



Exploring livelihoods of the urban poor in Kampala, Uganda

An institutional, community, and
household contextual analysis

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Abstract

The urban poor in Kampala, Uganda represent a large portion of the population of the capital city, yet little is documented about their livelihoods. The main objective of this study was to gain a general understanding of the livelihoods present amongst the population of the urban poor and the context in which they exist, so as to form a foundation for future programming.

Three groups of urban poor in the city were identified through qualitative interviews: street children, squatters, and slum dwellers. Slum dwellers became the principal interest upon considering the context, aims and limits of the study. Qualitative interviews with key actors at community and household levels, questionnaires at a household level, and several other supplementary investigations formed the remainder of the study. Ultimately, six different livelihood strategies were identified and described: Non-poor Casual Labourers, Poor Casual Labourers, Non-qualified Salary, Qualified Salary, Vocation or Services, and Petty Traders and Street Vendors. Each of the livelihood strategies identified held vulnerabilities, though the severity of these varies between both the type of vulnerability and group.

Vulnerabilities of the entire slum population of Kampala include land tenure issues, malnutrition monitoring, and enumeration information. Those at a community and area level include the risk of persistent flooding, unhygienic and unsanitary practices, and full realisation of benefits of social networks. Finally, major household vulnerabilities included lack of urban agriculture, and lack of credit.



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List of Abbreviations

ACF	Action Against Hunger/Action Contre la Faim	MUAC	Mid-upper Arm Circumference
CBN	Cost of Basic Needs	NGO	Non-governmental Organisation
CBO	Community Based Organisation	NHS	National Household Survey
CHO	Carbohydrate	NSDF	National Slum Dwellers Federation of Uganda
CPI	Consumer Price Index	NUT	Nutrition
DHS	Demographic and Health Survey	OTP	Outpatient Treatment Programme
FANTA	Food and Nutrition Technical Assistance	OVC	Orphans and Other Vulnerable Children
FEI	Food-energy Intake	PEAP	Poverty Eradication Action Plan
FSL	Food Security and Livelihoods	SDI	Slum Dwellers International
HEA	Household Economic Approach	SLF	Sustainable Livelihoods Framework
HfA	Height for Age	TFP	Therapeutic Feeding Programme
HFIAS	Household Food Insecurity Access Scale	UN	United Nations
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome	UNDP	United Nations Development Programme
IDDS	Individual Dietary Diversity Score	UN-HABITAT	United Nations Human Settlements Programme
IDP	Internally Displaced Person	UNICEF	United Nations Children's Fund
IL	Income Level Poverty	WASH	Water, Sanitation and Hygiene
IP	Income Position Poverty	WfA	Weight for Age
KCCA	Kampala Capital City Authority	WfH	Weight for Height
LC	Local Councilor	WFP	World Food Programme
LRA	Lord's Resistance Army		

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Introduction

Action Against Hunger-USA is part of the Action Contre la Faim (ACF) international network, whose mandate addresses the treatment and prevention of malnutrition of the world's most vulnerable populations. With a multi-sectoral approach, the ACF network lays claim to over five million beneficiaries annually in the more than 40 countries in which they are active.

ACF-USA has been operating in Uganda since 1981. Headquartered in the political, economic and commercial capital of Kampala, their projects range nationally between the organisation's three main areas of intervention: Food Security and Livelihoods (FSL); Water, Sanitation and Hygiene (WASH); and Nutrition and Health (NUT).

Kampala's urban population is nearing 1.7 million people and is growing at rate higher than the natural population growth (births-deaths), suggesting migration into the city as well as expansion of the urbanised areas surrounding the delimited district. Alongside ACF's current programming structure which is focused in the north and north-east of the country (beneficiaries are typically ex-IDPs and poor pastoralists), ACF-USA Uganda is presently scaling-up their capacities and programming in urban areas, specifically in Kampala.

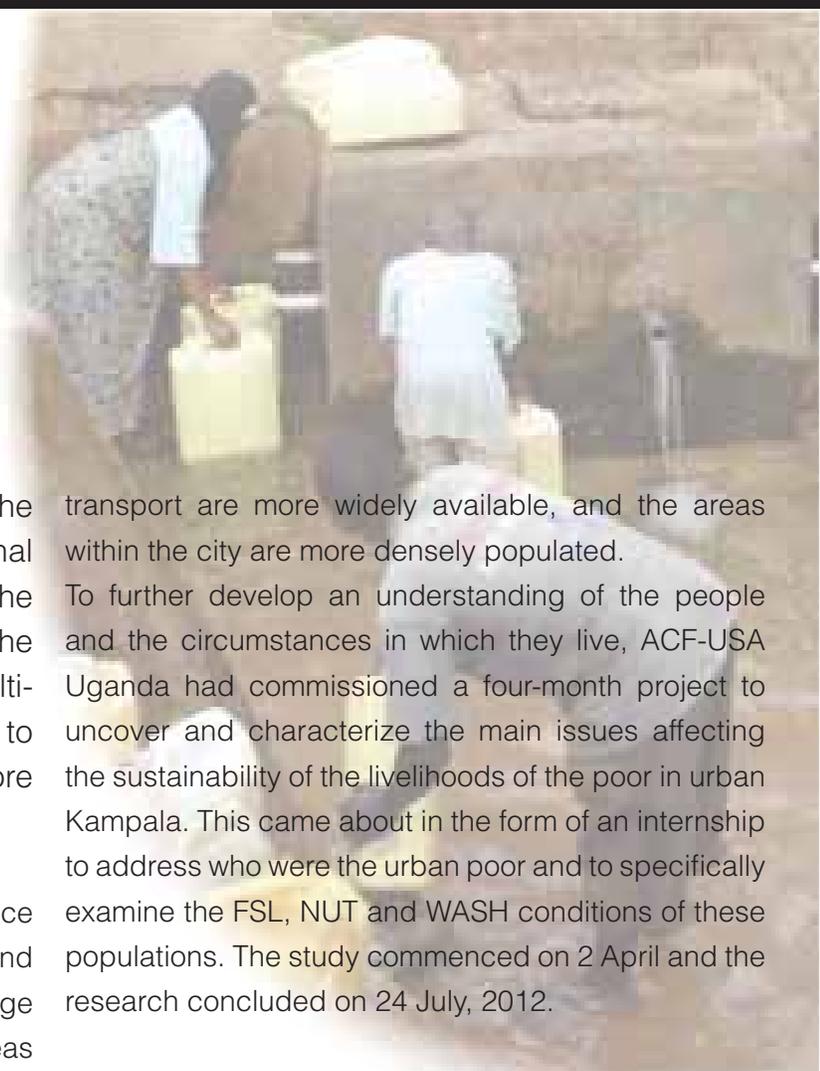
Urban livelihoods are fundamentally different from their rural counterparts as the types of income activities vary widely, goods and services are principally exchanged for cash, basic services such as infrastructure and

transport are more widely available, and the areas within the city are more densely populated.

To further develop an understanding of the people and the circumstances in which they live, ACF-USA Uganda had commissioned a four-month project to uncover and characterize the main issues affecting the sustainability of the livelihoods of the poor in urban Kampala. This came about in the form of an internship to address who were the urban poor and to specifically examine the FSL, NUT and WASH conditions of these populations. The study commenced on 2 April and the research concluded on 24 July, 2012.

Recent monitoring conducted prior to the study at Mwanamugimu Child Nutrition Unit at Mulago National Referral Hospital in Kampala demonstrated a 4-fold increase in admissions to therapeutic feeding programmes in the six months between January and June 2011. With no programmes currently operating in the Kampala area, ACF chose to implement this study and form a general indication of who and where are the urban poor within the city of Kampala, which are the issues that they face, how can their livelihoods be characterized, and ultimately what interventions could be proposed to help improve their situation.

This study was conducted at institutional, community and household levels with the aim of uncovering the key forces that act upon the targeted populations. This report will describe and present justification of the methods chosen to accomplish this goal, the resultant findings of the study, followed by a synthesis of final ideas and suggestion of areas for further investigation.



Context

Uganda is a landlocked country in the eastern region of Africa which shares land borders with Rwanda, the Democratic Republic of Congo, South Sudan and Kenya and maritime borders along Lake Victoria with Tanzania. The country is divided into four administrative regions (Northern, Eastern, Central and Western) and further divided into 111 districts. Kampala District (coterminous with Kampala city), the commercial and political capital of the country and focus of this study, is located in the Central Division on the northern coastline of Lake Victoria (0°18'N, 32°34'E) and covers approximately 176km² of land.



The population was predicted to be at just below 36 million inhabitants as of July 2012 (The World Bank 2011). Of this population, 13% live in urban areas and is growing at an estimated rate of 4.8%, with

the capital city of Kampala holding 1.659 million in 2011 (UBOS 2010a; The World Bank 2011). The country designates both English and Swahili as official languages, though up to 41 other languages have current speakers (Lewis 2009).

Uganda acquired independence from The United Kingdom in 1962 and since then has had a tumultuous past, including the brutal dictatorship of Idi Amin in the 1970s. More recently, Joseph Kony had led the Lord's Resistance Army (LRA) in a revolt against the Ugandan state that had lasted for more than 20 years. Peace talks in 2006 saw an end to the insurgency and with that, the beginning of the return of almost 1.8 million internally displaced persons throughout the north of the country.

2.1 The Study Area

Kampala district limits were originally demarcated by the seven main hills in the city, however they have been continuously expanded upon (most recently in 2001) to account for urban sprawl and population growth (UN-HABITAT 2007).

The city-district is further divided into five administrative divisions: Kampala Central, Kawempe, Makindye, and Rubaga with the Central division comprising the



TABLE 1: CLIMATE OF KAMPALA

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record High (°C)	33	36	33	33	29	29	29	29	31	32	32	32	36
Average High (°C)	28	28	27	26	25	25	25	25	27	27	27	27	26.4
Average Low (°C)	18	18	18	18	17	17	17	16	17	17	17	17	17.3
Record Low (°C)	12	14	13	14	15	12	12	12	13	13	14	12	12
Rainfall (mm)	46	61	130	175	147	74	46	86	91	97	122	99	1174

central business district. The district has an area of approximately 189 km², of which 13km² is Lake Victoria and other waterways. Population density is a defining characteristic of any urban area, to which Kampala claims 9629.4 persons per km² (UBOS 2010b).

The namesake hills (Kampala means hill of the Impala in the native Buganda language) make up the predominant geographical feature of the city, the largest of which (Muyenga) reaches 1306m at its summit. The lowest point of the city resides on the shores of Lake Victoria at Murchison Bay, standing at 1137m above sea level. The low lying areas along the Bay and continuing toward the centre of town via the Nakirubo channel are either beach area or swampy marshland. The hills and surrounding areas are typically fertile soils that are heavily vegetated where the built environs does not inhibit wild growth.

Kampala lays near the Equator claiming a tropical climate with two rainy seasons per year: the first lasting from February to April, and the second from August to November. Because of the hilly landscape and year-long rainfall, the low-lying areas are prone to flooding.

2.2 Progressing Economic and Social Development

Despite a difficult past, Uganda has made inroads regarding economic and social development. For a number of years, the food security of the country has had a central place in the official plans of the government as it adopted the United Nations (UN) principles of the Humanitarian Right to Food in 1987.

This was accomplished through the ratification of the UN Committee on Economic, Social and Cultural Rights in 1987, as well as mentioning food security as a National Objective and Directive Principle of State Policy in the Constitution of 1995 (Government of Uganda 1995):

The State shall –

- (a) *Take appropriate steps to encourage people to grow and store adequate food;*
- (b) *Establish national food reserves*
- (c) *Encourage and promote proper nutrition through mass education and other appropriate means in order to build a healthy State.*

With these commitments to food security for the citizens of Uganda, recent years have seen the country labelled on aggregate as food secure, along with a marked decrease of 16% in the number of impoverished people between 2002/3 (39%) and 2009/10 (23%) (WFP 2012).

Generally, Uganda has seen a rapid rate of economic development and an increase in the standard of living for its citizens in recent years. Its gross domestic product has consistently had a growth rate above 5.9% since 2002 and the Human Development Index has increased 52% since 1985 which they have achieved despite the rebel insurgency occurring for the majority of the period. This being said, with a current rank of 161, though they are ahead of their neighbours Rwanda, Sudan and Democratic Republic of the Congo, Uganda is placed in the category of 'Low Human Development' (UNDP 2011; WFP 2012).

2.3 Population Growth and the Rural-Urban Link

The last decade has seen the global population dynamically shift so that for the first time in history, the majority of people are living in urban areas rather than in rural environments, since passing the threshold in 2008 (although the specific period is disputed) (United Nations 2011). Since all regions of the world are expected to reach this threshold by the year 2030, the need for heightened attention and more comprehensive urban planning in these cities is apparent (UN-HABITAT 2008).

Sub-Saharan Africa claims the highest rate of urban population growth in the world, and Uganda is not an exception to this trend, having increased the urban population from 137,000 in 1960 to the 2012 estimate of 1.6 million (The World Bank 2011; Cohen 2004; United Nations 2011). In 2009, a previous study by ACF had estimated Kampala with a population of 1.4 million; yielding a current day an increase of 12.5% in 3 years (UMoH et al. 2009; The World Bank 2011). The country has also experienced urban population growth rates of above 4.5% since 2006 which has been well above both the natural population growth rate (births-deaths per 1000/10) and the rural population growth rate for the last 20 years (The World Bank 2011). The rural population growth rate has been below the natural growth rate since 1993, suggesting that migration from these areas plays a crucial role.

Rural to urban migration is a global trend that touts economic opportunities and social upward mobility even for people with limited assets, education and/or skill-sets. However in addition to usual migration, for the past 26 years multiple conflicts around Uganda had forced approximately 1.8 million internally displaced persons to seek refuge either in camps or through migration. Compounding this population growth, a long period of drought in the poor pastoralist

Karamoja region in the north-east of the country had forced persons to seek better farmland or other sources of income (ACF 2011; Stites & Akabwai 2012; Hovil et al. 2001; Baxter & Burrall 2011; Krause-Vilmar 2011).

