) may frequently exceed the available purchasing power of poor households. Nationally, only 14 percent of rural households have access to electricity (Coronel 2015). This figure is even lower in Karamoja at a rate of only 2.8 percent of households (UNDP 2015). Correct use and maximization of mobile technology among the general population remain somewhat challenging given the literacy, numeracy, and overall capacity of households, vendors, and market actors in the region.

### 7.6.4 Security

Although the security situation has improved and is now characterized as "relative peace," localized instances of theft and cattle rustling persist and inevitably impact local perceptions of livelihoods stability. These events are generally on a small scale, even targeting specific households or individuals rather than entire communities. The memory and perception of insecurity discourages trade and marketing activities in some areas (Kaabong in particular). FEWS NET noted reticence among some traders to participate in more rural regional markets due to perceptions of poor security and the risk of theft, graft, and harassment during the transportation and/or delivery

of goods and services. Title II program reports also pointed to isolated incidents of theft and graft of trucks carrying commodities intended for program beneficiaries at the district and village level. Institutional memory of the recent conflict also has a role in shaping household livelihoods strategies, including collective and individual investment in particular agricultural activities (including marketing and production), and the establishment of a more sedentary and permanent settlement structure.

Livestock production and marketing has been hampered and disabled by decades of armed conflict. Though the current environment is generally viewed as increasingly peaceful and stable, concerns regarding small scale theft of animals remain. Field research conducted by the Feinstein International Center notes that while cross-border animal theft is not currently at the scale of past raids, perpetrators of theft are armed and organized and able to steal multiple animals. This concern was prominent in Kaabong, where external actors (Turkana, Toposa, and Didinga tribes) were widely identified as the responsible parties for theft of animals (Stites et. al, 2016).

## 7.7 Local capacity constraints and scale of implementation

Basic literacy and formal skillsets need to be appropriate for scaled up economic activity. The literature, including reporting from current Title II partners, concludes that current skill levels among the general population are low and motivation for improvement and expansion of skills is mixed and context-dependent. Poor education levels, lack of numeracy and literacy, and little exposure to training and vocational learning by government extension agents and/or equivalent technical guidance are barriers to advancement in both agriculture and pastoralist activities. Increased technical knowledge (agricultural or pastoral), combined with improved literacy and basic business acumen are likely to remain key factors in the potential for Karamoja's private sector to support stable market systems, functioning supply and demand (for food and inputs), and household access to critical livelihoods components. The scope, scale, and pace of program activities are key considerations when addressing the widespread underdevelopment of supportive services and sectors (education, banking and finance, vocational training, technical training in key agriculture and livestock sectors). Scaling an adaptive approach to capacity building to allow for skills, education, and participation to reach a level that supports sustainability through pilot (or otherwise designated) level initiatives may provide a permissive setting for the gradual progression towards a desired level of behavior change and/or livelihoods adaptation/transition.

## 7.8 Supportive systems and infrastructure for voucher programming

Weaknesses in market infrastructure, and particularly in the capacity of market actors to fruitfully engage in larger market systems, has implications for the modalities and pacing of cash-based programming. While small-scale vendors and traders are active within their marketing environment, low literacy and numeracy, limited market reach, low use of and access to current market information, and physical constraints within shops and stalls are limiting factors to expanding operations. The FEWS NET assessment noted that in Kotido, the capacity of potential vendors to meet programs needs varied widely, revealing a potential bias in vendor selection, and points to the greater challenges associated with capacity building for a scaled up market-based food assistance initiative. Additionally, access to seed capital, credit, and resources to expand operations are prominent obstacles to increased and formal vendor engagement in marketing activities as a whole, and in food assistance programming in particular. Allocation of designated time and resources to create adequate vendor capacity and facilities for the correct and desired level of performance and participation in voucher-based food assistance may benefit from a phased or scaled approach to capacity building and vendor selection. Food quality is another aspect of vendor capacity that has emerged from anecdotal reports, and as an observation in the USDA evaluation of voucher programs. Procurement of commodities that meet established standards and quality thresholds can be achieved through a variety of procurement strategies that include systematic checks and monitoring to verify that beneficiaries can access food of suitable quality and nutritional content.

**Table 33 Key considerations for future program design**

| Market characteristic | Overall assessment findings | Refer to |
|---|---|---|
| **Supply** | | |
| **Sufficiency of supply** | • Very limited within Karamoja for the key staples.<br>• Adequate within Uganda. | Section 4.2.2<br>Section 4.1 |
| **Timing of supply** | • Limited within Karamoja for the key staples, following unimodal erratic rainfall patterns<br>• Adequate in Uganda, benefiting from bimodal rainfall pattern | Section 2.2 |
| **Quality of supply** | • "Local quality" and varying measurement units predominate for the key staples, since no grades or standards are followed.<br>• Only for the case of maize, there has been some adherence to standards when supplying product to institutional buyers, such as the WFP.<br>• Refined edible oil available throughout the country. That adheres to NBOS requirements. | Section 4.4.2 |
| **Market competitiveness** | • Low risk of collusion among a large number of traders in Karamoja | Section 4.4.1 |
| **Market integration** | | |
| **Within Karamoja** | • Well established trade relationships exist across markets in Karamoja.<br>• Strong price correlations across certain markets suggest price co-movement in the region. | Section 4.5.2<br>Annex 6 |
| **With other markets in Uganda** | • Well established trade relationships exist between markets in Karamoja and other markets in Uganda located in districts such as Gulu, Kitgum, Soroti, Lira, and Mbale.<br>• Strong price correlations between Karamoja markets (Kaabong, Moroto, Nakapiripirit) with Lira and Soroti suggest price co-movement between the region and other markets in Uganda. | Section 4.5.2<br>Annex 6 |
| **Barriers to trade** | • Several factors constrain the local population for engaging in trade: Low marketable surplus, physical accessibility issues, cultural norms and preferences, and security concerns stand as the major barriers. | Section 4.3.3 |
| **Market accessibility** | | |
| **Consumers** | • Markets, particularly secondary markets, are available to consumers in weekly basis. Primary and town/center markets may operate even in daily basis.<br>• Accessibility may become constrained during the rainy season due to impassable roads. | Section 6.1.1 |
| **Traders** | • Traders and retailers operate following market pre-defined schedules and frequency.<br>• Trading activities become constrained during the rainy season due to impassable roads. | Section 4.3.1<br>Section 2.4<br>Section 6.1.2 |

*Source: FEWS NET (2016a)*

**Table 32 Key considerations for future program design (cont'd)**

| Market characteristic | Overall assessment findings | Refer to |
|---|---|---|
| **Infrastructure** | | |
| **Storage availability** | • At the market level, storage facilities are often unavailable, particularly for the case of secondary markets.<br>• In the broader marketing system, storage facilities are available in other places of Uganda, from the private sector as well as from NGOs and the WFP. Storage facilities from these actors in Karamoja are limited. | Section 2.4<br>Section 4.3.3<br>Section 6.3 |
| **Financial infrastructure** | • Mobile money services are available in the region and have been used successfully by development programs.<br>• Farmers, traders, and retailers in Karamoja do not use formal financial services. Most traders and retailers are self-financed. | Section 6.4 |
| **Communications infrastructure** | • Mobile network providers are well established in Karamoja. Network coverage is acceptable in most areas, but localized exceptions do occur due to hilly conditions or delays in operator upgrades.<br>• Mobile phone users have access to charging services. Most traders use mobile phone technology, however usage is more limited among households. | Section 2.4<br>Section 6.2 |
| **Security concerns** | • "Relative" peace prevails in Karamoja. Theft of goods (from households or from trucks in transit) and livestock is reported to occur, but at low levels compared to past times.<br>• Perception of insecurity continues to create obstacles to trade, especially in Kaabong. | Section 6.5 |