Moving to urban centres can be viewed as a coping mechanism for the rural poor. It is highly dependent on the livelihood profile as some may seek to move permanently in search of better services, opportunities for work, or better housing or security; while others may move seasonally to find work during the agriculturally unproductive periods of the year (ACF 2012; Stites & Akabwai 2012; Lucas 2006). However major urban centres are not the usual primary destination in these migrations. Rural residents, when migrating, will typically first find their ways to a large regional town or city, only after this step might they eventually move on to a larger area, in this case, Kampala (Stites & Akabwai 2012).

Despite the hopes that a migrant might hold of their new environment, increased urbanization brings with it a host of issues in developing countries. Previous studies have noted that unemployment, insufficient infrastructure, gaps in the capacity of service delivery, overcrowding, negative environmental impacts, and housing shortages become prevalent (D Maxwell et al. 2000; Todaro 1996).

2.4 Poverty in Kampala: How Prevalent and How Severe?

Urban livelihoods are fundamentally different from their rural counterparts as income activities are spread amongst a widely differing amount of sectors. Also, there is a reliance on cash for basic needs of daily life (water, food, housing, etc.) and social services (such as health care) are of a closer proximity. Physical security is also said to be much less of a concern. Markets are more accessible and less prone to stock

shortages, and urban life has been widely cited as relatively more food secure by rural-urban migrants (Stites & Akabwai 2012). For the urban poor, issues can arise that relate to the continuous need for cash when employment for unskilled workers is typically day-labour, housing prices are markedly higher (in some cases prohibitively so), sexual harassment and exploitation are more prevalent, and discrimination and harassment are wide-spread as multiple ethnic and social groups are located within close proximity to one another (Stites & Akabwai 2012).

The urban poor are a population in Kampala that is not necessarily ignored, but a large knowledge gap exists regarding precisely which groups constitute this demographic and what exactly characterizes their livelihoods. No official census information exists that specifically target the urban poor throughout the country, much less in its capital city. Anecdotal evidence from multiple non-governmental sources suggest that between 55-65% of the population reside in slum areas, and this figure does not account for those who are homeless or do not claim a place of regular residence (i.e. squatters) (UN-HABITAT 2007).

The government does however classify groups that are vulnerable to poverty in the National Household Survey, though no specific mention is made to the urban poor. Poverty at an official level is calculated based principally on food item consumption, though it does account for a few other non-food items. According to the most recent report, the population below the official poverty line in Kampala is listed at 4.0%, the lowest rate of any disaggregated region in Uganda (UBOS 2010b). This is contrary to findings by UNDP which claim that an estimated 20% live below the poverty line (UN-HABITAT 2007). This may be an issue of measurement or of methodology, however in either case a standard baseline is not transparent.

Urban poverty is also examined in official statistics by wealth quintiles which are calculated every five years

in the Demographic and Health Survey. According to this measure, 90% of residents in Kampala are in the highest wealth quintile when compared to other urban areas in the country. These wealth qualifications were determined on income and expenditure data collected from 2,770 households in 2011 (UBOS 2011).

As evidenced above, a significant divide exists between the unofficial figures and those presented by the government. Considering that nearly 1 million of Kampala's population is purportedly living in informal settlements or slum areas, one can infer that more information is needed to properly address the issues facing this neglected demographic.

2.5 Government Policies for the Urban Poor

Uganda's national government has instituted policies that are directed toward reducing the level of poverty in the country. On a macroeconomic level, Uganda was the first country to develop and submit a Poverty Reduction Strategy Paper to the International Monetary Fund and World Bank in its application for debt relief under the Highly Indebted Poor Countries Initiative in 1998. The paper was labelled the Poverty Eradication Action Plan (PEAP), and in June 2001 it was approved, making Uganda the first country to benefit from partial debt relief under the IMF initiative (UMoFPED & European Commission 2002).

Revised in 2000, the PEAP is the government's participatory approach to a national development plan to reduce poverty. One of the pilot districts for the approach, the profile of Kampala was undertaken in 1999 over two months with the objectives of enhancing knowledge about the nature and causes of poverty and appropriate strategies for action, building district capacity to plan for poverty reduction, developing a national system for qualitative and participatory poverty monitoring, and establishing the capacity for

participatory policy research in Uganda (UMoFPED 2000). The areas selected and profiled within Kampala were narrowed to four parishes, Bwaise II, Kisenyi II, Luzira and Nakulabye. Aside from qualitative data, results were mostly assembled from the 1991 Population and Housing Census.

The government of Uganda has current day policies that are better targeted to the urban poor. Notably, the Ministry of Gender, Labour and Social Development has created the Secretariat for Orphans and other Vulnerable Children (OVC), as well as the Ministry of Housing, Labour and Urban Development which in turn created the National Slum Upgrading Strategy and Action Plan.

Vulnerable Children

The OVC targets the 19% of children in Kampala which it classifies as vulnerable. It characterizes vulnerable children as between 0-17 years of age, and either an orphan, a child who is over 6 years old and out of school, a child with a disability, child labourers, a child in a child-headed household, a child who was married, idle children, non-orphaned children who are not living with their parents, and children living in an elderly person-headed household. The policy affords recommendations for actions and partnerships to improve in 9 identified key priority areas:

- Education
- Health
- Psychosocial Support
- Socio-economic Security
- Food Security and Nutrition
- Care and Support
- Child Protection
- Legal Support
- Capacity Strengthening and Resource Mobilisation

The recommended focus in the National Orphans and other Vulnerable Children Policy is at a household level as it serves the broadest set of target groups (approximately 80% of the identified OVC in Kampala) (KCCA 2008). This being said, orphans and street children are not explicitly mentioned in the plan with regards to programming.

In the case of the street children, being a 'rogue' or 'vagabond' has only recently been decriminalised in Uganda since the adoption of the Children's Statute in 1996. In reality, this statute (now re-administered as the Children's Act) has seen little in the way of progress for street children (Wernham 2004). Since 2002, street children that are found on the street are collected by police during unannounced round-ups. These children are then brought to Kamparingisa National Rehabilitation Centre, where they are kept for a period of 6 months until being returned to their place of origin, though time spent at the centre often continues for longer due to a lack of resources (Bett et al. 2005; van Blerk 2006).

Slum Dwellers

In 1986 the first policy that regarded slum-dwellers was described within the National Human Settlement Policy. This specifically addressed improving access to infrastructure and services at affordable standards, and providing sufficient residential land and plots in urban areas (UNDP & UMoLHUD 2008). This policy was amended by the National Shelter Strategy in 1987, with the goal of providing adequate shelter for all by the year 2000. As conceded by the Ugandan Government, this strategy did not sufficiently assess the needs of the urban poor. The PEAP also did not adequately address the importance of housing (and therefore slums). Consequently, this resulted in the denial of the sector having necessary resources for actors such as CBOs and NGOs to act effectively (UNDP & UMoLHUD 2008).

As a result, the government released its official policy on slum areas in 2008, the National Slum Upgrading

and Action Plan. The overall goal of 'slum upgrading' as stated by the government is 'to improve the living conditions of slum residents living the most depressed physical conditions in Uganda's urban areas on a sustainable basis and to prevent future slum growth' (UNDP & UMoLHUD 2008).

As it stands, there are gaps in the policies that target the urban poor. Though the groups are recognised at a policy level by both government and other institutions such as NGOs and CBOs, interventions and context-driven actions remain limited.

The plan lists specific objectives to achieve this goal:

- To develop affordable and participatory measures for upgrading housing conditions and related support infrastructure in slum areas
- To plan and implement in collaboration with stakeholders programmes and pilot projects to minimize, eliminate and curtail the growth of slums
- To harness central government's and urban authority's resources in enhancing the contribution of slums to the urban economy
- To ensure and appropriate institutional framework and mechanisms for effective implementation of slum upgrading programmes by different stakeholders.

These objectives are attained through strategies that deal with tenure regularization and affordable land, the supply of affordable housing, improvement of urban infrastructure and basic services, developing a slum-sensitive urban planning framework, financing of slum upgrading, inclusion and participation of slum residents and other stakeholders (UNDP & UMoLHUD 2008).

Slum upgrading has been a feature of NGO and government initiatives before the plan was devised, mostly those that improve infrastructure or access to basic services. A number of areas have already undergone this form of development, although before the slum upgrading policy took hold, the lack of protection from land tenure issues allowed land and structure owners to raise rents and sell off their properties, alienating the original residents.

Research



There are certain aspects of livelihoods that are particular to urban areas. ACF (2010) has identified some of these issues that indeed pertain to the study of urban Kampala.

- Urban environments, because of their dependency on services, are more susceptible to changes or shocks made in policy
- Urban districts are unique from one another as each has its own social organization and methods of accessing services.
- Multiple social and economic models make targeting for a new project more complex
- Urbanization creates urban sprawl, which yields new, marginalized areas as costs for providing services to these areas are prohibitive
- Contrary to rural areas, poverty is only one cause of exclusion in urban areas. Social capital can play a higher role.
- The formal labour market often excludes the recent rural poor migrants. When employment is obtained, it is often temporary. Thus, labourers from rural backgrounds have difficulties adjusting to demands of non-agricultural work.

are becoming prevalent in Kampala. This is evidenced by a recent extraordinary increase in the admission of children to malnutrition treatment programmes within the previous year and was one of the instigating factors for the study.

As there has been an increase in population in the city itself, one may infer from the issues previously identified by ACF that there has been a change in dynamic between FSL, NUT and WASH components which are apparent at household, community, and/or institutional/policy levels. Therefore there is a need for these aspects to be assessed in order to gain a proper baseline.

One may also infer that due to basic economic models, the increase in population has created a higher demand for food, water, and basic services. The effects of this shift in the demand curve need to be properly profiled.

An issue for this particular study is that ACF has limited prior experience in non-crisis urban assessments, notably in Uganda. Only scattered information exists on the urban poor in Kampala and to date, no formal study has attempted to comprehensively profile the livelihoods and the interactions of FSL, NUT and WASH within these groups. This leaves a lack of precedent regarding the implementation of the study.

The absence of reliable data indicates that the issues are globally unknown at household, community and

3.1 Interest of Research

In addition to the general effects of rapid urbanization, the health and nutrition consequences

institutional levels; therefore a synthesis of information from each of these levels is needed to properly profile and understand the context and daily lives of the urban poor.

3.2 Research Question

Given these calls to investigation, the research problem is presented as:

What are the livelihood strategies of the urban poor in Kampala and which are the forces that promote or oppose their sustainability?

3.3 Objectives

With the research question in mind and the context of the study given, the research was performed with achieving the following objectives:

3.3.1 Main Objective

- To gain a general understanding of the livelihoods present amongst the population of the urban poor in Kampala, Uganda and the context in which they exist, so as to form a foundation for future programming that is effective and well targeted.

3.3.2 Sub-Objectives

- To identify which populations are vulnerable groups and characterize the main livelihood profiles, identifying specific vulnerabilities and coping mechanisms
- To profile food access, availability, and utilization in Kampala as it pertains to the targeted groups
- To identify health and malnutrition issues associated with targeted group livelihoods
- To characterize water access, availability and quality, as well as that of sanitation and hygiene for the identified groups.

Methodology



4.1 Frameworks

In order to realise the objective, frameworks were put in place to guide the planning, implementation and subsequent analysis of the study.

4.1.1 Conceptual Frameworks

At the origin of this project, two theoretical frameworks were presented as guidelines for the assessment. The Sustainable Livelihoods Framework (SLF) was considered to profile the targeted groups in a holistic manner; that is, to consider all factors and assets that may affect an individual's livelihood. For the sake of this study, the definition of a livelihood is taken from Chambers and Conway (1992):

A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term.

The SLF is an approach which incorporates the sustainable human development approach as

adopted by UNDP along with the concept of capitals and capabilities as described by Amartya Sen. To illuminate the different levels of causes that can lead to malnutrition, the UNICEF Causal Model of Malnutrition was also considered as a widely accepted framework so as to be able to describe the processes and forces involved contributing to malnutrition within these groups.

Upon review of the food security assessment of high density urban areas in Kenya (Nzuma & Ochola, 2010), a third conceptual framework was adopted retroactively for this project. The Food and Nutrition

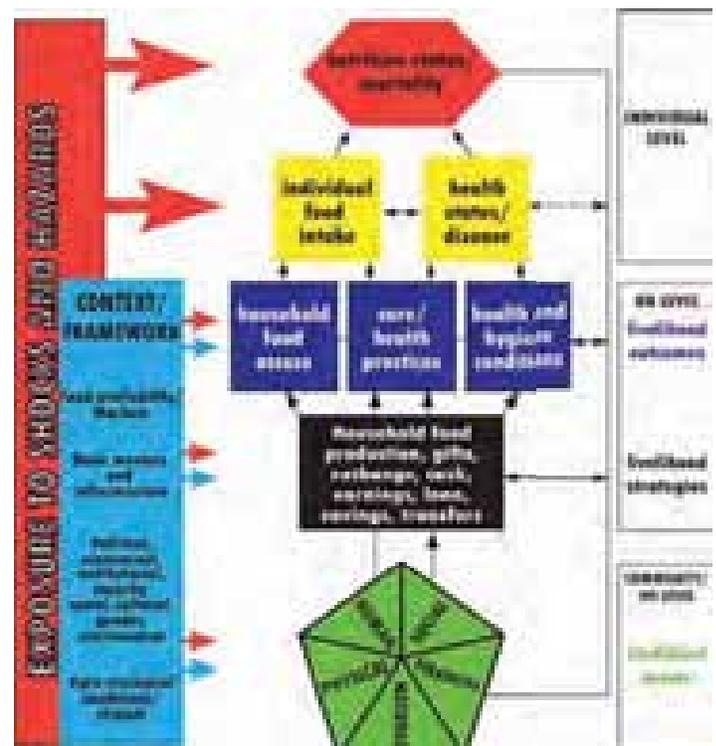


FIGURE 1. FOOD AND NUTRITION SECURITY CONCEPTUAL FRAMEWORK (WFP 2009)

Security Conceptual Framework as described by the World Food Programme (2009) provides an encompassing viewpoint on the factors that come into play in an assessment such as this. This framework takes into account the five capitals and exposure to shocks from the SLF, and incorporates the hierarchy of actors that may influence malnutrition from the causal model of malnutrition. Additionally, it explains the interactions and contexts at individual, household, and community levels and is therefore the most holistic model to implement in this context.