# Annex 1 People Contacted During the Assessment

**List of People Interviewed / Contacted**

| Name | Designation |
|---|---|
| **Mr. Joshua Rissa** | Napak District Commercial Officer |
| **Dr. Oscar Okengo** | Abim, DVO |
| **Ogwang Constantine** | Acting DVO, Kotido |
| **Francis Obita** | District Senior Finance Officer, Kotido |
| **Odong David** | Kotido District Commercial Officer |
| **Ajok Janet** | Livestock Officer |
| **Francis** | Interdistrict Grain Trader, Kotido |
| **Dr. Logwe** | DVO |
| **Dr. Eladu** | Ag. DVO, Kaabong |
| **Abura Levi** | DPO, Kaabong |
| **Okwi Barton** | DAO, Kaabong |
| **Mr. Kitanda Ronald** | OC Station, Kotido Central Police Station |
| **Grace Dodoi** | Parish Chief, Kanawat Cattle Market, Kotido |
| **Gwanyi** | Interdistrict cattle trader from Pallisa, Kotido |
| **Abdul Rashid Kira** | Interdistrict cattle trader from Busia, Kotido |
| **Mr. Patric Enok** | Branch Manager, Kotido Stanbic |
| **Benard Obin Eria** | Agricultural Officer, Kotido |
| **Logiel Peter Leilei** | Revenue Officer, Kaabong |
| **Simon Peter Agoma** | Parish Chief, Kaabong |
| **Maurine (Family name unknown)** | Veterinary doctor attached to Livestock Officer with Mercy Corps for LMIS data, Kaabong |
| **Awor Pasea (Pasis)** | Law enforcement officer, Kaabong |
| **Chipa Martha** | Law enforcement officer, Kaabong |
| **Alex Kiberu** | Kaabong District Agricultural Officer (Phone), Kaabong |
| **Okello David Nyambi** | Market Master, Abim |
| **Eket Franco** | Parish Chief, Abim |
| **Were Moses** | Kaabong |
| **Baleke Siraje** | Livestock transporter, Kaabong/ Kotido |
| **Teko Andrew** | Livestock trader, Pallisa<br>Kaabong/ Kotido |
| **Ilukol Gabriel** | Livestock trader, Kaabong/ Kotido |
| **Kamada Sendi** | Livestock trader, Kalwele Market, Kaabong/Kotido |
| **Masaba Mutwalib** | Livestock trader Mbale, Kaabong/Kotido |
| **Mr Opeera David Moses** | Branch Manager Centenary Bank, Moroto |
| **Mr Derric Loumo** | District Commercial officer, Moroto |
| **Losike Kanu** | Staples trader, Nakiloro market, Moroto |
| **Mr Ahimibisibwe Tom** | WFP, Head of Office, Moroto |
| **Ms Joyce** | WFP, Head of Office, Nakapiripirit |
| **Mr Moses Kalia** | Livestock trader, Cheptapoyo Market |
| **Mr Ciwere Timothy** | Programmes Officer, Andre Food Consult |
| **Mr Odongo James Peter** | Programmes Officer, WFP Nakapiripirit |
| **Ms Atim Lucy** | Operations Coordinator, AFC, Nakapiripirit |
| **Mr Lokwang Dominc** | Chairman, slaughtering traders, Moroto |
| **Chemasuet Mohamed** | Livestock market contract, Amudat |
| **Mr Ofwono Silver** | MTN Sales Manager, Nakapiripirit |
| **Mr Lodio Solomon** | Staples trader, Namalu |
| **Mr Bwakya Abdu** | Livestock trader, Kangole livestock market |
| **Mr Oyang John** | Staples trader, Kangole Market |
| **Mr Mutia Joseph** | Staples trader, Iriri market |
| **Mr Rissa David** | District Commercial Officer |
| **Mr Nyonyintono Alex** | District Sales Manager, Airtel telecom |
| **Mr Mark Mitchell** | Deputy Chief of Party, ACDI/VOCA |

## List of People Interviewed / Contacted

| Name | Designation |
|---|---|
| **Mr Kokoi Godfrey** | Regional Commodity Distribution Coordinator |
| **Ms Christine Rose Asalo** | Branch Manager, Stanbic Bank, Moroto |
| **Mr Okia Luck** | Staple trader, Moroto |
| **Mr Okwii Francis** | District Agricultural Officer, Moroto |
| **Mr Logune Mathew** | District Commercial Officer, Nakapiripirit |
| **Mr Tengai Mario** | District Agricultural Officer, Nakapiripirit |
| **Mr Edalu Abraham** | Chairman Traders' Association, Moroto |
| **Mr Lookit Eliah** | Chairman Traders' Association, Napak |
| **Mr Sagal Ben Paul** | Subcounty Chief – Kakomongole Subcounty |
| **Kitima Disability Group c/o William Sagale** | Village Savings Association in Namalu, Nakapiripirit |
| **Sankha S Chatterjee** | Bidco, Customer Response Team, Jinja |
| **Gerald Wanyara** | Accountant, Mount Elgon Millers, LTD, Mbale |
| **Kassim Ngude** | WFP, Tororo |
| **Freddy Opoka** | World Vision Regional Manager, Eastern Uganda |
| **Tony Ojoke** | World Vision Technical Officer, Mbale and Soroti |
| **Mr Sabakaki** | Bugisu Cooperative Union, General Manager, Mbale |
| **Celina Auko** | WFP, Soroti |
| **Florence Opolot and Joseph Omaria** | Soroti Grain Millers |
| **Edith Assimwe** | ACDI/VOCA Commodity Support Officer, Soroti |
| **Levi Okelo** | Son of owner, Kakisa Holdings Limited, Soroti |
| **Dr. Patrick Eyudu** | Secretary for Production, Central Government, Soroti |
| **Mr. Cuthbert Wula** | Engineer, Public Works, Road Authority, Eastern Region |
| **Kyalo Kimanzi** | Operations Manager, Mukwano – AK Oils and Fats |
| **Mr Ayen** | Station Manager, URA Mukwano Bonded Warehouse |
| **Tracey Mitchell** | Chief of Party, Mercy Corps, Kampala |
| **Charles Onyait** | Commodity Operations Manager, ACDI/VOCA Kampala |
| **Kathryn Clark** | CRS Uganda, Head of Programs |
| **Innocent Namara** | Senior Information Officer, Uganda National Bureau of Statistics |
| **Maurice Musuga** | Imports Inspection Department, Uganda National Bureau of Statistics |
| **Sajjabbi Frederick John** | Senior Planner Infrastructure, National Planning Authority |
| **Tony Gadhoke** | Chief Executive Officer, Mukwano – AK Oils and Fats, Kampala |
| **Eseza Ikedit** | Grants Manager, World Vision International, Kampala |
| **Emmanuel Tumweboneire** | General Manager, Aponye Uganda Limited, Kampala |
| **Joseph Elimu** | Inspector, SGS, Kampala |
| **Kassim Muwonge** | Customer Care Service, SGS, Kampala |
| **Elly Smartson Mugumya** | Operations Manager, Livercot Impex Limited, Kampala |

# Annex 2 Stakeholder Workshop Agenda

**Famine Early Warning Systems Network (FEWS NET)**
**Uganda-Karamoja Market Assessment Stakholder Workshop August 1–3, 2016**
**Mt. Moroto Hotel, Moroto, Uganda**

| Day/Hour | Activity |
|---|---|
| Evening | Arrival of resident participants |
| **Monday, August 1, 2016** | |
| 08:00 | Registration |
| | Session I: The Opening Session |
| 9:00 | Welcome |
| 9:15 | Overview of Workshop |
| 9:45 | Coffee / Tea Break |
| **10:00** | **Session II: Percentage and Level of Deficit, Self-sufficiency and Surplus Status of Districts for Food and Livestock** |
| | Group 1: Sorghum |
| | Group 2: Maize |
| | Group 3: Livestock |
| | Group 4: Edible Oil and Dry Beans |
| | Rapporteur |
| **11:00** | **Session III: Main Markets and Their Key Characteristics** |
| | Group 1: Sorghum |
| | Group 2: Maize |
| | Group 3: Livestock |
| | Group 4: Edible Oil and Dry Beans |
| | Rapporteur |
| 12:00 | Plenary Discussion |
| 12:45 | Group Photo |
| **13:00** | **Lunch** |
| **14:00** | **Session IV: Main Trade Flows of Crops And Livestock Maps** |
| | Group 1: Sorghum |
| | Group 2: Maize |
| | Group 3: Livestock |
| | Group 4: Edible Oil and Dry Beans |
| 16:00 | Plenary Discussion |
| | Rapporteur |
| **Tuesday, August 2, 2016** | |
| **9:00** | **Session V: Cross-Border Trade Dynamics With Kenya** |
| | Group 1: Sorghum |
| | Group 2: Maize |
| | Group 3: Livestock |
| | Group 4: Edible Oil and Dry Beans |
| | **Rapporteur** |
| 10:45 | Coffee / Tea Break |
| **11:00** | **Session VI: Market Actors, Gender Roles, and the Role of Local Indigenous People** |
| | Group 1: Sorghum |
| | Group 2: Maize |
| | Group 3: Livestock |
| | Group 4: Edible Oil and Dry Beans |
| 12:30 | Plenary Discussion |
| | Rapporteur |
| **13:00** | **Lunch** |
| **14:00** | **Session VII: District Food Assistance Context** |
| | Group 1: South Karamoja Districts |
| | Group 2: North Karamoja Districts |
| 15:45 | Coffee / Tea Break |
| 16:00 | Plenary Discussion |