The five capitals of the SLF are given as a base to describe different livelihoods, and do so through interaction in addition to their individual merits. The following descriptions are adapted from DFID (1999)

Economic/Financial

One of the key livelihood assets, financial capital describes the financial and economic resources that are available to an individual to achieve their livelihood objectives. Urban areas having principally cash-based economies, this is one of the most apparent capitals to consider as it can be converted into and utilized for other capitals and assets. In an urban context and therefore the context of this study, it is the most commonly utilized capital for direct achievement of livelihood objectives such as purchasing food to reduce food insecurity or purchasing medication to alleviate or prevent illness.

Human

Human capital can be considered all the things that a human being can contribute to the livelihood of a household, such as knowledge, skills, and capacities to work and adapt. At its most fundamental level in an urban context, human capital can be considered a factor of the amount and quality of labour available to a household, which can differ dependent on the aforementioned qualities.

Social

Networks and connectedness can increase people's trust and ability to work together and expand their access to wider institutions. This increase in trust can give a sense of community to an area, can diffuse the workload for a project, and can help in the upkeep and management of communal resources.

Natural

Natural capital describes all of the natural public resources that are available to an individual for supporting their livelihood. This includes a wide range of assets, from the intangible such as the atmosphere and biodiversity, to divisible assets used directly for production such as trees and land. In an urban context, natural capital is not necessarily as influential as the others or as it may be in an agricultural/rural setting, however environmental issues such as rainfall and flooding or drought, and the natural capital that it takes to provide the food that is delivered to the urban centres are extremely important.

Physical

Physical capital describes the available infrastructure that is used to support livelihoods. This can mean transport, shelter, water supply and sanitation, energy, communications, and tools that aid productivity. Lacking one or more of these dimensions can impact health and can place obstacles in the way of accessing education, health services or inhibit income generation.

4.1.2 Analytical Framework

A study performed by Concern Worldwide in Dhaka, Bangladesh described a contextual analysis and targeting system which Concern had utilized to review the pertinence and efficacy of its ongoing programs in the city's slum areas. The summary of this project provided a base to work from in terms of designing the

analytical framework for this study. Figure 2 describes the framework that was adapted with the goal of providing evidence-based reasoning for inclusion of the groups that will be profiled, with specific focus on the ACF mandate of treating underlying causes of malnutrition.

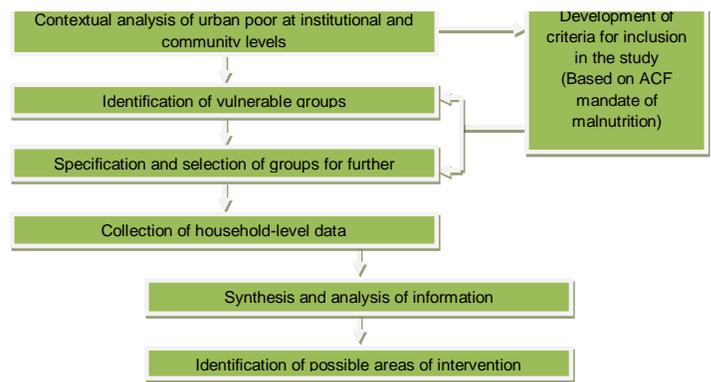


FIGURE 2 ANALYTICAL FRAMEWORK

4.2 Approaches and Tools

The study was rather large in context and needed to be both comprehensive and well-targeted to fit within the constraints as detailed in the study limits section. It was therefore conducted in two phases.

The first phase was implemented at an institutional level, i.e. key actors who either work with or are influential in the policies that concern the target population. This was accomplished by identifying groups that could be included under the study's general target of 'urban poor in Kampala'. The groups that were identified were then detailed so that specific groups could be selected for further investigation in the study.

Phase two of the study was a targeted and detailed analysis of the issues that contribute to a livelihood in the slums, with specific attention paid to food security, nutrition, as well as water, sanitation and hygiene. This portion of the study focused on key actors in the community level as well as a household study that considered the individual context.

4.2.1 Qualifying 'Urban Poor' for the Study

The first goal of the study was to define and standardize the term 'urban poor' for the relevant context. The

phrase 'urban poor' evokes a relation with poverty, though poverty itself is not a standardized definition. Therefore multiple dimensions had to be considered along with their merits and shortcomings. Due to the standardized methods associated with them, economic measures were of primary consideration while other aspects served to complement the findings.

4.2.1.1 Relative Measures

The first methods used were measures of relative poverty, that is, to define poverty by where a specific income falls within a certain group (Bellù & Liberati 2005b). In this case, the poverty threshold was determined by considering the group as all respondents who provided income information. For this, income level (IL) and income position (IP) poverty were calculated.

Income level is defined as any income less than the mean of the group (utilised in this exercise) or any percentage thereof. Income position considers position in the percentile rank. Income position was determined using quintiles.

4.2.1.2 Absolute Measures

An absolute measure defines a poverty line that is used as a threshold. This is similarly determined by information from a population; however, whether an individual is considered to be in poverty or not is based on a threshold that is determined by a measure such as income or expenses and is thus not relative to

TABLE 2: POVERTY LINE CALCULATIONS

Measure	IL	IP	CBN	FEI
Poverty Line - US\$hs/day	25255	18000	854	446

the rest of said population (Bellù & Liberati 2005a).

The Ugandan Government utilizes the Cost of Basic Needs (CBN) poverty determination which, simply put, measures expenditure on food and is then adjusted for other non-food items by essentially increasing the limits by mathematical derivation (Ravallion & Bidani 1994). This is a complex measure and as such a poverty limit for 'Central District Urban Uganda', calculated in 1993 by Appleton (2003), was used after being adjusted for inflation as is commonly done in these measures (Citro & Michael 1995).

Lastly, the Food Energy Intake (FEI) measure was used. This measure is similar to the CBN, however it does not account for non-food items. It essentially defines poverty by a minimum food intake that is required to lead a decent life (Wodon 1997). This limit was for 'Urban' regions in Uganda and was taken from a study that utilised data from 1992 and likewise was adjusted for inflation (Okurut et al. 2002).

4.3 Phase 1 – Identification and Specification of Groups and Areas for Further Investigation

4.3.1 Study Tools

Semi-Structured Interviews were sought with actors from representative organizations from each capital of the Sustainable Livelihood Framework. Examples of the interview topics can be found in Appendix I.

Human – Government health centres III and IV (3 interviews); Ministry for Gender, Labour, Social Development (1), Mulago National Referral Hospital (2)

Natural – Urban Agriculture Organizations (2); Ministry for Lands, Housing and Urban Development (1)

Social – UN-HABITAT (1); Local Council Representatives (3); Community Based Organizations (2); Ministry for Gender, Labour, Social Development (1)

Physical – Ministry for Lands, Housing and Urban Development (1); UN-HABITAT (UNDP) (1), Community Shelters Uganda (1)

Financial – Groups who provide credit/savings programs for urban poor (2)

Total institutional interviews: 22

4.3.1.1 Institutional Level Investigation

The first phase of the study lasted for approximately one month. Non-governmental organizations that had either already been working with urban poor groups or were planning their own assessments were contacted through ACF's in-country professional network. Governmental and UN organizations were selected based on their areas of focus which were obtained through their websites or through the Uganda National NGO Forum, previous published studies and reports, and recommendations by ACF-USA Uganda staff.

The principle goal of these interviews was to determine through qualitative investigation which groupings were utilised to classify the urban poor within the city.

The groupings were based on 'lifestyle' rather than any specific geographic, economic or demographic characteristic because of the aforementioned lack of

census data on the urban poor. Three groups were decidedly well cited as falling into the context of the phrase 'urban poor', using indicating phrases such as 'food insecure' and 'marginalized' as well as citing issues with their livelihoods such as unemployment or underemployment, lack of suitable housing, and being at higher risk for both chronic and acute communicable diseases. Taking account of these indications, four criteria had to be met to be considered for inclusion in this study:

Lacking source of regular or sufficient income

Typical work for the urban poor is that of unskilled labour on a per-diem basis, leaving a daily uncertainty of a minimal income. For the majority of urban poor in Kampala, work is typically in the sectors of petty trade, casual unskilled labour, illicit/immoral activities (prostitution, theft, etc.), or any combination thereof.

Susceptible to or affected by regular illness

Chronic exposure to disease causes a multitude of complications which inhibits the patient's ability to work through lowered productivity or lost working days. Any one day not working can mean a day without food. If this person is the primary income earner of a household the effect can reach each individual that is a part of that household. This effect can also be seen when there is an ill child or elderly relative in the household, as one income-earner is forced to miss a day of work to look after the ill. Additionally, as the poor often live in confined residences, communicable diseases are more easily spread.

Living in unsuitable/uncertain shelter

Housing for the poor is often limited to informal structures of unsuitable building materials which typically consist of one multi-purpose room that is occupied by more than one person. No public/social housing is available in Kampala, so the poor who do not have access to housing in the slum areas reside either as squatters in the aforementioned shelters attached to permanent structures, or are homeless.

Household/individual lacks access to basic services

Slum areas and other informal settlements are notoriously underserved in regards to basic services. Water, sanitation and hygiene are the most frequently cited as severe issues by the interviewed actors. Water sources and their quality are ill-managed since public wells are not regularly tested for safety and the availability can depend on the season. Water may also be a daily expense for a household and if purification procedures are not regularly adhered to, can be a source of illness for the users. Public latrines that are functional are prone to overflowing and flooding during rains. The biological hazards that occur with this are implicit, and the regularity of these occurrences yields a severe and persistent risk of illness to those whom are affected. Sanitation and collection of rubbish is also irregular and limited. Designated refuse sites are generally not present within informal settlements and those that exist are filled quickly.

After identification of the groups, decision for further investigation was based on consultation with the ACF-USA staff in both Uganda and at the headquarters in New York. The final selection was based on ease of identification, accessibility and potential number of those affected (hence number of potential beneficiaries of future programming).

It was then decided to focus on slum areas and their residents.

The geographic designation and standardised characteristics of a slum (expanded upon below) make this group the most easily accessible and likewise provides the largest population for investigation.

A large number of slum areas exist within Kampala and each has a different context associated with it based on location, principle activities, and overall standard of living. Identification of slum areas was completed through previous data reported by the Kampala City Capital Authority (KCCA) (UN-HABITAT 2007), the

Ministry of Lands Housing and Urban Development, and utilizing Google Maps software. A slum area was defined using the criteria as specified by UN-HABITAT (2003):

1. Lack of basic services
2. Substandard housing or illegal and inadequate building structures
3. Overcrowding and high-density
4. Unhealthy living conditions and hazardous locations
5. Insecure tenure; irregular or informal settlements
6. Poverty and social exclusion

A seventh criterion was defined by a minimum settlement size, with an example from Kolkata of 700 square meters. However the KCCA does not offer this information and as such, was omitted for the purposes of this study. A previous study had found that in 2003, slum areas had a population density of over 14,000 people per square kilometre, nearly 5000 more residents than the Kampala average in 2011 (UMoH et al. 2009; The World Bank 2011).

On the basis of this information, as well as the aforementioned institutional interviews, three slum areas were identified to be the 'worst off' by the actors interviewed, despite empirical evidence not being available as data for additional characterisation of the slums. These circumstances having been considered, the areas of Bwaise I, II, and III, Kisenyi III, and Namuwongo were selected for inclusion in this study.

A previous nutrition monitoring survey in the slums and the government's district profile for the development of its national Slum Upgrading Strategy and Action Plan identified two of the three same areas which were chosen for this study (Kisenyi and Bwaise), validating the selection (UMoFPED 2000; UMoH et al. 2009).

4.4 Phase 2 – Exploration of livelihoods and the conditions in which they exist

Once the groups were specified for inclusion in the study, further investigation was needed to form an appropriate profile of each area, paying special attention to the three main areas of interest for this study: FSL, NUT, and WASH while also incorporating the five capitals of the SLF.

4.4.1 Community Level

The first step was sensitization of the communities. Members of the National Slum Dwellers Federation (NSDF) network of savings groups were contacted through their association with Shack/Slum Dwellers International (SDI). These members aided the research by playing the role of key-informants to each area. These informants were typically a leader of a savings group within the slum community itself and also held higher leadership roles within the community. The Bwaise representative was an elected local councillor (LC), the Kisenyi representative was the head of Kiti School and an LC, and the Namuwongo representative had previously been working as a team leader with a local NGO which had programmes in the area.

Interviews were held with each of the key informants at the SDI offices. These interviews were guided by conversation topics as listed in Appendix II. These interviews were meant to gain a general understanding of the slums in terms of major issues as viewed by the interviewees from a position of leadership, and also from the resident's point of view.

A transect walk was then performed and was guided by the key informant to observe and clarify the ideas originally presented during these interviews. During the walk, informal discussions were held with residents, shop owners, and workers who were encountered to further clarify these ideas as well as ask about their daily lives.