**Famine Early Warning Systems Network (FEWS NET)**
**Uganda-Karamoja Market Assessment Stakholder Workshop August 1–3, 2016**
**Mt. Moroto Hotel, Moroto, Uganda**

| Day/Hour | Activity |
|---|---|
| | Rapporteur |
| **Wednesday, August 3, 2016** | |
| **9:00** | **Session VIII: Financial Services Coverage in Districts** |
| | Group 1: South Karamoja Districts |
| | Group 2: North Karamoja Districts |
| 10:45 | Coffee / Tea Break |
| **11:00** | **Session IX: Information and Communication Coverage In Districts** |
| | Group 1: South Karamoja Districts |
| | Group 2: North Karamoja Districts |
| 12:00 | Plenary Discussion |
| | Rapporteur |
| 12:45 | Closing Remarks |
| **13:00** | **Lunch** |

# Annex 3 Stakeholder Workshop Participants

**List of Workshop Participants**

| SN | Point of Contact | Role | Organization | Location |
|---|---|---|---|---|
| 1 | Dr Kaziro Micheal | DPO | Amudat | Amudat |
| 2 | Dr Okengo Oscar | DVO | Abim | Abim |
| 3 | Dr. Paul Boma | Programme Leader and Animal Production Scientist | Livestock and Fisheries Research and Development Nabuin ZARDI P.O. 132, P.O. 132, | Nakapipirit |
| 4 | Daniel Egaru | DAO, DVO, DPO, NAADS | Kaabong DLG | Kaabong |
| 5 | Francis Opira | Project coordinator NUSAF | World Vision | Kotido |
| 6 | Hamidu Tusiime | SPA-VAM | World Food Programme (WFP) Uganda Country Office | Kampala |
| 7 | Dr Inangolet Francis Olaki | PVO/DVO | Napak DLG | Napak |
| 8 | Mario Tengei | DAO | Nakapiripirit | Nakapiripirit |
| 9 | Francis Okwi | Local official in Moroto, who is also technical/useful | DAO/Moroto | Moroto |
| 10 | Agnes Atyang | Private consultant | Private consultant | Kampala |
| 11 | Esther Ngorok | Grain trader | Private trader | Matany Napak |
| 12 | Benson Kombozi | Community Mobilizer and Board Member | JICAHWA (Jie Community Animal Health Workers Association) | Kotido |
| 13 | Andew Kizito | Consultant | FEWS NET | Kampala |
| 14 | Christine Bwogi | Consultant | FEWS NET | Kampala |
| 15 | Samuel Mugarura | FEWS NET | FEWS NET | Kampala |
| 16 | Philippe Chabot | Consultant | FEWS NET | USA |
| 17 | Alice Okecho | Administration | FEWS NET | Kampala |
| 18 | Moses Owori | FEWS NET | FEWS NET | Kampala |

# Annex 4 EMA Assessment Methodology

## FEWS NET Enhanced Market Analysis Methodology[25]

The Bellmon Amendment requires assurance that a proposed food assistance program will not result in a significant disincentive to or interference with food production or marketing.[26] [27] Historically, the Bellmon Amendment was mostly applicable to in-kind US food aid that was either distributed or monetized as part of Food for Peace (FFP) Title II programs. Since 2016, with the increased flexibility in terms of the modality options available using US government funds via the 2014 Farm Bill and Food Aid Reform process, FFP has extended this application to include other assistance modalities including local, regional, and international commodity procurement, as well as cash transfer and voucher programs.[28]

The objective of FEWS NET Enhanced Markets Analysis (EMA) is to provide sufficient evidence to relevant USAID policy decision makers and program managers on a range of topics to allow a determination of whether the design of a proposed food assistance program (Emergency or Development) is appropriate and feasible given the local context. Local context includes but is not limited to the underlying livelihood and market systems and resulting food security outcomes, government policies and programs, local infrastructure and supporting services, and relevant food assistance experience in focus areas.

Each food assistance modality has the potential to negatively affect production and/or market incentives. An assessment of the likelihood of those negative impacts must therefore be completed to successfully determine the appropriateness of a given proposed modality and transfer distribution mechanisms.

FEWS NET analysts use a livelihoods-based convergence of evidence approach that typically draws on a range of primary and secondary data sources to provide the necessary evidence to inform the decision-making process. The sources, extent/detail, and quality of secondary data available for analysis vary widely from country to country. To this end, FEWS NET EMA builds from existing national-level FEWS NET Market Fundamentals Reports and market databases (production, prices, trade flows, commodity balances), livelihood reporting, agroclimatology information, and food security reporting and analysis with secondary data sources (food security and market reports, poverty mapping reports, income and expenditure studies, among others) and data gathered from stakeholders via a field assessment and stakeholder workshop.

[25] This section is informed by several key references including "Malawi Best Report 2013, Annex 6 "Methodology for Determining Impact of Distributed Food Aid," Barrett and Maxwell 2009, "Food for Peace Modality Decision Tool" 2016, ECHO "The Use of Cash and Vouchers in Humanitarian Crises" 2013.

[26] Bellmon Amendment.

[27] The language in the Bellmon Amendment refers to "food aid" rather than "food assistance." The language used in this report was updated to reflect the new and increased flexibility in terms of USAID FFP funding use, which now allows for a much wider range of procurement and distribution options.

[28] "The Future of Food Assistance: U.S. Food Aid Reform" FY 2015.

**Table 34 Key EMA study questions**

| | Study focus area, typically a subnational geographic area targeted by FFP for future assistance programming | Other areas (national, regional, or international) where commodity procurement might take place for in-kind distributions or transfers |
|---|---|---|
| Appropriate | What are local livelihood systems, including key foods consumed, and food and income sources | |
| | What is the estimated food gap among poor and very poor households? | |
| | What is the size of local markets (quantities traded), who are the actors, and do they behave competitively? | What is the size of the market (quantities traded), who are the actors, and do they behave competitively? |
| | What are seasonal variations in supply, demand, and prices? | |
| | How well are local markets integrated with broader national, regional, and international marketing systems? | What is the size of markets and size of exportable surpluses? |
| | What are key constraints to expanding supply to local markets? | |
| Feasible | What existing food assistance programs are underway and what have been their experiences, including key challenges and successes? | What existing procurement efforts are underway and what have been their experiences, including key challenges and successes? |
| | What is the status of the local enabling environment for the food assistance modalities and transfer distribution mechanisms under consideration (for example, private and NGO storage and transportation capacity)? | What are constraints to the effective and timely procurement and distribution of commodities (for example, physical constraints, policies, storage, and transportation network capacity)? |

*Source: Authors and USAID/FFP (2016).*

## FEWS NET EMA Analytical Approach

### Step 1 CONSULTATION

Carry out consultations with USAID/FFP to understand and elaborate on their preliminary research questions, future program objectives (including geographic targeting and expected outcomes), and initial range of modalities and transfer distribution mechanisms under consideration. This consultative step is repeated in an iterative fashion, as necessary, as USAID's understanding of the study area and context improves and as its priorities are further refined. These consultations take place with key stakeholders within FFP Washington (country backstop officers and the FFP Markets Team) and in the field as well as with other relevant USAID staff (for example, Feed the Future).

### Step 2 REVIEW OF EXISTING RESOURCES

The specific resources reviewed will be informed by the results of the consultation process (Step 1) and the depth and scope of existing FEWS NET resources and expert knowledge. In general though, the secondary resources reviewed fall under a number of essential themes (Table 35). The review of secondary sources likewise usually takes an iterative approach that is flexible to changing information needs (Step 1) and the evolving nature of FEWS NET's understanding of key issues and topics.

**Table 35 Key resources reviewed over the course of EMA studies**

| Theme | Key information | Useful resources |
|---|---|---|
| **Livelihoods** | Food and cash income sources, preferred foods, size and seasonality of food gap. | Livelihood zone descriptions, profiles, and baseline study reports by FEWS NET, FEG, Evidence for Development, Save the Children, and others). |
| **Markets** | Market structure, conduct, and performance (SCP) in study focus areas including: determinants and level of food availability, market actors and their behavior, price levels and trends (seasonal and interannual) in key reference markets, degree of market integration within broader national or regional context. | FEWS NET Market Fundamentals Reports<br>FAO CFSAM reports<br>WFP Market assessments<br>FAO Food Balance Sheets<br>Cash and voucher feasibility studies<br>Other market baseline reports |
| **Food security outcomes** | Food security assessment findings (CFSAM, CSFVA, VAC reports) and national Demographic and Health Surveys (DHS) and income and expenditure study results (ILO, World Bank, among others). | Demographic and Health Surveys (DHS)<br>Income and expenditure study results (ILO, World Bank, among others) |
| **Policy context** | Existing government, UNDP, World Bank, and other development policies and programs. | National Poverty Reduction Strategy Papers<br>UN Strategy papers |
| **Food assistance program experience** | The inventory includes, I/NGO or government agency, location (as specific as possible), modality, expected duration of activity, transfer composition and size. | Current FFP awardee annual reports, Development Experience Clearinghouse (DEC) and partner annual and evaluation reports |
| **Infrastructure** | Existing road networks, port capacity (if relevant), storage and transportation systems and capacity, availability of information technology (IT) | Previous Bellmon reports and analyses, Digital Logistics Capacity Assessments (DLCA), and National Ministry of Transportation Strategy Documents and Annual reports |
| **Enabling environment** | Availability of banking and mobile money services in focus areas. | Cell Mapper |

*Source: Authors.*

### Step 3 FIELD ASSESSMENT DESIGN AND PLANNING

The field assessment design and planning process is informed by Steps 1 and 2, which jointly orient the team to USAID priority research questions and geographic focus areas and reveal information gaps and inconsistencies in existing literature and reports that require clarification and triangulation. Each assessment is different, but nevertheless includes common elements implemented in the context of a rapid assessment that includes in-depth interviews with selected key stakeholders.

**Table 36 Essential elements of FEWS NET EMA field assessment design and planning**

| Assessment planning element | Notes |
|---|---|
| **Determine assessment team structure** | This is informed by expertise required to successfully respond to USAID decision support needs and may include a combination of skills sets, including economists, livelihood specialists, logistics and supply chain analysts, food assistance programming experts, food security experts, and local specialists who are familiar with the study focus area and can help orient the team to local dynamics and facilitate meetings between the assessment team and stakeholders. |
| **Identify markets to visit** | This includes the commodity markets, and the physical markets, ports, and border points. |
| **Identify stakeholders to interview** | This should be as specific as possible, including stakeholders' institution, geographic location, and function. |
| **Identify potential logistical issues and strategies** | This includes but is not limited to security concerns to be discussed with local staff, partners, and hired facilitators/translators. |
| **Design field assessment checklist** | Checklists of key topics and questions to discuss are developed for each stakeholder group: private traders, food processors, transporters, implementing partners, farmers, food assistance beneficiaries, warehouse managers, local government officials, and extension agents. |
| **Draft assessment roadmap** | This includes a detailed itinerary, a daily agenda of planned interviews, and travel itinerary. |
| **Plan stakeholder workshop** | If the assessment includes a consultation workshop, this event (one to three days) must be planned. |

*Source: Authors.*

**Step 4 CONDUCT FIELD ASSESSMENT**

The FEWS NET EMA field assessments involve filling in data gaps, triangulating secondary data, and holding discussions with identified key stakeholders to ensure a convergence of evidence. While in the field, the assessment team may split into separate groups to maximize geographic or thematic coverage. In principle, the division of responsibilities should happen as early as possible during the design and planning phase.

In some instances, inviting a cadre of stakeholders to a central location to discuss key assessment issues is deemed useful by FEWS NET staff. In those cases, the workshop typically follows the field assessment and serves an additional check on the accuracy of field assessment findings, particularly as they relate to market structure, conduct, and performance, and the experience with specific assistance modalities in a given geographic area.

Likewise, instances arise when physical field visits are not possible due to conflict or other constraints. While not ideal, in this case, FEWS NET staff may still be able to speak with key informants via phone calls to obtain relevant information to meet EMA decision support needs. FEWS NET staff may also hold the stakeholder workshop in a safe location rather than physically entering areas deemed unsafe.

**Step 5 REPORT WRITING**

FEWS NET reports assessment findings according to an outline agreed upon with inputs from FFP staff. The first complete draft is typically submitted within six weeks of completing the field assessment, as outlined in the original activity Scope of Work. FFP staff typically reply with comments, questions, and requests for clarification within two to three weeks of receipt of the initial draft. A final 508-compliant report must be submitted according to an agreed-upon timeline.

# Annex 5 Quantities Traded on Visited Markets in Karamoja

**Table 37 Maize quantities traded on visited markets in Karamoja**

| District | Market | Market type* | High-volume period | | | | Low-volume period | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Timing | No. of traders during this period | Quantity Sold (bag/week) | Price level (UGX/kg) | Timing | No. of traders during this period | Quantity Sold (bag/week) | Price level (UGX/kg) |
| Moroto | Moroto Town | T | Oct-Nov | 35 | 50 | 900 | Jan-Feb | 5 to 10 | 20 | 800 |
| | Nakiloro | S | Nov-Dec | 10 | 20 | 1,100 | April-June | 2 | 10 | 1,500 |
| Nakapiripirit | Namalu | P | Oct-Jan | 10 | 8 | 700 | Mar-July | 10 | 2 to 3 | 1,300 |
| | Lolachat | S | Oct-Dec | 20 | 5 | 1,000 | Mar-June | 10 | 1 | 1,500 |
| Napak | Kongole | P | Sep-Oct | 10 to 15 | 5 | 1,200 | Mar-May | 10 to 15 | 2 | 1,500 |
| | Iriri | S | Oct-Dec | 10 | 5 to 10 | 1,000 | Apr-May | 10 | 5 | 1,500 |
| Amudat | Amudat Town | T | Oct-Nov | 10 | 30 | 500 | Apr-June | 5 | 10 | 1,800 |
| | Karita | S | Nov-Dec | 20 | 3 | 600 | Jun-Jul | 20 | 20 | 1,200 |
| Abim | Maklatin | P | Jul-Aug | 40 | 20 | 700 | Aug-Dec | 40 | 20 | 900 |
| Kaabong | Town Market | T | May-Aug | 35 | 15 | 800 | Aug-Dec | 35 | 7 | 1,000 |
| Kotido | Kanawat | P | May-Aug | 50 | 40 | 700 | Aug-Dec | 50 | 22 | 1,000 |
| | Lokiterakebu | S | May-Aug | 4 | 7 | 800 | Aug-Dec | 4 | 4 | 1,100 |

*Market type:
P = primary
S = secondary
T = town

*Source: FEWS NET (2016a).*

**Table 38 Sorghum quantities traded in Karamoja**

| District | Market | Market type* | High-volume period | | | | Low-volume period | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Timing | No. of traders during this period | Quantity Sold (bag/week) | Price level (UGX/kg) | Timing | No. of traders during this period | Quantity Sold (bag/week) | Price level (UGX/kg) |
| **Moroto** | Moroto Town | T | Sep-Dec | 30 | 100 to 120 | 500 | Feb-Jul | 30 | 25 to 50 | 1,300 |
| | Nakiloro | S | Oct-Dec | 10 | 20 | 600 | Apr-May | 10 | 15 | 1,200 |
| **Nakapiripirit** | Namalu | P | Oct-Jan | 10 to 20 | 10 | 700 | Mar-Jul | 10 to 15 | 5 | 1,300 |
| | Lolachat | S | Oct-Dec | 20 | 5 | 600 | Mar-Jun | 10 | 1 | 1,500 |
| **Napak** | Kongole | P | Oct-Nov | 5 | 20 to 30 | 700 | Feb-Jun | 5 | 5 | 1,500 |
| | Iriri | S | Sep-Dec | 10 | 5 | 700 | Apr-May | 10 | 1 to 2 | 1,300 |
| **Amudat** | Amudat Town | T | Oct-Nov | 10 | 10 | 500 | Apr-Jun | 10 | 5 | 1,500 |
| | Karita | S | Nov-Dec | 10 to 20 | 10 | 600 | Jun-Jul | 10 to 20 | 1 to 2 | 1,000 |
| **Abim** | Maklatin | P | Jun-Jul | 40 | 35 | 600 | Sep-Oct | 40 | 20 | 1,000 |
| **Kaabong** | Town Market | T | Jun-Jul | 35 | 20 | 700 | Sep-Oct | 35 | 8 | 1,200 |
| **Kotido** | Kanawat | P | Jun-Jul | 50 | 40 | 800 | Sep-Oct | 50 | 30 | 1,150 |
| | Lokiterakebu | S | Jun-Jul | 4 | 6 | 1,000 | Sep-Oct | 4 | 4 | 1,300 |