4.4.2 Household Level

Gaining a profile and general understanding of the livelihoods and daily life in the slums from a household perspective was a crucial part of this investigation. To accomplish this, questionnaires were administered to 45 households in each of the three slum areas. The questionnaires were developed on a model presented by ACF for livelihood analysis in urban settings (ACF 2010a). This was subsequently adapted upon consultation with ACF staff in both Uganda and New York. The final survey was comprehensive in nature and covered the following subjects:

- Household composition and demographics
 - » Ages and genders of HH members
 - » Education
 - » Migration
 - » Religion
- Housing
 - » Crowding
 - » Tenure
- Social Support
 - » Group/Association membership
 - » Forms of support
- WASH
 - » Water access, availability and quality
 - » Latrine use
 - » Hygiene practices
 - » Rubbish
- Food Security
 - » Access, Availability, Utilisation
 - » Sources of food and Markets
- Health
 - » Illnesses
 - » Mosquito nets
 - » Access/availability of health facilities
- Finances
 - » Incomes
 - » Expenses
 - » Debts

4.4.2.1 Sampling

Households were chosen by the enumerators, guided by instructions to choose a variety of households that described the wide range of livelihoods within the area. This was partly because specific enumeration data and mapping were not available. Justifiably, scientific sampling measures were not utilised, as the goal of this part of the study was to explore issues experienced as a community and to highlight those that a household may face, yet not necessarily categorically.

4.4.2.2 Implementation

The questionnaires were administered by six enumerators in each of the three areas. The compensated enumerators were residents in the slums that they were investigating and were recruited by the aforementioned contacts.

The questionnaires were trialled with members of the ACF-USA Uganda Staff, the three contacts within the slum areas, and one resident in each of the slums.

One workweek was devoted to this portion of the household study. On Monday, 28 May 2012, training sessions

Namuwongo		Kisenyi		Bwaise	
Area	# of Respondents	Area	# of Respondents	Area	# of Respondents
Soweto	11	Kiti	31	Kamalimali	3
Kanyogoga	10	Nook	5	Lufula	8
Kasavu	5	Church Area	1	Jamubula	8
Namuwongo A	8	Lubiri Triangle	1	Katogo	3
Namuwongo B	9	Kasato	1	Lutwa	1
Other	1	Luzige	1	Mubowa	2
		Sapoba	1	Mabukalu	1
				Isambola	1
				Bugalami	1
Total Population of Zones: Unknown		Total Population of Zones: ~12,800		Total Population of Zones: ~8800	

were held with the enumerators, followed by three days for each enumerator to administer 9 surveys, ending with a discussion on their experiences and general trends in the fields in a group format on Friday, 1 June 2012.

Trainings were held in groups of all six enumerators in each of the areas of investigation. Each question in the questionnaire was explained and described with regard to what the question was targeting and what it meant to the study as a whole. Subsequently, one member of the group trialled the questionnaire with another member while the principal investigator offered commentary and guidance on the proper asking of the question and recording of the subsequent response. This was reinforced by a “cheat sheet” that was given to each enumerator with the same guidance information as provided during the initial presentation of the questionnaire to the enumerators. This guidance note also elaborated on the goals of each of the specific indicator questions.

The enumerators were asked to perform three surveys per day over the course of three days, for a total of 9 from each enumerator and 45 representing each slum. At a random time during the administration of the questionnaires, the principle investigator arrived to observe and answer questions that the respondent may have had, as well as to address any concerns or questions that the enumerator had.

The enumerators were gathered together the following day for the collection of the surveys, payment for their services, and for a guided discussion on key points they had noted. They were guided by talking points as listed in Appendix IV.

4.5 Other Study Tools

Tools were also used that were universally utilised throughout both phases of the study or for separate sub-investigations.

4.5.1 Observation

Due to the sensitive nature of some of the questions (latrine use, hygiene practices, etc.), visual observation played a key role in determining some of the conditions within and around the households. The enumerators were asked to note any presence of human or animal faeces, standing or stagnant water, or household rubbish within the close vicinity of each household visited.

4.5.2 Food Security Indicators

It was requested by ACF that specific industry-standard food security indicators be utilised to aid in identification of issues that may affect food security at a household level. Specifically, Food Consumption Score (FCS), Household Food Insecurity Access Scale

(HFIAS), and Individual Dietary Diversity (IDDS) were utilised. A description of how these were collected and calculated can be found in Appendix V.

4.5.3 Livelihood Profiles

As the main objective of this project, livelihood profiles were developed by taking key information from a number of different indicators and the five capitals of the SLF. Their development was based largely on the household questionnaire data, though contextual data that was also gathered during the preliminary phase interviews held influence as well.

The guidelines presented by the Household Economy Approach (HEA) and adapted for urban livelihoods was the principle guide in developing these profiles. This was considered as it utilises a multi-dimensional approach to define livelihoods, including wealth breakdown, sources of food, sources of cash, expenditure, hazards, and hazard responses (Seaman et al. 2000). HEA was also recommended by ACF-USA staff as a guideline for development of these profiles.

The asset pentagons were based on data that was taken from the household study for each livelihood profile so as to form a base. Values were calculated and standardised to a maximum of 1, and from then adjusted to reflect information that was not collected by the questionnaires, i.e. qualitative information from interviews and observations. The equations utilised for the first step are presented hereafter:

$$\text{Financial}_{\text{profile}} = \frac{\left(\frac{\text{Financial}_{\text{household}}}{\text{Financial}_{\text{reference}}} \right) + \left(\frac{\text{Financial}_{\text{household}}}{\text{Financial}_{\text{reference}} + 20} \right) (\% \text{ with debt})}{2}$$

$$\text{Human}_{\text{profile}} = \frac{(1 - \% \text{ children not in school}) + (\% \text{ with suff. access to healthcare})}{2}$$

$$\text{Physical}_{\text{profile}} = \frac{(\% \text{ women (unemployed)}) + (\% \text{ better no. houses}) + (\% \text{ low water consumption})}{3}$$

$$\text{Social}_{\text{profile}} = \frac{(\% \text{ members of social groups}) + (\% \text{ extended fam. forms of support})}{2}$$

$$\text{Material}_{\text{profile}} = \frac{\left(\frac{\text{Material}_{\text{household}}}{\text{Material}_{\text{reference}}} + (\% \text{ with suff. access}) \right) + (\% \text{ land ownership})}{2}$$

4.5.4 Malnutrition Indicators

Malnutrition indicators were not specifically explored during this study. Though malnutrition is a principle area of activity for ACF-USA, it was decided that it was not feasible for this study given the limits. Most notably because of the training involved for both the principle investigator and the enumerators, the relative invasiveness of taking physical measurements as opposed to posing questions, the non-statistical significance of the resultant data, and that the ultimate goal was not a baseline or monitoring of malnutrition.

Aside from this, malnutrition information is still accessible in the form of the ACF-USA study of 2009, where indicator measurements were taken in the form of mid-upper arm circumference (MUAC), height for age (HfA), weight for age (WfA), and weight for height (WfH) with a supplementary test for bilateral oedema. A glossary of malnutrition terms can be found in Appendix VI.

Some information related to the chronic malnutrition findings are herein presented from this study. These indicators are examined in the context of malnutrition by comparing the values to a reference population (calculated by the National Center for Health Statistics at the Center for Disease Control in the USA (WHO 1995)). A z-score is then figured and represents the number of standard deviations from the mean. A child with z-score of -2 is typically viewed as affected by malnourishment, with lower z-scores representing higher severity (The Wellcome Trust 2000; WHO & UNICEF 2009).

The chronic malnutrition measurements and indicators from the 2009 study are presented and explained within the results section.

Acute malnutrition indicators represent a specific point in time, and thus the findings of the 2009 study are not relevant in the context of this paper. It does however remain a discussion point as the contexts of both

chronic and acute malnutrition require understanding to form a better comprehension of the subject as a whole. Thus, brief definitions are given herein:

Low WfH is usually an indication of a recent severe weight loss that can usually be attributed to a recent illness such as diarrhoea or starvation.

MUAC is a measure that can indicate a risk of mortality and is another measure for acute malnutrition. Combining weight for height with MUAC and presence of oedema gives a more comprehensive view of acute malnutrition.

Weight for age is a standard measurement, though it is not always accurate as it does not account for non-stunted short children or naturally tall, thin children. Difficult to interpret by itself, this is typically used for population screening and monitoring, as the information on an individual child can be misleading (WHO 1995; Trowbridge 1979; WHO & UNICEF 2009).

4.5.5 Water Quality Tests

Water sources in the slums were tested for bacterial contamination by *Escherichia coli*. Triplicate samples from each water source being investigated were taken after a period of four rain-free days so as to assure that the spring itself was being tested and not run-off water. The tests were conducted through the use of a professional-grade portable membrane-filter incubation kit.

4.5.6 Markets

Linking food security to financial/economic and physical capitals, markets were investigated.

4.5.6.1 Market Survey

One-day market prices were surveyed at two distinct markets within the vicinity of Namuwongo slum. As the units of sale were arbitrary and not exact weights or volumes, they were recorded and photographed to provide a visual representation of the unit of sale which

can be found in Appendix VII. The food basket utilised in this market survey was improvisational in that a proper listing of food basket items was unavailable. This items chosen to be surveyed were done so by advice of market vendors and the accompanying enumerator

4.5.6.2 Market Prices

Historical price data for multiple commodities at Nakasero and Owino markets were taken from InfoTrade Uganda (AGMIS & Infotrade Uganda 2011). This food basket represents those commodity prices which were most commonly surveyed by Infotrade enumerators.

4.5.7 Literature

Previous studies and literature were utilised to more efficiently guide the study throughout all phases including pre-planning, planning, implementation, and analysis.

4.5.8 Coping Mechanisms

How the poor dealt with potential hazards and shocks was vital information to collect. Ultimately, the information was collected by adapting questions that were relevant to the urban context from the Coping Strategies Index into the Household Food Insecurity Access Scale questionnaire. The resultant data was then weighted according to the CSI weights, aggregated and analysed as a coping mechanism score on a scale from 0 to 39.

The key difference in this method from the standard coping strategies index is that it gives a timescale over a month rather than a week, which is more pertinent toward the holistic and non-monitoring aims of this study.

It also allows for the interviewee to distinguish their answer by 'often', 'sometimes', 'rarely', or 'never'; allowing the respondent to express their own perception of frequency of coping strategies utilised.

To the knowledge of the principal investigator, this method has not been utilised before and has not been validated for further use in other contexts. Thus, the results obtained should be used only as a comparative measure within the sample populations of this study.

4.6 Data Analysis

Data entry for the household study was done so through use of Sphinx Plus2 software, version 5.1.0.7. Data validation and statistical analysis was carried out through Microsoft Office Excel 2007, version 12.0.662.5000.

Qualitative data was processed through manual analysis of audio recordings and notes.

4.7 Study limits and biases

The study encountered limits and difficulties throughout the pre-planning, planning, implementation and analysis phases.

4.7.1 Scope of the study

The study was requested as an undertaking to uncover, explore, and understand some of the major issues that affect the livelihoods of Kampala's urban poor. Because of this, statistical representation of any whole population was not a primary goal of this study. Therefore, the results presented herein are meant to be solely indicative, not representative.

4.7.2 Difficulties encountered

Access to many government agencies was difficult with regards to scheduling interviews or finding current contact information. Because of non-response or scheduling conflicts, some of the agencies or organizations that may have proven beneficial to

further develop the context were unavailable.

A proposed sub-project examining mothers and children who are currently attending a malnutrition treatment programme and reside in slum areas was originally planned with a partner organisation in Kampala. Ultimately, the study did not eventuate after an agreement could not be reached regarding intellectual property rights. The planning and negotiation of this proposed study occurred concurrently with the Phase 1 investigations. As the study did not eventuate, the time allotted to planning and negotiation was ultimately lost.

4.7.3 Logistic/organizational issues

This study had no allocated budget. Given the lack of funding, the sample size of the household study had to be limited, though the subject matter still comprehensive enough as to properly demonstrate some of the key livelihoods and some key issues they face.

The urban poor population of Kampala is large in both number and inhabited area. Each slum area has their own context associated with it, though for the sake of this study only those designated as the three most vulnerable were investigated. Admittedly, this itself was an arbitrary measure at the time as formal studies or statistics relating specifically to the slums either as a whole or individually were limited or non-existent. Therefore, the selection of areas and groups for further investigation was based nearly entirely on anecdotal, qualitative information. Though the profiling of the selected areas was conducted successfully, the results may not be pertinent to other groups or areas within Kampala.

The time allotted for this study was four months. Because of this limited time, the population of the study had to be scaled down so as to be sure to thoroughly investigate the key areas of the original terms of reference.

4.7.4 Methodological Biases

Some of the institutional actors had certain motivations and biases toward the sample population. There is a distinct tension between these two groups, and because of this, the quality of information from the qualitative interviews may have been compromised.

Many residents of the slums refused to take part in the study, and likewise those who did were notably hesitant. Many who refused to take part had claimed that many studies are done in the areas, yet no apparent programming has resulted from them. Survey fatigue of the residents in the slums may have influenced the results to an unknown degree.

The questionnaire itself was comprehensive in nature, and as such had 199 data points associated with it. Though this length was noted during the trialling (and the questionnaire subsequently scaled down), the length of the questionnaire along with the sensitivity of the subject matter resulted in fatigue of the respondents, multiple missed or incomplete data points, and, therefore, possibly inaccurate information.