*Market type:
P = primary
S = secondary
T = town

*Source: FEWS NET (2016a).*

**Table 39 Dry bean quantities traded on visited markets in Karamoja**

| District | Market | Market type* | High Volume Period | | | | Low Volume Period | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Timing | No. of traders during this period | Quantity Sold (bag/week) | Price level (UGX/kg) | Timing | No. of traders during this period | Quantity Sold (bag/week) | Price level (UGX/kg) |
| **Moroto** | Moroto Town | T | Mar-Jun | 20-25 | 20 | 2,500 | Oct-Dec | 20-25 | 30 | 2,000 |
| | Nakiloro | S | Apr-May | 10 | 10 | 2,000 | Oct-Dec | 10 | 10 | 1,500 |
| **Nakapiripirit** | Namalu | P | Mar-Jul | 10 to 20 | 2 | 2,500-3,000 | Oct-Dec | 10 | 1 to 2 | 2,000 |
| | Lolachat | S | Mar-Jun | 15 | 0.5 | 3,500 | Oct-Dec | 15 | 2 | 3,500 |
| **Napak** | Kongole | P | Mar-Jul | 20 | 2 | 3,000 | Sept-Dec | 10 to 20 | 1 | 1,500 |
| | Iriri | S | Feb-Jul | 5 | 5 | 2,500 | Sept-Dec | 5 | 1 to 2 | 2,000 |
| **Amudat** | Amudat Town | T | Apr-Jun | 10 | 2 | 3,000 | Oct-Dec | 10 | 2 | 2,000 |
| | Karita | S | Jul-Aug | 10 | 5 | 2,500 | Aug-Dec | 10 | 2 | 1,500 |
| **Abim** | Maklatin | P | May-Aug | 5 | 3 | 2,500 | Aug-Dec | 5 | 2 | 2,000 |
| **Kaabong** | Town Market | T | May-Aug | 4 | 2 | 3,000 | Aug-Dec | 4 | 1 | 2,500 |
| **Kotido** | Kanawat | P | May-Aug | 5 | 3 | 3,000 | Aug-Dec | 5 | 2 | 2,600 |

*Market type:
P = primary
S = secondary
T = town

*Source: FEWS NET (2016a)*

**Table 40 Edible oil quantities traded on visited markets in Karamoja**

| District | Market | High-volume period | | | | Low-volume period | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Timing | No. of traders during this period | Quantity Sold (liter/week) | Price level (UGX/liter) | Timing | No. of traders during this period | Quantity Sold (liter/week) | Price level (UGX/liter) |
| **Moroto** | Moroto Town | Aug- Dec | 20 to 30 | 10 to 40 | 5,000 | Feb-Jun | 20-30 | 10 to 20 | 5,000 |
| **Moroto** | Nakiloro | Oct-Dec | 10 | 50 | 5,000 | Apr-May | 10 | 50 | 5,000 |
| **Nakapiripirit** | Namalu | Constant | 3 | 20 | 5,000 | Constant | 3 | 20 | 5,000 |
| **Napak** | Kongole | Sep-Dec | 10 | 10 to 30 | 5000 | Mar-Jun | 10 | 10 to 30 | 5000 |
| **Amudat** | Karita | Little changes | 10 to 20 | 5 to 20 | 6,000 | Little changes | 10 to 20 | 5 to 20 | 6,000 |
| **Kotido** | Kanawat | Constant | | | 4,000 | Sep–Dec | Constant | | 4,000 |

*Source: FEWS NET (2016a).*

**Table 41 Cattle quantities traded on visited markets in Karamoja**

| District | Market | Market type* | High-volume period | | | | Low-volume period | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Timing | No. of traders during this period | Quantity Sold (animals/ week) | Price level (Million UGX per animal) | Timing | No. of traders during this period | Quantity Sold (animals / week) | Price level (Million UGX per animal) |
| **Moroto** | Moroto Town | T | Aug-Dec | 350 | 500 | 0.3-1.3 | Feb-June | 250 | 340 | 0.4-1.0 |
| | Tapach | S | Aug-Dec | 20-30 | 200 | 0.6-1.0 | Apr-Jun | 15-Oct | 20 | 0.5-0.6 |
| **Napak** | Kongole | P | Jul-Nov | 10 to 15 | 30-50 | 1.0-1.2 | Feb-Jun | o/a 5 | 8 to 12 | 0.8-1.0 |
| **Amudat** | Amudat Town | P | Jul-Dec | 20 | 200-300 | about 1.0 | Mar-Jun | 20 | 20-50 | about 0.6 |
| | Cheptapoyo | S | Jul-Dec | 5 | 15 | 0.8-1.0 | Mar-Apr | 5 | 5 | 0.6-0.8 |
| | Karita | S | Aug-Dec | o/a 100 | 500 | 0.8-1.0 | Mar-Apr | o/a 100 | 200 | 0.5-0.6 |
| **Kaabong** | Komuria | P | Jun- July | 300 | 263 | 0.4-1.3 | Sep–Dec | 150 | 130 | 0.6-1.5 |
| **Kotido** | Kanawat | P | Jun- July | 300 | 280 | 0.2-1.3 | Sep–Dec | 150 | 240 | 0.2-0.8 |
| | Lokiterakebu | S | Jun- July | 10 | 28 | 0.4-0.6 | Sep–Dec | 5 | 15 | 0.5-0.8 |

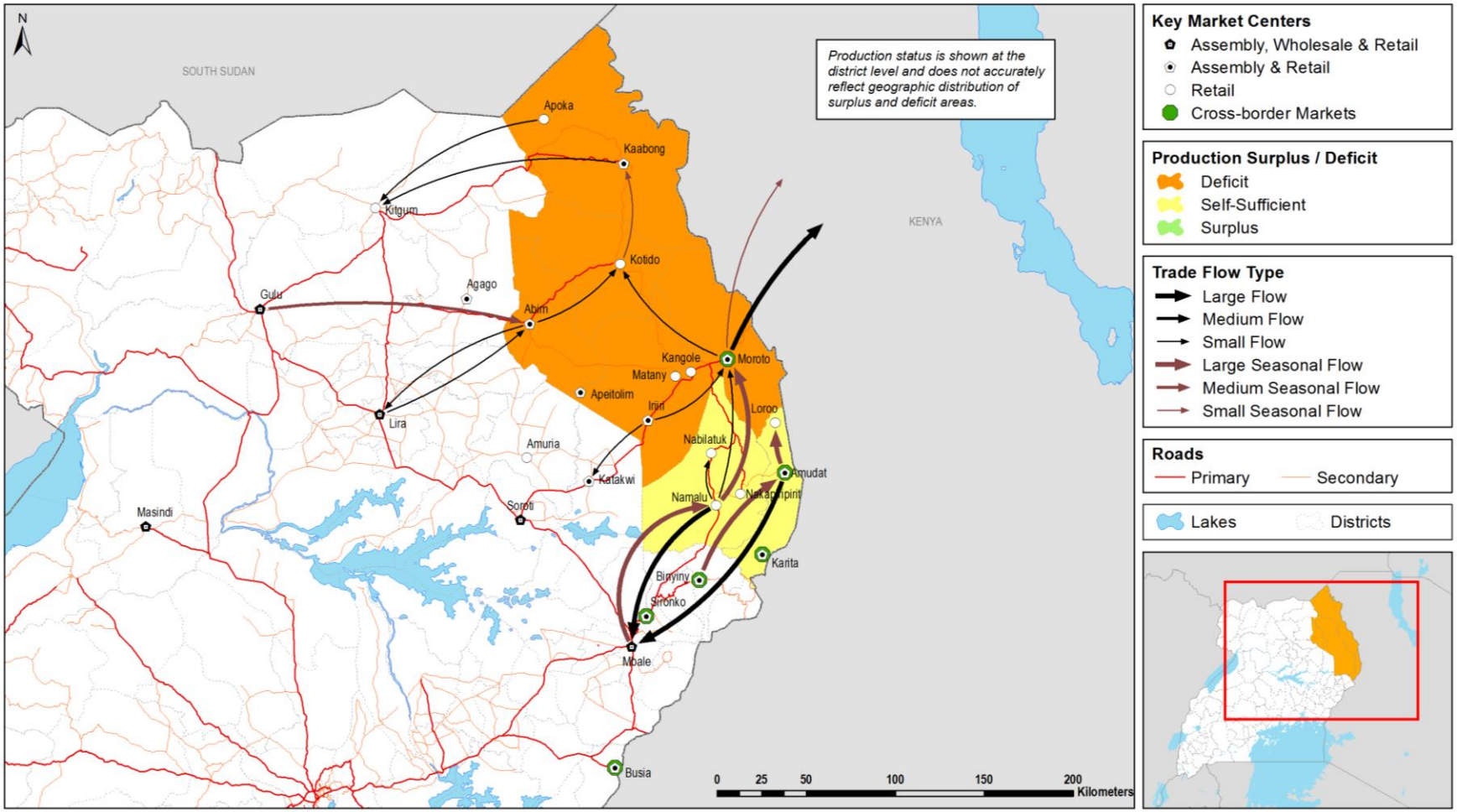
*Market type:
P = primary
S = secondary
T = town

*Source: FEWS NET (2016a).*

## Annex 6 Production and Trade Flow Maps

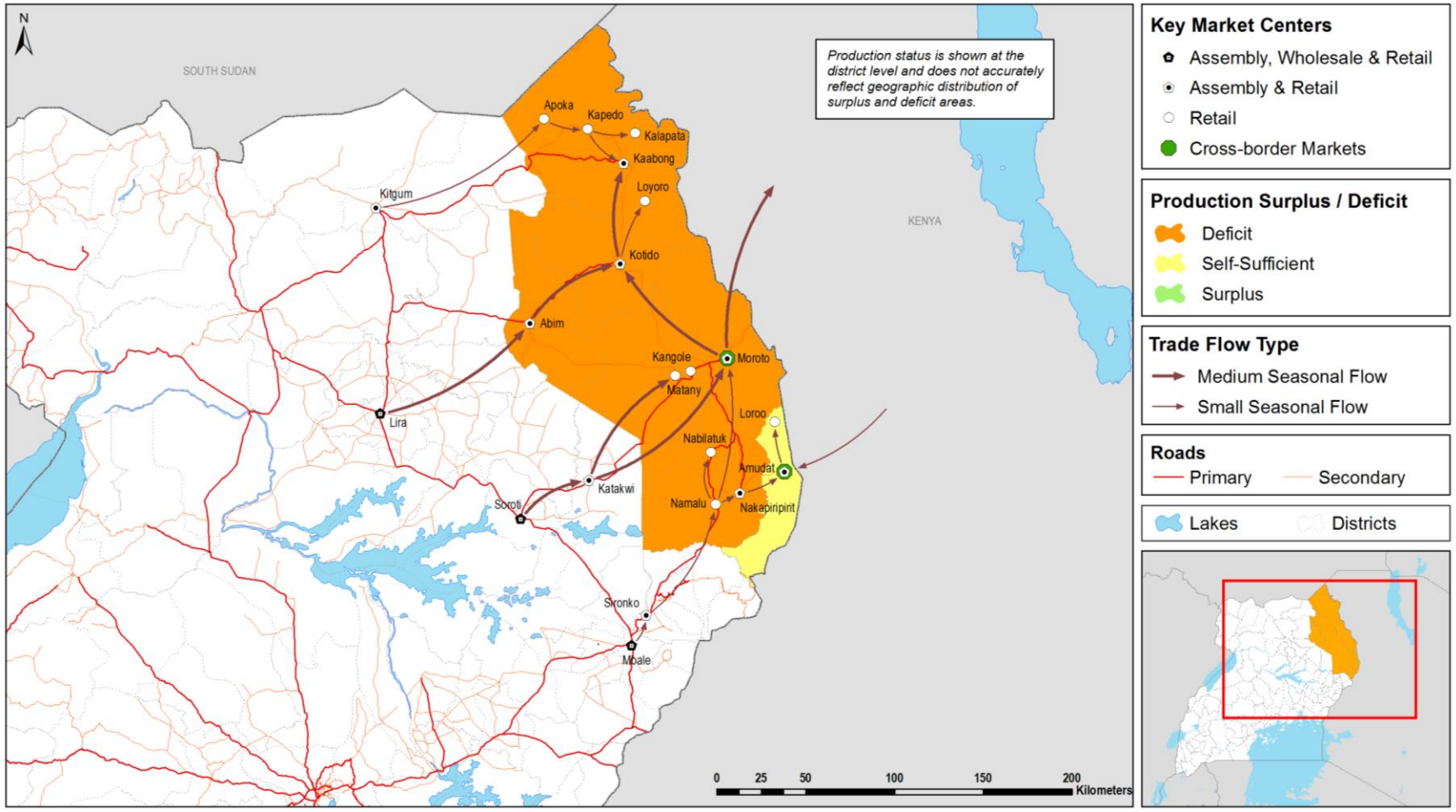
FEWS NET Production and Trade Flow Maps provide a summary of the geography of marketing systems that are relevant to food security outcomes during an average marketing year or season. The maps are produced by FEWS NET in collaboration with stakeholders from local government ministries, market information systems, NGOs, and private sector partners, using a mix of qualitative and quantitative data.