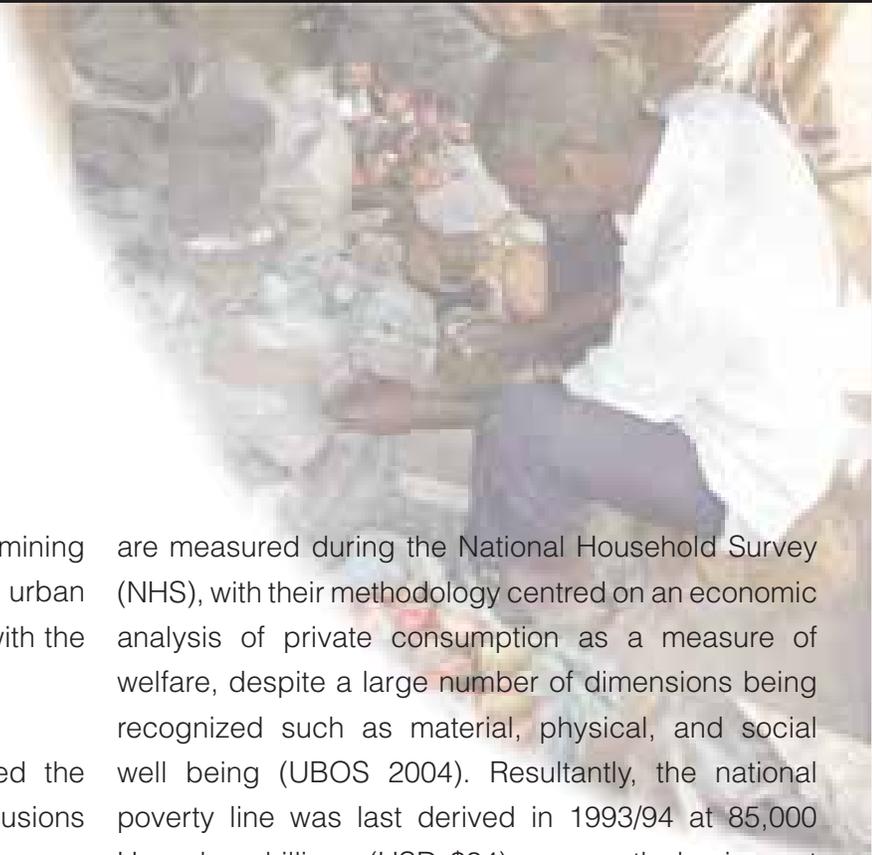
The Food Consumption Score indicator is a 7-day recall measure of frequency and diversity of diets. To account for respondent fatigue, the FCS was scaled down to a one-day measure to be collected along with the IDDS. As a result these measures may not be as accurate nor reliable as has been previously validated in other studies.

The Household Dietary Diversity question was mis-phrased on the questionnaire, and as such did not collect information related to the household, but that of the individual dietary diversity of the respondent. Though this was noticed and accounted for during trainings, the questionnaires had already been printed and distributed; therefore the data is not submissible for analysis.

The index utilised to characterise coping strategies

was adapted from the Coping Strategies Index (Daniel Maxwell & Caldwell 2008) to account for frequency of occurrence over a period of one month as opposed to 7 days. Upon analysis of the results, the raw data appeared inconclusive. It was then put into a scale format so as to simplify the responses and create a more generalised picture of the use of coping mechanisms for comparison between groups. The scale format yielded more decisive results; however, it is a completely novel approach and has not been validated in previous studies.

Results



As the study was comprehensive in examining the factors influencing livelihoods of the urban poor, the results are presented in line with the chronology of the study.

The first phase of the study which examined the institutional actors and forces presents the conclusions made from the information collected by the means noted in the methodology.

The second phase of the study, that which examined community and household levels, presents the results as specified by either representing the entire sample of households or as disaggregated by slum area when relevant. Relevancy is determined by a disaggregated result that is of note, and one that the sample of respondents represents a result with a certain degree of confidence, i.e. a reply rate of more than 50% of respondents in the relevant category.

5.1 Phase 1 – Identification and Specification of Urban Poor Groups

The preliminary phase of the investigation is to determine which are the groups that can be considered urban poor within Kampala and, furthermore, which are to be included for further investigation given the constraints as noted in the study limits.

The Ugandan government's poverty investigations

are measured during the National Household Survey (NHS), with their methodology centred on an economic analysis of private consumption as a measure of welfare, despite a large number of dimensions being recognized such as material, physical, and social well being (UBOS 2004). Resultantly, the national poverty line was last derived in 1993/94 at 85,000 Ugandan shillings (USD \$34) per month, having not been adjusted for consumer price index (CPI) inflation (varying widely in the past decade from -0.3% in 2002 to 13.01% in 2011 and at 3.9% in 2012) (The World Bank 2011; UBOS 2010b).

Uganda has claimed a 4% poverty rate according to this measure within Kampala in 2012 (UMoFPED 2012). Interestingly, estimates of poverty in Kampala vary widely depending on the reporting institution with scarce reporting on the actual methodologies utilized to figure such statistics. In examples of these discrepancies, UN-HABITAT (2007) reported 38.9% of residents in absolute poverty. Additionally, The Observer, a bi-weekly independent newspaper, cited 17.6% of Kampala's population as living under the poverty line in 2010 (Mwesigye 2010).

After considering these criteria, three groups were decided upon for further specification: Street Children (also including mothers of the children, though most are orphans), Squatters, and Slum Dwellers.

5.1.1 Street Children and their Mothers

Street children and mothers were originally cited in the project's terms of reference by ACF-USA Uganda to be a main group of interest, and have been the subject of a number of various studies since the late 1990s due to the noted rapid increase in their numbers (Young 2003; KCCA 2008; Wernham 2004; Gackle et al. 2007; Munene & Nambi 1996). Typically, these children are orphans that have come from rural poor areas. Originating mainly from the poor north-eastern region of Karamoja, food and physical insecurity have compelled some parents to send their children to urban centres to seek income (Mulumba & Mlahagwa 2009; Kalibala & Elson 2009). This population is one of the most visible in Kampala, as they are typically found on the streets of heavily trafficked areas approaching passing cars to ask for money. They are an identified vulnerable group by the Ugandan Government and fall under policy as directed by the OVC Secretariat.

However, Uganda has enacted laws that forcibly evict street children from the Kampala centre, and relocating them to 'reception centres' located around the hinterlands of the city (Bett et al. 2005). Because of the unknown timing and execution of these round-ups, knowing the actual number (estimates range from 2,500 to 10,000) of street children at any given period is not feasible. This brings the problem of properly targeting the population, and given that their presence in Kampala is under continual threat of eviction, the assurance of the effectiveness of any programming for these beneficiaries is made that much more difficult.

The largest proportion of registered NGOs in Kampala deal principally with children and children's rights, and more so there are a number of NGOs and CBOs whose prime mandate is to host these children and provide services such as education, shelter, food and healthcare.

5.1.2 Squatters

Squatter households were identified as a group that may also be vulnerable. This group is characterized by not claiming an official residence but living in improvised or abandoned structures that are typically hidden behind large buildings on main roads. These residences are considered as informal settlements; but differ however from their slum counterparts as they do not usually exist as multiple, densely populated households in a large area.

Ultimately, the disorganized nature of the squatter households, the lack of official statistics or demographic data, and the sceptical demeanour of the households make this group difficult to target for further investigation. They are the only identified group which the principal investigator was not been able to identify organisations or programmes specifically targeting this group.

5.1.3 Slum Dwellers

Slum Dwellers were an identified group in the preliminary phase and are the main focus of this study. Though there are limited to no official statistics relating to the populations living in the slums, numerous local NGOs who work in the areas and a UN-HABITAT report (2007) estimate that more than 1 million people live in the slum areas of Kampala, making up 60% of the population.

5.2 Area Profiles

The slum areas that were chosen are profiled along with reasoning for inclusion in the study.

5.2.1 Namuwongo

Namuwongo is located on the margins of the Nakirubo canal, a waterway leading from the central business district to Murchison Bay. The area border is demarcated by out-of-service railroad tracks on the east, Nakirubo canal to the west, the Industrial area to

the north and Murchison Bay to the south. Population statistics do not exist for this area.

Namuwongo slum has a history that sets itself apart from other slum areas. Its origins are from the late 1970s to early 1980s, when the slum used to reside uphill from its current location. In the mid-1990s, the government of Uganda had started infrastructure improvement and basic service delivery projects as a form of slum-upgrading. The residents of the slums were displaced while the infrastructural works were happening; however the government had told the dwellers they would be able to return once the works were completed. Land tenure in the slums finds most dwellers as tenants who do not own the land nor structure that they live in; therefore legal right to residence was not necessarily given to the tenants.

Once the works were finished, the land-owners increased the rents to levels that prohibited the original tenants from re-entering their homes. The land was then sold and developed into shops and housing, as well as some public buildings.

Slum upgrading had unwittingly created a form of gentrification, causing the original residents to resettle at the current location, which is on significantly more marginal land and with a significantly higher risk of flooding.

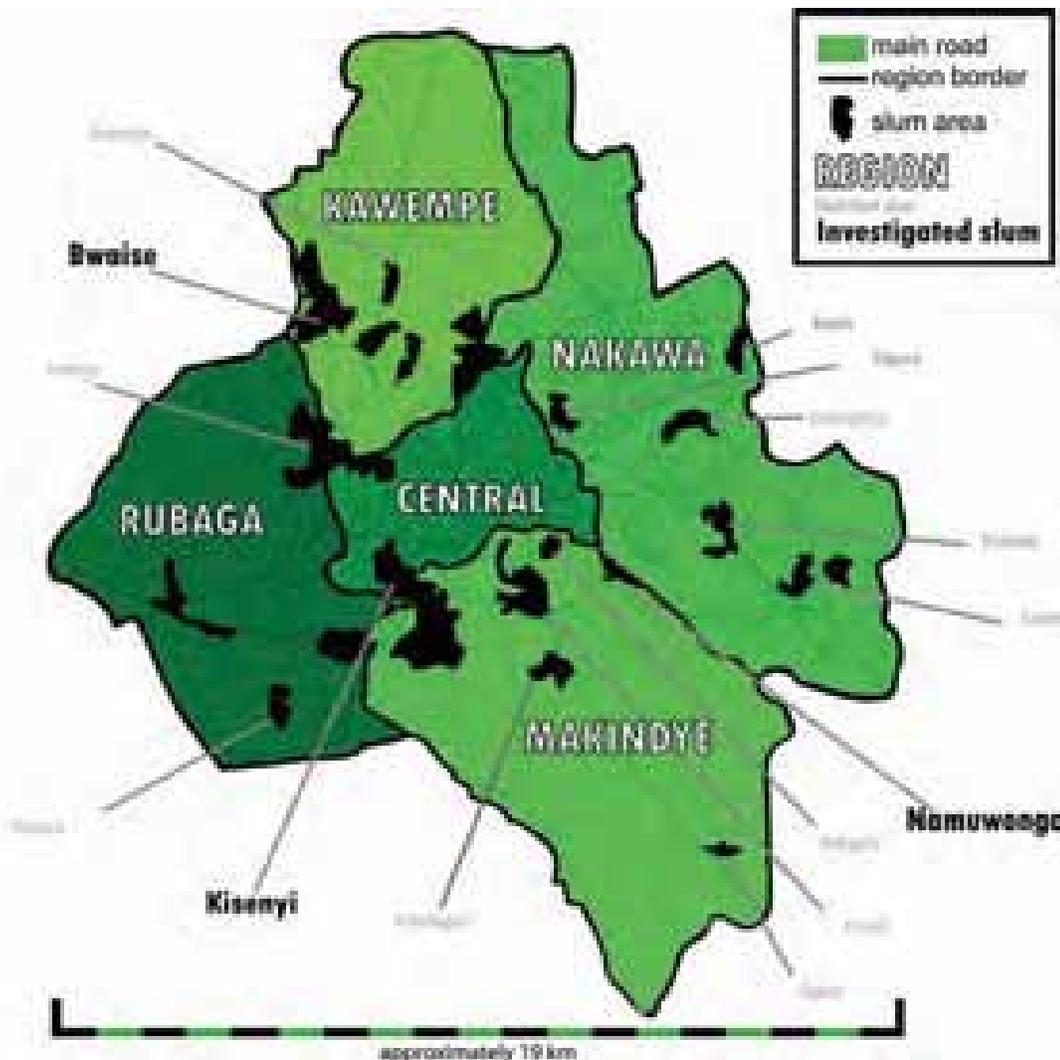
5.2.2 Bwaise

Bwaise slum is just north of the Northern Bypass road and straddles the border of Kampala District. It was consistently noted by government officials and local NGOs as the slum that is the 'worst off' of those identified.

Enumeration has been planned for households focusing on housing and basic services by Slum Dwellers International/ACTogether Uganda/National Slum Dwellers Federation of Uganda under the mandate of the National Slum Upgrading Policy, though the data has not yet been validated nor analysed. It is further divided into parishes Bwaise I, II, and III. The investigated area has an approximate population of 12,800 (UMoH et al. 2009).

5.2.3 Kisenyi

Kisenyi slum is located in the central division of Kampala, and is the oldest standing slum



MAP 3. IDENTIFIED SLUM AREAS OF KAMPALA DISTRICT

area in Kampala District having its origins from the early 1970's. It is the focus of many of the main slum projects and interventions by government and NGOs. As such, much more information is available on the area. Extensive enumeration and mapping has been performed by SDI. The enumerators have mapped toilets, markets (distinguished between goods), streets and alleys through the slum, water sources, and structural dimensions. Kisenyi is divided into Kisenyi I, II, III, with the main slum area placed in Kisenyi III. Kisenyi II is considered a slum area as well, however in the 1990s the parish had undergone upgrading projects similar to Namuwongo, though this did not result in partitioning as direct as Namuwongo.

This area was the focus for the household survey as Kisenyi I and II are undergoing continual land and property development. Enumeration data from NSDF states that 5,553 households are in this locale. The population of the areas that were investigated stands at approximately 8,800 (UMoH et al. 2009).