**Figure 62 Karamoja, Uganda maize production and trade flow map**



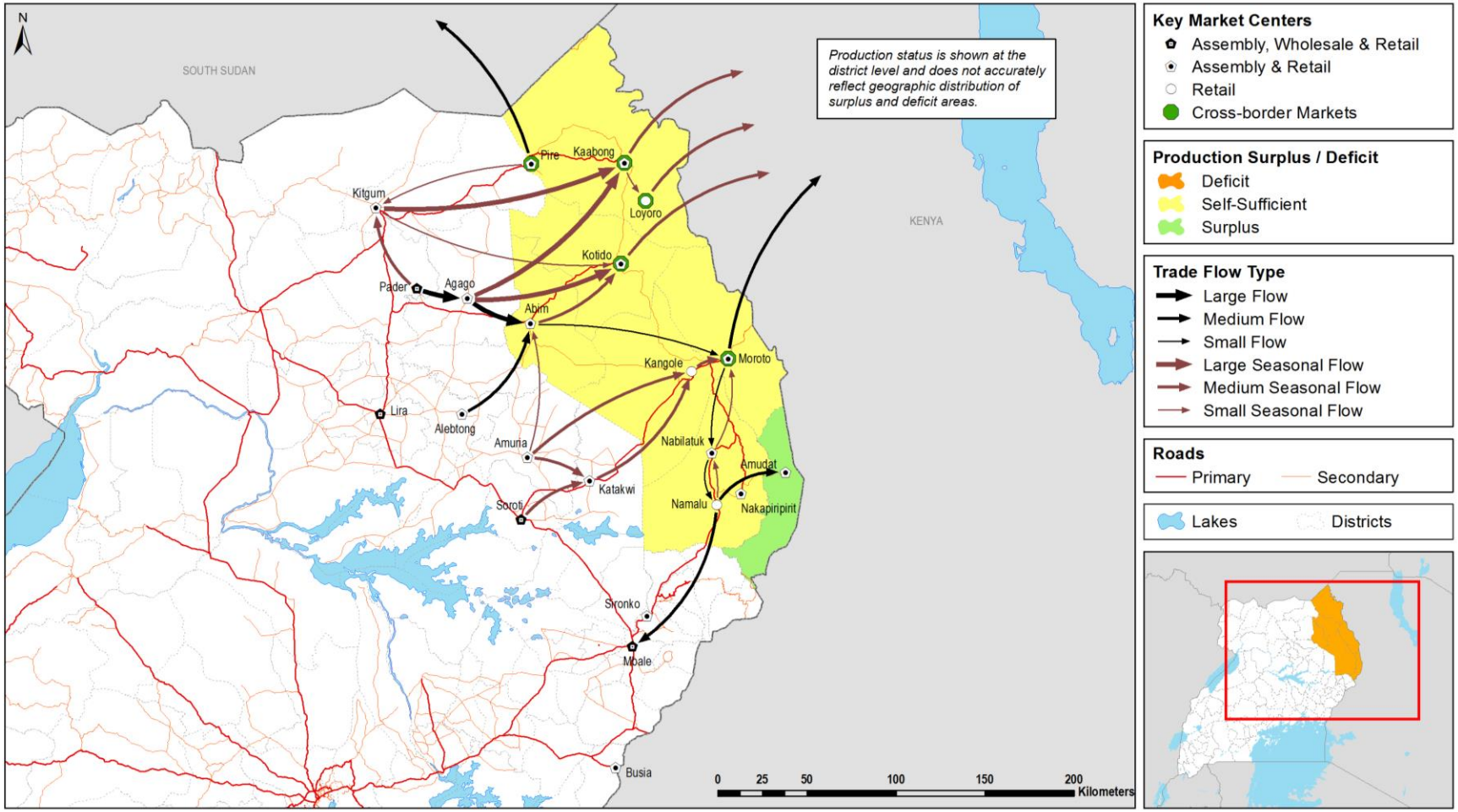

*Source: FEWS NET (2016b).*

**Figure 63 Karamoja, Uganda dry beans production and trade flow map**



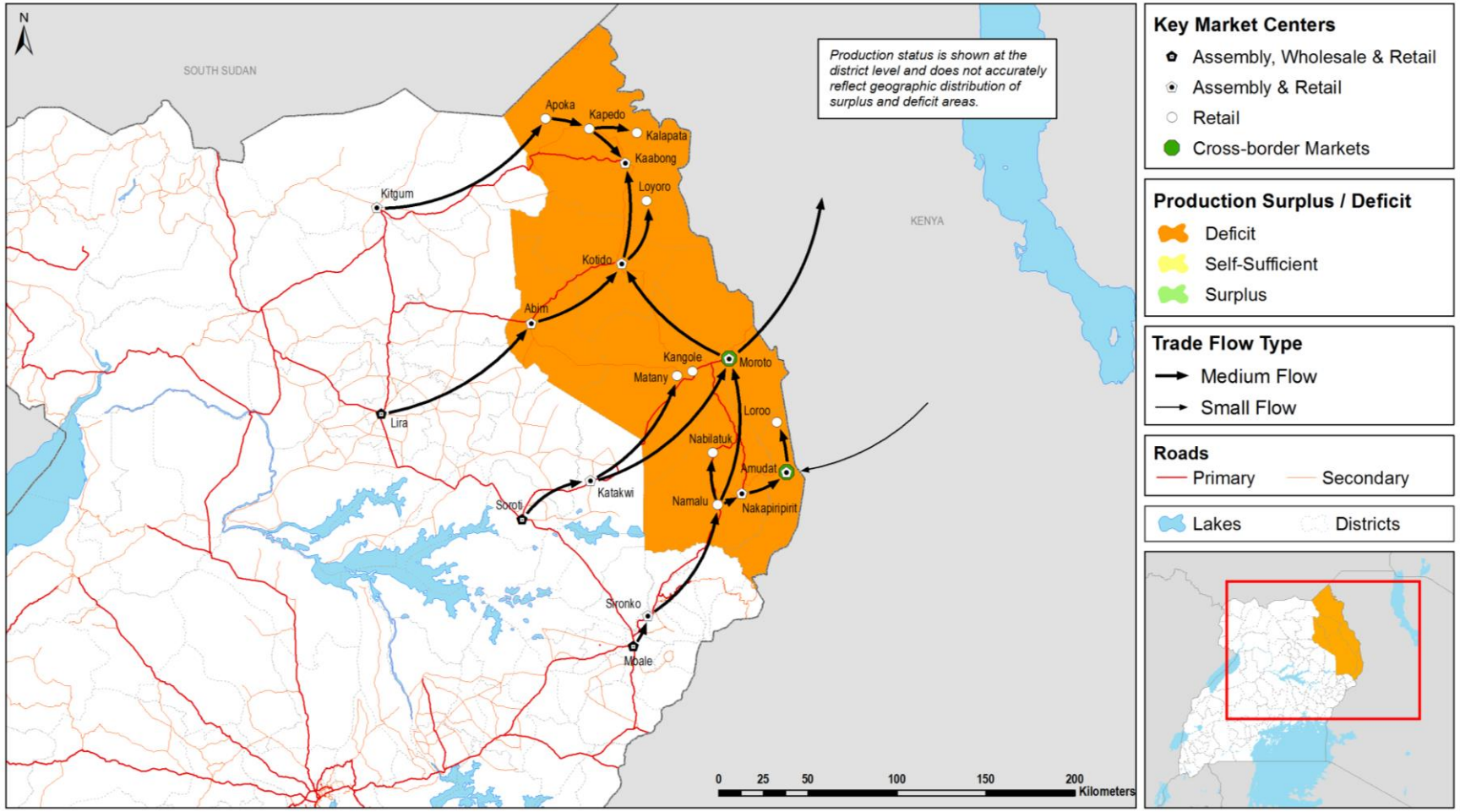

*Source: FEWS NET (2016b).*

**Figure 64 Karamoja, Uganda sorghum production and trade flow map**



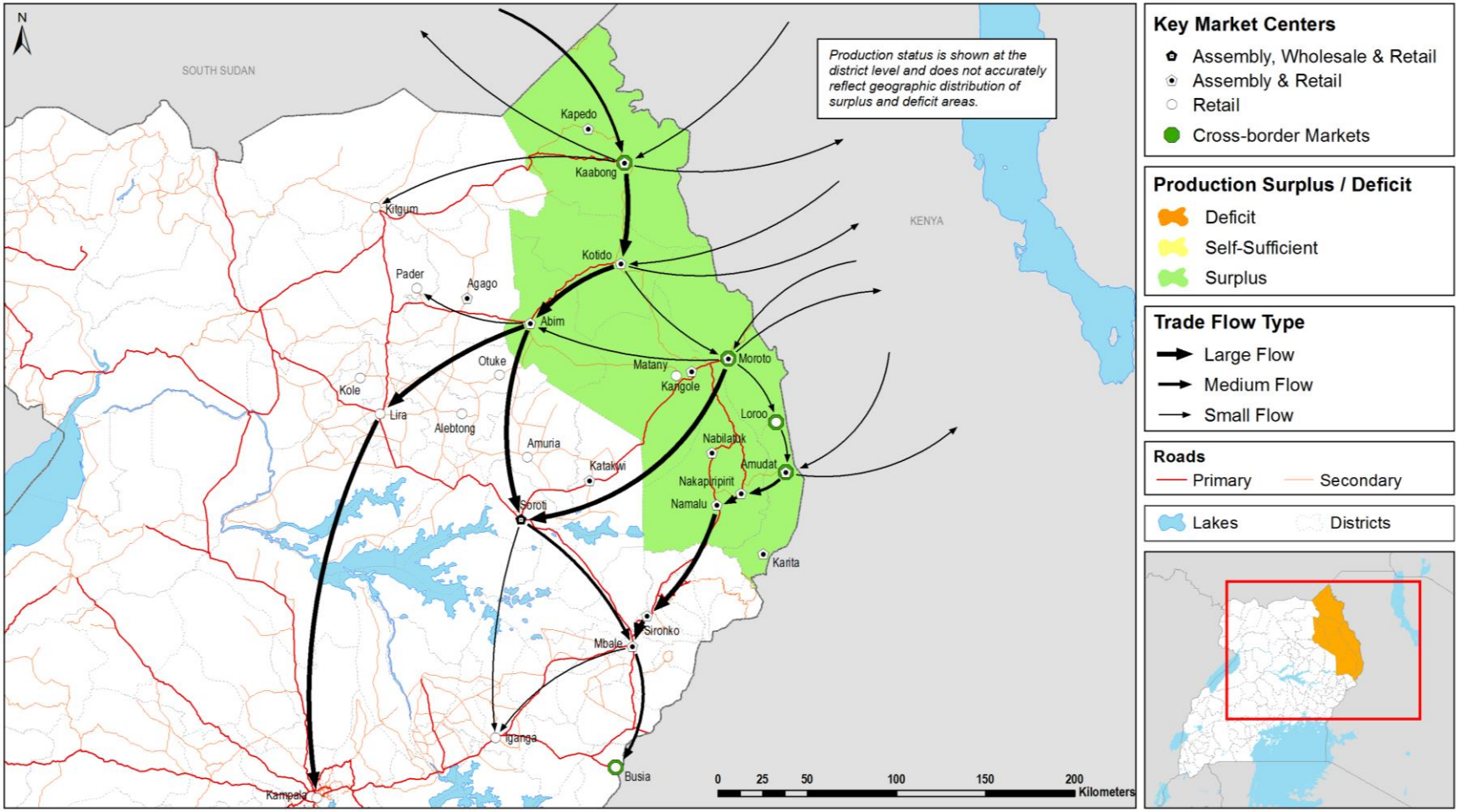

*Source: FEWS NET (2016b).*

**Figure 65 Karamoja, Uganda edible oil production and trade flow map**




*Source: FEWS NET (2016b).*

**Figure 66 Karamoja, Uganda livestock production and trade flow map**




*Source: FEWS NET (2016b).*

# Annex 7 Price Correlation Tables

**Table 42 Price correlation for maize retail prices in selected markets in Karamoja**

| | Kaabong | Kotido | Moroto | Nakapiripirit | Soroti | Lira |
|---|---|---|---|---|---|---|
| **Kaabong** | 1 | .267 | .502** | .428** | .619** | .426** |
| **Kotido** | | 1 | .467* | .261 | .239 | .130 |
| **Moroto** | | | 1 | .536** | .628** | .590** |
| **Nakapiripirit** | | | | 1 | .550** | .480** |
| **Soroti** | | | | | 1 | .870** |
| **Lira** | | | | | | 1 |