5.3 Phase 2 – Exploration of livelihoods and the conditions in which they exist

The second phase of the study reveals the more detailed investigation into the three slum areas. The subsequent findings demonstrate information gathered from each of the institutional, community, and household levels. The results are presented in a structure that delineates each of the five capitals of the SLF, as well as three expanded sections specifically dedicated to the core concepts of the study: food security, nutrition and health, and water, sanitation and hygiene. All of the following information presented under each capital is in relation to support the general understanding of malnutrition and its root causes within this populace.

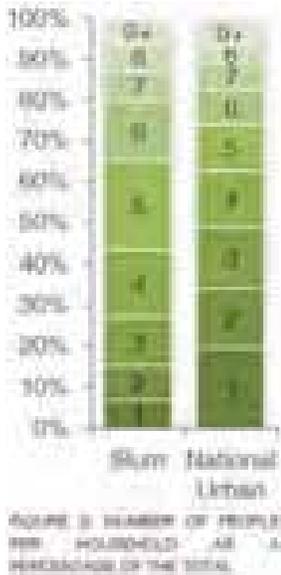
The household investigation yielded 135 surveys as performed by compensated enumerators. After validation of the data, closed-question responses were utilised from 119 of the surveys, ultimately representing 543 individuals. Though the remaining 16 samples were not included in the general results, open-ended questions and observations as noted by the enumerators for these households were still taken into account. The results from the survey portion of the study are presented as for the entire sample population of all three slums and disaggregated where appropriate.

5.3.1 Demographics and Profile of Respondent Households

The demographics of the respondents show an equal distribution between male and female household members, which is in line with the national statistics for urban settings. 17% of households had children less than 6 months of age. This data is not collected nationally but was done so in this case as this is the age group which the child is meant to be uniquely breastfeeding, though breastfeeding practices were not examined further. The sample households show a younger demographic than the national data as they typically have more school aged children (between 5-15 years), which is in line with previous findings (UMoFPED 2000; UMoH et al. 2009; UNDP & UMoLHUD 2008). The average age of a male head of household is 39 years old and female is 43. Males make up 58% of the heads of households (69% national urban, 70.5% national all) and females account for the remaining 42% (31%, 29.5%).

TABLE 3. AGES OF HOUSEHOLD MEMBERS

<i>Slum HH</i>	>6 mos	6mos-5 years	5-15 years	16-60 years	60+ years	Total
Male (n=286)	3%	12%	40%	45%	1%	50%
Female (n=287)	3%	10%	70%	49%	1%	50%
<i>National Urban</i>	Under 5	5-15 years	16-60 years	60+ years	Total	
Male	17%	25%	55%	2%	48%	
Female	15%	27%	55%	4%	52%	



The size of this sample of slum households averaged 4.8 persons per household, which is larger than the national average of 4.1. Namuwongo households were the largest on average with 5.2 persons, and Kisenyi the smallest with 4.5. The data shows that the 4.8 average in the sample population is largely influenced by 4-6 members per household, whereas the national figure represents a more equal distribution

between 1 and 4 members. This comes into greater significance when considering overcrowding, which is discussed in the Physical capital section.

Migration is one of the key contributing factors to Kampala's population growth. Of all respondents, only 14% stated that they were born in Kampala, and of those who moved into the city, 68% have lived there for longer than 7 years.



FIGURE 4. AREAS OF ORIGIN OF MIGRANTS

Just over half of the respondents who had been migrants had come from Buganda (the district surrounding Kampala). West Nile and Acholi are the two

areas that were worst affected by the LRA conflict lasting from 1986 until 2006, though together they account for only 12% of migrants, all of whom live in Namuwongo. This is contrary to the findings in the previous

ACF study, as it states that the dwellers are mostly from neighbouring countries and the north and east portions of the country (UMoH et al. 2009). None of the respondents had indicated they were originally from Karamoja.



Of these migrants, 86% came from rural areas and the remaining 14 % came from urban areas. This is contradictory to findings that migration patterns typically move from rural areas to a nearby urban area, then finally a major urban centre—in this case, Kampala (Stites & Akabwai 2012).

The referring study did however focus on Karamojong people from the northeast of the country, of which this survey did not claim any respondents.

One reasoning for this may be that Karamojong are a traditional pastoralist culture, and when they arrive to the city they may not adapt or integrate well to a cash and income based economy (ACF 2010a; Stites & Akabwai 2012). Because of this, they are not as likely to find housing in a slum area

TABLE 4: RANKED REASON FOR MOVING TO KAMPALA (N=168)

Reason	Rank
Find work	1
Services available in the city	2
Family reasons	3
Better housing	4
Social pressure/war	5
Other	6
Less risk of natural hazard	7

or will seek out other populations of Karamojong for support. They are noted as the poorest population in Uganda, and rural skills do not translate well into urban employment skills. Therefore they may not have the means to acquire lodging and, in fact, the same study says that the majority return to Karamoja, albeit forcibly by the government after being found homeless (Gackle et al. 2007; Bett et al. 2005; Stites & Akabwai 2012).

When asked why they had chosen to move to Kampala, 46% of the respondents had stated more than one reason. Nearly half stated it was to find work or better paying work. 48% of the migrants had said that they had changed their type of work since moving to Kampala, the majority of which were formerly farmers or pastoralists. The two main reasons explaining why they had changed their type of work were that if they were agriculturalists there was no land available to farm, and others did not have capital to start a business in their new area of residence.

to what was previously thought, the majority of households (66%) reported only one source of income, 26% with two, and 8% with three. 78% of respondents replied that their primary source of income is every day,

with other income sources either once/twice per week (16%) or less than once/week (6%).

Households were categorized into eight types dependent on the primary income source. These were justified by the type of work as detailed by the respondent. Casual labour and petty trade/street vendors were the most common types, accounting for just under half of all respondents (n=91) which is agrees with previous studies (UN-HABITAT 2007; UMoFPED 2000; UNDP & UMoLHUD 2008).

For reference, the average exchange rate during the study period has been calculated as:

1 US dollar (USD) = 2485 Ugandan shillings (UShs)

1 Euro (EUR) = 3160 Ugandan shillings (UShs)

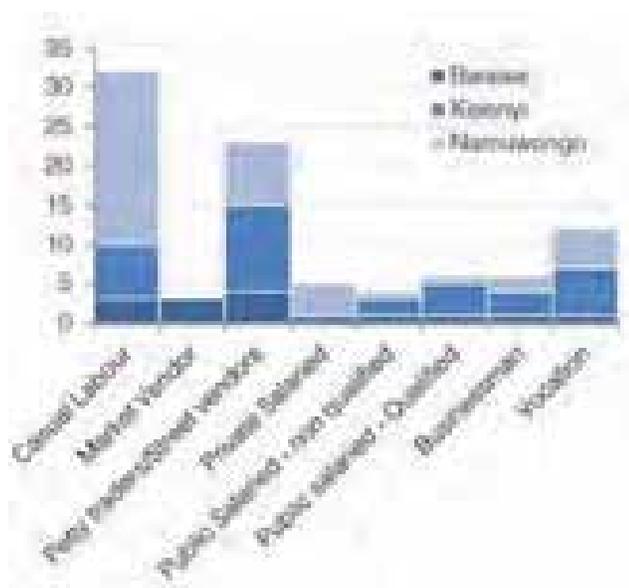


FIGURE 5. NUMBER OF RESPONDENTS BY PRIMARY INCOME ACTIVITY

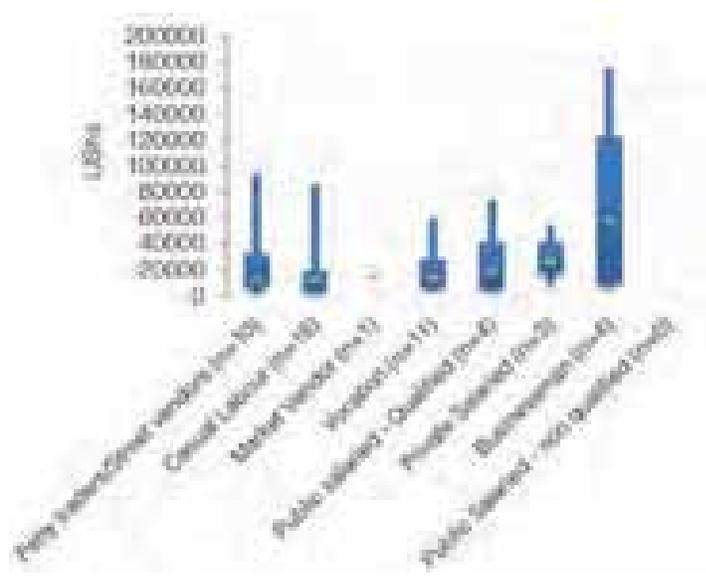


FIGURE 6. DAILY INCOME MEANS AND VARIANCE BY INCOME ACTIVITY

5.3.2 Financial Capital

Income information collected in this study is quite extensive, and 80% of respondents provided at least some information on their income sources. Contrary

As incomes are bound to shift in a casual labour market, approximations of low and high daily incomes were given, thus the average of these two figures is what is presented. Though many respondents gave

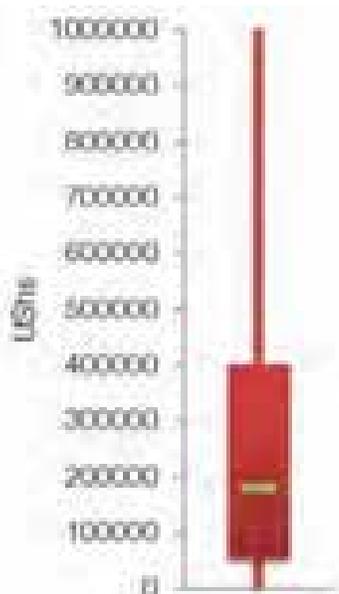


FIGURE 7: VARIANCE OF DEBT AMOUNTS

types of income sources, they were less forthright with amounts; leaving a limited sample of 52 respondents (55% of those reporting any income information). Income levels have been divided into quartiles based on the total household daily income, with those reported at frequencies of 'a few times per week' and 'once per week or less' subsequently adjusted

for periodicity. The results show a wide variance for each type of income source, with the trend across all categories of the maximum far outreaching the upper limit of the middle 50% of income earners, suggesting overestimation by some of the respondents.

5.3.2.1 Debts

Debts were had in the past year by the vast majority of respondents (84%). The most frequently stated reason for taking on the debt was for food, followed by medical or health costs and finally school fees. Of the respondents who had taken debt, 42% had multiple uses for the extra money. The debt amounts ranged from as little as 2500 to as large as 1,000,000 USHs, though the median amount was just under 200,000. The average debt taken out to be used solely for food was 113,700. The average loan drawn on only for school and education costs figured at 185,000 shillings. All individuals that borrowed money for business purposes used the loan exclusively for this purpose, at an average amount of 445,000.

5.3.2.1 Markets

There are markets in close

proximity of almost every neighbourhood in Kampala, and the slum areas are not an exception. Two major markets exist in Kampala, Owino (within the central business district) and Nakasero (just east of the central business district). Smaller markets where slum-dwellers typically shop purchase food mainly from two sources: either from buying at the larger markets in town and selling locally at a higher price, or through direct deliveries from the producers that are made roughly once/week to these smaller markets. Produce is much cheaper for both the vendors and the consumers on this day and most slum dwellers will purchase food to last at least half of the week.

5.3.2.1a Pricing of Foodstuffs

Pricing of produce is sold either by piece or arbitrary units such as 'piles' of yams, where the vendor will stack up an even looking amount of yams and sell them for the same price. The only commodities that are sold by weight are meat (except poultry, sold by whole bird), flours and pulses.

Historical price data on food basket items from both Owino and Nakasero markets for the 18 month period prior to the household study (between December 2010, and May 2012) show price fluctuations and the relative percentage make up of the food basket of pulses/legumes, meat/fish, fruit, carbohydrates, and dairy.

The data displays daily prices of 36 commodities at both retail and wholesale levels. As wholesale prices more accurately represent the seasonality of the goods for sale, this price information was utilised to create this chart.

Additionally, as the wholesale prices ultimately influence retail prices, this information was used to display what commodities are influencing the price index at any point in the 18 month period in Figure 7. Protein from meat and fish make up the bulk of the index, accounting for nearly 60% of the total

TABLE 5. RANKING OF DEBTS BY LENDER

Lender	Rank
NGO	1
Family/ Neighbour	2
Shop	2
Loan Shark	2
Bank	3

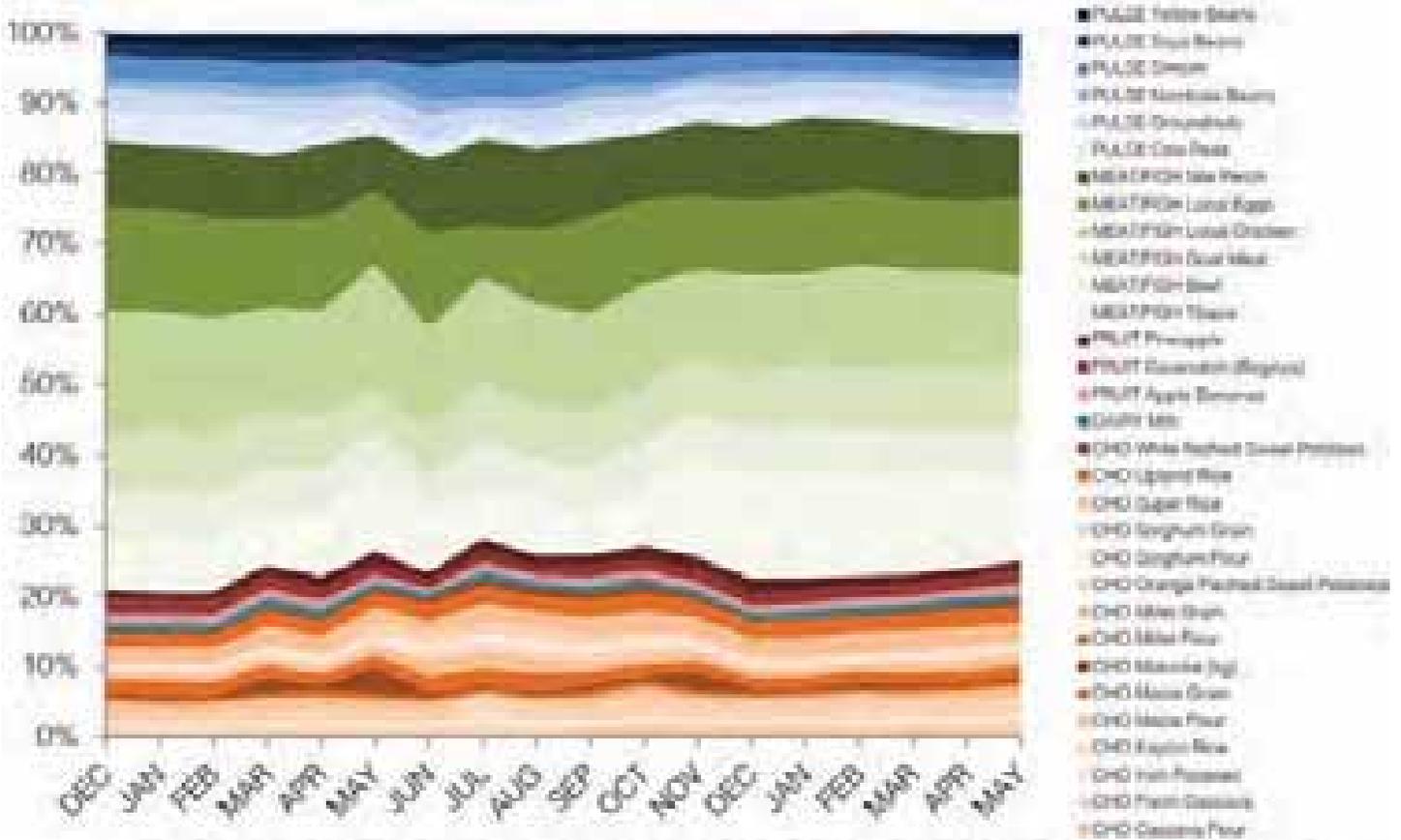


FIGURE 8. COMMODITY CONTRIBUTION TO PRICE INDEX OVER 18 MONTHS PRIOR TO HOUSEHOLD STUDY

throughout the year, whereas the principle source of calories (carbohydrates such as sorghum, matooke, cassava, and maize) make up approximately 20-25%. The trends within the index presented show an overall

increase of 23% in the food basket for retail prices and 37% in wholesale prices, a marked increase over the 20.1% CPI inflation rate and 15.1% for the Annual Food Inflation rate for the same period (UBOS 2012).

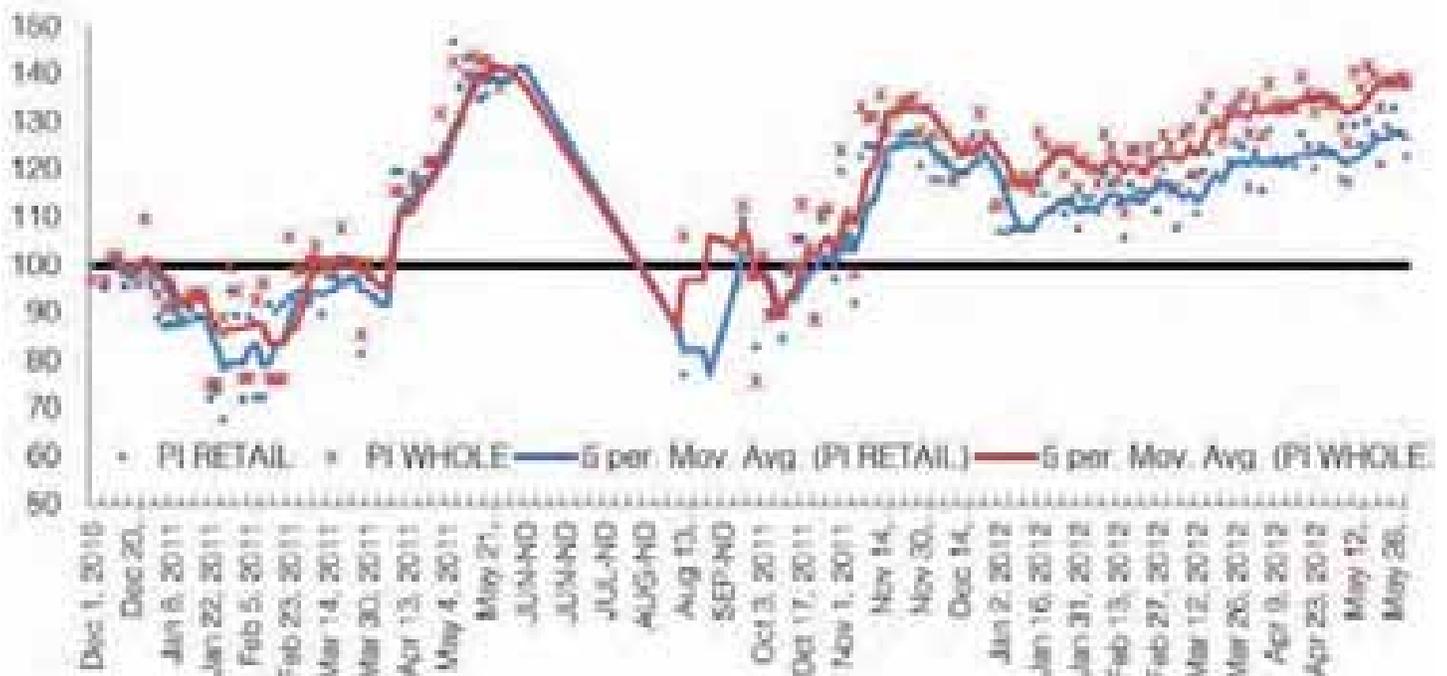


FIGURE 9. PRICE INDEX FOR 18 MONTHS PRIOR TO HOUSEHOLD STUDY (NOTE: PRICE DATA WAS LIMITED OR NON-EXISTANT FOR THE MONTHS OF JUNE, JULY AND AUGUST) DATA ADAPTED FROM INFOTRADE UGANDA (2012)

A 5-day moving average trend line was overlaid on the data points to mitigate major daily variation in prices, though this is considered below in Figure 9. Given these figures, one can see that direct increases in wholesale prices are not necessarily immediately passed along to the consumer through the retail equivalents, though the overall trend is still evident.

Daily prices can vary at the markets for a number of factors; the most influential as noted by vendors in Owino and Nakasero is that heavy rains can make the roads impassable, preventing efficient delivery of

goods from the areas which they originate. Normalized price data from this 18 month period shows that prices do not vary wildly very often (the median 50% of prices are mostly within a ± 0.05 z-score of the mean). All price fluctuations that occurred at ± 2 z-scores below the mean were in a 6-week period of Sep-Nov 2011. This point in the year is in the middle of the second rainy season, and one can postulate that this would have had an effect on these prices, i.e. a product cannot be delivered and therefore the prices would increase on that day, while the following days see both the previous and current days order fulfilled, thus

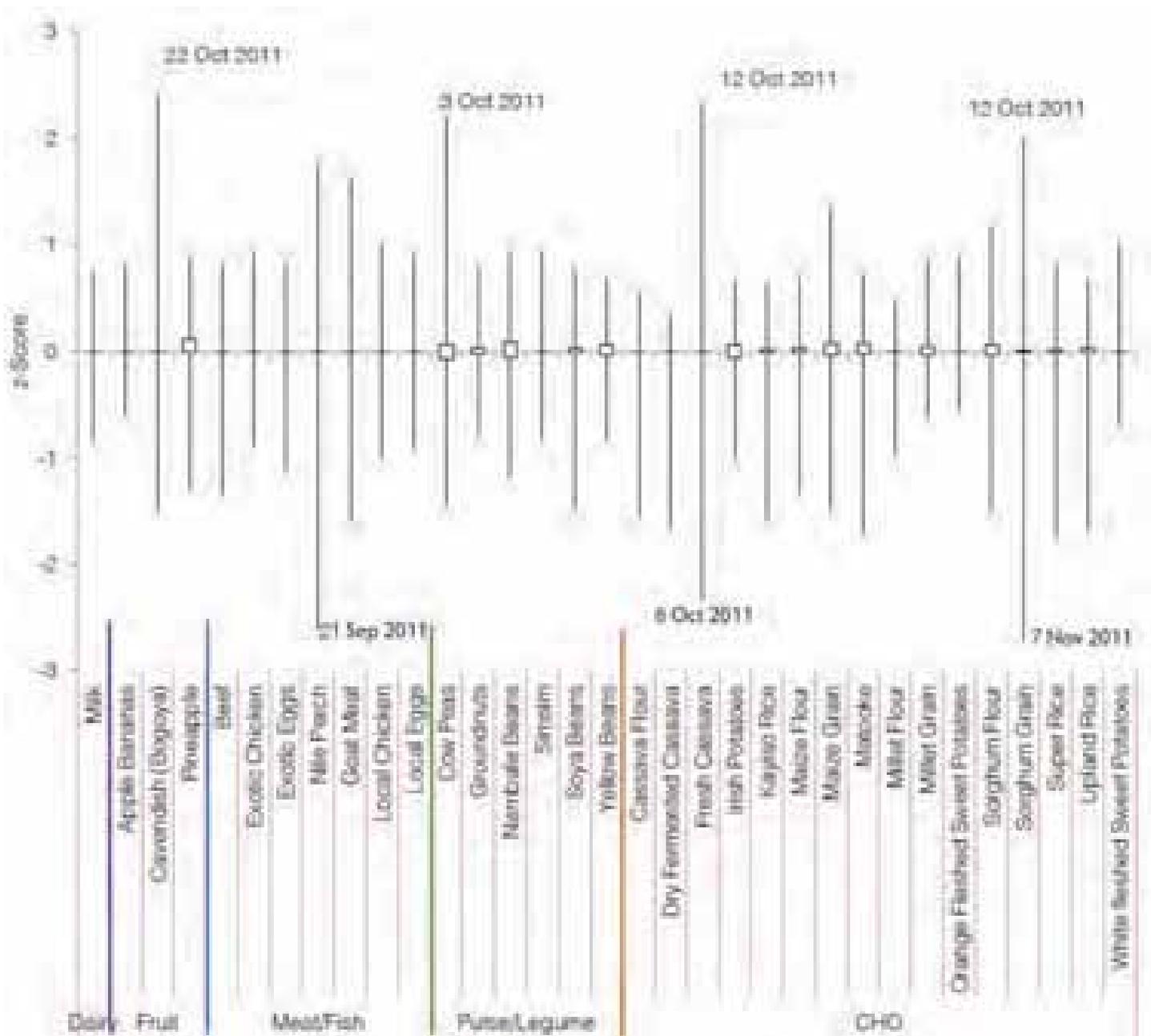


FIGURE 10. NORMALISED PRICE VARIATION BY COMMODITY OVER 18 MONTHS PRIOR TO HOUSEHOLD STUDY

lowering prices due to increased supply.

Market facilities range from simple, outdoor stands to sheltered permanent structures. The investigated markets in Namuwongo, Bwaise and Kisenyi have no cold storage facilities aside from selected meat vendors, thus the price and quality decrease inversely with days after procurement.

It should be noted that petty traders exist within the slums as well, often selling foodstuffs at lower prices that can be found at markets, though the product selection is typically limited to sweet potatoes, tomatoes, onions, cassava, and/or Irish potatoes

5.3.2.1b Impact on prices of slum upgrading

In order to investigate cost of living increases due to Namuwongo's previously mentioned upgrading and subsequent displacement of slum dwellers; a market price survey was conducted in order to compare

prices where slum dwellers (Namuwongo Market) and residents of the upgraded area (Kisugu Market) typically shop. Many goods are sold at differing prices for differing levels of quality (class of flour, breed of chicken or hen/cock). Data were collected on prices of all different grades, however, for the sake of this comparison, the cheapest quality or smallest unit was used.

As stated previously, the food basket utilised was improvised upon advice of the guide and market vendors and was not scientifically determined.

The numbers show that Kisugu market was more expensive with 13 products costing more. 11 products were equal and 9 products were more expensive. This is not a significant difference, though staple carbohydrates were on the whole more expensive and make up the bulk of daily calories in the diets of slum dwellers.

TABLE 6: PRICE COMPARISONS BETWEEN KISUGU AND NAMUWONGO MARKETS

Product	Units	Nam'go	Kisugu	+/-=
Staple CHO				
Maize flour	KG	1600	2000	400
Cassava flour	KG	1400	1400	0
Sorghum flour	KG	1400	1600	200
Millet flour	KG	2800	2600	-200
Rce	KG	3200	3600	400
Cassava	Whole root	2000	3000	1000
Matooke	Branch	15000	15000	0
Meat (protein)				
Beef	KG	7000	7500	500
Chicken	Whole chicken	10000	12000	2000
Sheep	KG	10000	10000	0
Goat meat	KG	10000	10000	0
Protein Pulses				
Beans	KG	1800	1800	0
Lentils	KG	2000	2000	0
Vegetables				
Tomatoes	3 pieces	300	1000	700
Irish potatoes	small heap	1000	1000	0
Local yams	small heap	1000	2000	1000
Onions	3 pieces	300	600	300

Product	Units	Nam'go	Kisugu	+/-=
Vegetables				
Carrots	6 pieces	2000	1200	-800
Eggplant	3 pieces	300	500	200
Kusmumawiki	1 bunch	500	500	0
Cabbage	head	1000	2000	1000
Green pepper	3 pieces	1000	200	-800
Okra	4 piecees	100	200	100
Fruits				
Banana	Cluster	1000	2000	1000
Pineapple	Whole fruit	2000	2000	0
Lemon	3 pieces	1000	900	-100
Watermelon	Whole fruit	5000	5000	0
Fat				
Vegetable oil	5 liters	28,500	28000	-500
Fuel				
Charcoal	Per basin	1000	1000	0
	Per sack	60000	50000	-10000
Firewood	bundle	1000	1000	0
Hygiene				
Soap	1 pcs of 250G	2,500	2000	-500
Washing powder	250G	3,000	4000	1000

When deriving a basic food basket which comprises seasonal commodities from each of the food consumption score food groups (matooke, rice, beef, tomatoes, beans, pineapple, and vegetable oil), the price differences is 1,100 UShs more expensive at Kisugu market. This is not a seemingly large increase (approximately 0.44 USD), though it is nearly 300 shillings more expensive than the CBN line calculation for a day's worth of food.