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

*Source: Authors' calculations based on data from MIS/Farmgain Africa Ltd & Uganda Bureau of Statistics (2016) and WFP (2016).*

**Table 43 Price correlation for sorghum retail prices in selected markets in Karamoja**

| | Kotido | Moroto | Nakapiripirit | Soroti | Lira |
|---|---|---|---|---|---|
| **Kotido** | 1 | .336 | .227 | .002 | .219 |
| **Moroto** | | 1 | .709** | .072 | .258 |
| **Nakapiripirit** | | | 1 | .109 | .312 |
| **Soroti** | | | | 1 | .721** |
| **Lira** | | | | | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

*Source: Authors' calculations based on data from MIS/Farmgain Africa Ltd & Uganda Bureau of Statistics (2016) and WFP (2016).*

**Table 44 Price correlation for dry beans retail prices in selected markets in Karamoja**

| | Kaabong | Kotido | Moroto | Nakapiripirit | Soroti | Lira |
|---|---|---|---|---|---|---|
| **Kaabong** | 1 | .550** | .496** | .241 | .539** | .467** |
| **Kotido** | | 1 | .582** | .218 | .549** | .637** |
| **Moroto** | | | 1 | .379* | .670** | .552** |
| **Nakapiripirit** | | | | 1 | .270 | .180 |
| **Soroti** | | | | | 1 | .863** |
| **Lira** | | | | | | 1 |

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

*Source: Authors' calculations based on data from MIS/Farmgain Africa Ltd & Uganda Bureau of Statistics (2016) and WFP (2016).*

**Table 45 Price correlation for cattle prices in selected markets in Karamoja**

| | Kaabong | Kotido | Moroto | Nakapiripirit |
|---|---|---|---|---|
| **Kaabong** | 1 | .283 | .648** | .089 |
| **Kotido** | | 1 | .036 | .256 |
| **Moroto** | | | 1 | -.122 |
| **Nakapiripirit** | | | | 1 |

***. Correlation is significant at the 0.01 level (2-tailed).*

*Source: Authors' calculations based on data from WFP (2016).*

# Annex 8 Trade of key commodities between Uganda and its neighbors

**Table 46 Uganda exports for the key staples, 2010 - 2014**

| Commodity | Formal (MT) | | | | Informal (MT) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 2014 |
| **Maize** | | | | | | | | | |
| **Total** | 126,621 | 55,286 | 138,567 | 85,044 | 142,896 | 53,741 | 150,919 | 136,458 | 112,046 |
| Kenya | 71,662 | 46,034 | 59,373 | 36,667 | 83,021 | 38,312 | 57,107 | 49,659 | 87,524 |
| Sudan | 20,589 | 4,296 | 63,612 | 18,407 | 10,129 | 3,043 | 8,360 | 11,021 | 5,855 |
| Burundi | 16,475 | 2,303 | 262 | 3,145 | 0 | 9 | 0 | 1 | 6 |
| Rwanda | 2,274 | 23 | 6,007 | 9,840 | 10,916 | 9,784 | 14,820 | 19,156 | 16,292 |
| Tanzania | 9,191 | 70 | 8,477 | 5,632 | 38,331 | 2,553 | 70,502 | 56,524 | 2,100 |
| D.R.Congo | 1,909 | 436 | 37 | 4,679 | 498 | 40 | 129 | 96 | 269 |
| South Sudan | NA | NA | 790 | 6,673 | NA | NA | NA | NA | NA |
| **Sorghum** | | | | | | | | | |
| **Total** | 5,416 | 1,090 | 13,687 | 54,813 | 11,082 | 6,273 | 14,357 | 8,761 | 5,502 |
| Kenya | 399 | 957 | 50 | 18 | 2,914 | 3,608 | 1,586 | 1,994 | 2,110 |
| Sudan | 4,922 | 133 | 11,945 | 111 | 3,593 | 773 | 1,898 | 1,432 | 724 |
| Rwanda | 15 | NA | NA | 40 | 3,044 | 1,860 | 10,780 | 5,322 | 2,586 |
| Tanzania | 80 | NA | NA | NA | 1,448 | 12 | 82 | 8 | 14 |
| D.R.Congo | NA | NA | NA | NA | 83 | 19 | 11 | 5 | 68 |
| South Sudan | NA | NA | 1,691 | 54,644 | NA | NA | NA | NA | NA |
| **Beans** | | | | | | | | | |
| **Total** | 16,683 | 28,134 | 24,560 | 24,606 | 36,021 | 33,265 | 36,301 | 29,149 | 31,056 |
| Kenya | 10,615 | 25,199 | 21,091 | 16,058 | 19,839 | 20,119 | 13,891 | 7,020 | 8,867 |
| Sudan | 1,962 | 2,370 | 2,258 | 2,670 | 5,040 | 2,610 | 4,619 | 5,877 | 4,352 |
| Burundi | 489 | 107 | NA | 111 | 1 | 1 | 1 | 1 | 0 |
| Rwanda | NA | NA | NA | 278 | 718 | 1,165 | 3,252 | 2,891 | 1,873 |
| Tanzania | 2,357 | 66 | NA | NA | 9,235 | 3,841 | 2,702 | 4,623 | 7,263 |
| D.R.Congo | 1,178 | 291 | 1,013 | 2,111 | 1,189 | 5,530 | 11,837 | 8,738 | 8,699 |
| South Sudan | NA | NA | 55 | 1,120 | NA | NA | NA | NA | NA |

Note: NA = data not available

*Source: UBOS (2015).*

**Table 47 Uganda imports for the key staples, 2010 – 2014**

| Commodity | Formal (MT) | | | | Informal (MT) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 2014 |
| **Maize** | | | | | | | | | |
| **Total** | 1,498 | 3,626 | 2,012 | 534 | 1,994 | 4,575 | 1,031 | 718 | 615 |
| Kenya | 235 | 418 | 594 | 411 | 46 | 2,533 | 70 | 77 | 139 |
| Sudan | NA | NA | NA | NA | 45 | 5 | 6 | 1 | 4 |
| Burundi | NA | 414 | NA | NA | NA | NA | NA | NA | NA |
| Rwanda | NA | 95 | NA | NA | 33 | 90 | 198 | 39 | 57 |
| Tanzania | NA | 245 | 1,351 | NA | 1,314 | 105 | 203 | 50 | 54 |
| D.R.Congo | NA | NA | NA | NA | 556 | 1,842 | 554 | 551 | 361 |
| South Sudan | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Sorghum** | | | | | | | | | |
| **Total** | 3,368 | 1,597 | 1,813 | 2,272 | 957 | 758 | 2,016 | 791 | 2,274 |
| Kenya | 20 | 28 | 932 | 1,834 | 274 | 74 | 695 | 2 | 6 |
| Sudan | NA | NA | NA | NA | 32 | 2 | 5 | 0 | 6 |
| Rwanda | NA | NA | NA | NA | 33 | 81 | 92 | 146 | 89 |
| Tanzania | 2,682 | 993 | 880 | 438 | 5 | 66 | 19 | 38 | 1,555 |
| D.R.Congo | NA | NA | NA | NA | 614 | 536 | 1,205 | 604 | 619 |
| South Sudan | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Beans** | | | | | | | | | |
| **Total** | 2,025 | 1,505 | 1,242 | 2,256 | 7,664 | 6,075 | 6,154 | 2,992 | 3,504 |
| Kenya | 69 | 38 | 19 | 21 | 80 | 246 | 28 | 18 | 86 |
| Sudan | NA | NA | NA | NA | 58 | 9 | 16 | 37 | 39 |
| Burundi | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Rwanda | 250 | 829 | 37 | 110 | 757 | 1,517 | 2,767 | 1,349 | 2,109 |
| Tanzania | 1,447 | 405 | 958 | 1,839 | 439 | 285 | 995 | 483 | 209 |
| D.R.Congo | NA | NA | NA | NA | 6,331 | 4,018 | 2,348 | 1,104 | 1,060 |
| South Sudan | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Note: NA = data not available

*Source: UBOS (2015).*

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