5.3.3 Human Capital

A major part of this study, human capital contains health and care practices while further expanding on malnutrition. This is complemented by information about child education systems and data collected by the survey.

5.3.3.1 Education

Uganda had adopted a policy of universal free primary education in 1996. Nationally, government primary school fees still exist with a national average of 9006 shillings with additional fees averaging at nearly 16,000. Obviously, this is far from free, however the non-government equivalent can average nearly 260,000 shillings with an additional 167,000 shillings in ancillary costs (Winkler & Sondergaard 2008). The survey did not distinguish private from public education, and as such average fees were calculated to be 60,000 shillings. The additional fees that are charged cover the costs of books, materials, and in some cases uniforms. Furthermore, costs may come in the way of school lunches which can cost between 1000 and 2500 shillings/day as reported by a school teacher in Kisenyi.

Uganda was the first country in Africa to offer free universal secondary education in addition to primary school, and has done so for the past six years. Despite this offering, one third of the school aged children are not enrolled (30% of males between 5-15 years, 35% of females). When asked why the children would not

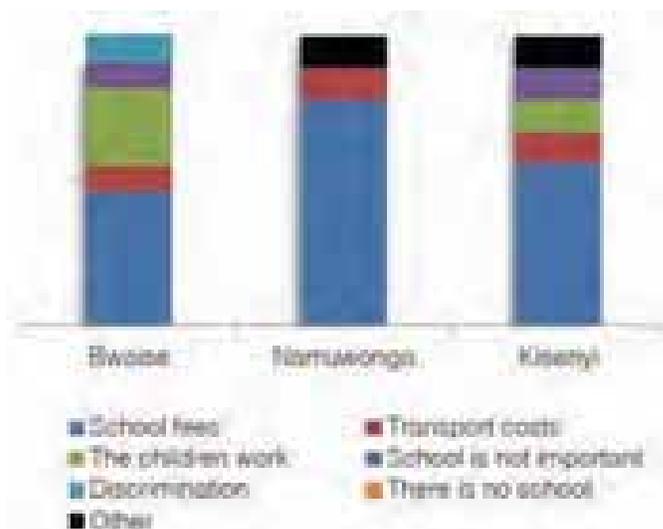


FIGURE 11: PROPORTIONS OF REASONS FOR NOT ATTENDING

go to school, nearly two-thirds of respondents said it was because of school fees or other ancillary costs.

5.3.3.2 Health and Care Practices

Uganda's public health system operates on a referral basis as Kampala's public health centres are designated with the Roman numeral II-IV. Health centres II are able to treat common diseases and are run by a nurse. If a patient's needs require more attention or expertise, they are sent to a Health centre III or IV, or if needed, to a referral hospital. The Uganda Minimum Health Care Package provides free care classified under four particular clusters: (UMoH 2010)

- Health promotion, environmental health and community health
- Maternal and child health
- Communicable diseases control
- Prevention and control of non-communicable diseases, disabilities, injuries and mental health problems

Approximately 60 health centres III and IV are located throughout the city, and at least one is in walking distance to each slum area that was investigated. Additionally, more than 800 private clinics and 22 not for profit centres serve the District (Atukunda 2011).

Doctors and nurses were interviewed at Kawempe Health Centre IV (near Bwaise), Kisugu Health Centre III (Namuwongo) and Kiruddu Health Centre III on the outskirts of the city.

The physicians had stated that a lack of drugs and waiting times were the most common reasons that someone would not seek treatment, along with missing a day of work (and therefore income) and nobody to watch over their children. Health centres perform outreach programs in the neighbouring areas that typically consist of education about proper self and child care practices.

One of the busier health centres in the city, Kawempe Health Centre IV serves a population of about 675,000 people. On a daily basis, the centre sees 200-250 outpatients, 80-100 antenatal, 50-60 teenagers seeking birth control and STD tests, 50-60 others for family planning, and 18-20 inpatient maternity. This gives a daily range of 410 – 510 patients, for a staff of 15 nurses and 1 doctor. The number of patients increases each time a new service is added. Seasonal changes in patient presentation occur during the rainy seasons which are typically school children who are seeking treatment for skin and upper respiratory infections, and more recently, measles.

The bulk of the patients at the health centres are children and those seeking medication for tuberculosis and antiretrovirals. One interview occurred during a mass-vaccination day, and it was observed that when a nurse announced for all mothers with HIV+ children to stand in a queue to receive counselling before treatment, approximately half of the 50-60 mothers and children came to stand in line. The 2011 DHS states that 80.3% of women in Kampala have been tested for HIV, with 96.1% knowing where to get the test. Likewise, only 69.5% of men have been tested with 96.6% knowing where to get the test (UBOS 2011).

It has recently reported that after a steady decline in the rate of HIV infection since the 1990s, Uganda has recently recorded its first increase in infection rate at 7.3% for 2012, which is allegedly attributed to the shift in public health programming to abstinence-only promotion during the early 2000s (Kron 2012).

Kawempe Health Centre also serves a large Muslim population. The doctor noted that the Muslim culture of polygamy and high fertility typically meant more people living in a single household (typically one or two rooms) and presented more often with communicable diseases, though this investigation showed no difference between Muslim households and others, nor an atypical high concentration of Muslim households in the bordering slum of Bwaise.

TABLE 7: INSUFFICIENT ACCESS TO HEALTHCARE

Namuwongo	67%
Bwaise	54%
Kisenyi	49%
All	57%

The household survey examined some basic health practices and access and utilization of services. Public health centres such as those interviewed (54%) and private clinics (27%) account for the most often visited health service providers. In Bwaise, the LC recounted that most residents will self-diagnose

and seek treatment at informal pharmacies in the slums, though these residents reported a lower usage rate of pharmacies (11%) than the other two areas (14%).

In terms of being able to access health services, 57% of respondents said they were not able to go as often as they need, of which about 2/3rds of respondents resided in Namuwongo. The majority of complaints were that it was too expensive to seek treatment, as well as complaints of the costs of tests, consultations, and medicine.

As all services are provided for free at the public health centres, there appears to be a gap in the communication of the services available. It was admitted by staff at each health centre that it is not

uncommon for the centre to not have enough medicine inventoried to supply it to those in need; therefore the patients are forced to go elsewhere for the drugs and pay for them, should they be able to afford them.

In terms of illnesses, 94% of households claimed to have had one member or more become ill in the previous month. The most commonly reported was malaria, with 75% of respondents saying that they had had the illness at least once in the previous month, which happened to be the tail end of the heavier of the two rainy seasons. Similarly, 52% of households with children reported that a child in the household had malaria in the same timeframe. Both of these figures are higher than the Kampala average for malaria incidence for a 30-day recall period which stands at 44.6%, though the survey does not indicate what time of year this recall took place (UBOS 2010b). Doctors have noted that if a person has a fever they are likely to think that it is malaria, so these results are solely anecdotal and not necessarily representative of the malaria prevalence within the sample population.

TABLE 8. ILLNESS PREVALENCE BY RANKING

Respondent	Rank	Child	Rank
Malaria	1	Malaria	1
ARI	2	Measles	2
Diarrhea	3	Diarrhea	3
Measles	4	ARI	4
Skin Infections	5	Skin Infections	5
Chronic Diseases	5	Chronic Diseases	6
Other	5	Other	--

There was a district-wide measles outbreak reported by each of the health centres, and these results confirm that 42% of children (19% of adults) have reported to have had measles within the month prior to the survey, despite child measles vaccination reported at 82% for Kampala in 2011 (n=86) (UBOS 2011).

Similarly, 30% of households with children have

reported that the child has had diarrhoea (14% of adults, 0.8% Kampala average). Also reported were 25% of adults with respiratory illnesses and 18% of children (19% Kampala).

Mosquito nets are used in 87% of the households (82% Kampala), 50% of which are untreated (42.5% Kampala). 54% of respondents had claimed that every member of the household sleeps under mosquito nets. 75% of children sleep under the net, which is on parity with the official figure of 74%. Likewise, 74% of men and 77% of women use the nets. There was no evident increase of cases of malaria due to non-use of mosquito nets, seeing that 95% of adult cases of malaria (97% of children) were experienced by households that do indeed use the nets.

5.3.3.2a Malnutrition

As stated previously, malnutrition is the key area of intervention for ACF and is necessary to examine in this study. No specific data (MUAC, oedema, age, height or weight) at the household level was collected during this study as explained in the Study Limits section. However as mentioned, a previous study by ACF had collected malnutrition indicator data and as such will be presented here alongside measurements presented in the 2011 National Demographic and Health Survey (DHS). For the sake of this study, admission data to malnutrition treatment programmes is presented that was gathered by Mwanamugimu Child Nutrition Unit, the primary malnutrition treatment centre in Kampala at Mulago National Referral Hospital.

Is Malnutrition Present?

HfA, WfA, and WfH are collected every five years by the Ugandan Government during the Demographic and Health Survey. However, representation of the population may be questionable as measurements were taken from only 132 children under 5 years of age in Kampala in 2011 (UBOS 2011).

A previous study by ACF in 2009 had taken HfA,



and -3 z-score from 2.6 to 1.4% (UBOS 2011; UBOS 2006). In the 2009 study, total underweight children were 7.7% with .7% severely underweight.

A rapid assessment study to address stunting in Uganda performed by the Ministry of Health had found that in 2011, stunting in urban areas was characterised at 26% with a -2 z-score along with underweight at 11% (UMoH 2011). This is not explicitly in Kampala, but provides both a point of reference and a point of contradiction to the census findings, further questioning the applicability of secondary government data.

TFP and OTP Admissions

In Kampala, Mwanamugimu Child Nutrition Unit at Mulago National Referral Hospital receives the more severe cases of malnutrition from Kampala and surrounding districts. The stark increase of admission numbers between January and June 2011 to both its Therapeutic Feeding Programmes (TFPs) and its Outpatient Treatment Programmes (OTPs) were one of the original instigating factors of this study. Therapeutic feeding programmes (TFP) are in-patient treatments for malnutrition, generally receiving patients that are suffering from severe acute malnourishment (as described by WfH and MUACs with a z-score of -3 and/or presence of bilateral oedema).

WfA, MUAC, and WfH measurements in two of the same three slum areas which are investigated by this report. As acute malnutrition indicators such as WfA and MUAC are not relevant to the current context, only chronic malnutrition factors are presented herein.

Stunting is a measure that usually describes long-term chronic malnutrition and is qualified by a low height for age. Uganda has historically had one of the highest rates of childhood stunting in Africa (Kikafunda et al. 1998). A child of z-score of -2 can be viewed as stunted, with -3 or lower as severely stunted. According to the 2011 DHS, 12.6% of children in Kampala were stunted with 2.2% severely so (UBOS 2011). In 2009, stunting was calculated at rates of 28% as stunted with 7.5% severely so within the slums (UMoH et al. 2009).

Weight for age can also be an indicator of chronic malnutrition, though without continual monitoring at a population level the indicator itself is relatively arbitrary. Regardless, the rates in Kampala show a decrease between 2006 and 2011, with underweight children lessening from 10.3 to 9.6% with a -2 z-score

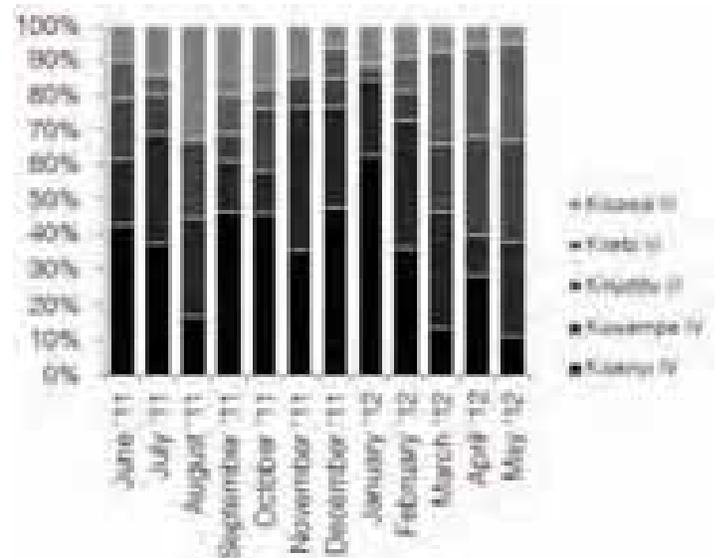


FIGURE 12. PROPORTION OF OTP ADMISSIONS BY HEALTH CENTRE

OTPs are administered both at Mwanamugimu and supported programmes at five health centre III and IVs (that were opened with the assistance of ACF) around the district. Two of the health centres that administer the outpatient programmes are located within one kilometre of two of the slums investigated, while the other two are located on the outer edges of the district. 60% of new admissions to supported OTPs over the year preceding the household study have come from the health centres that border the investigated slum areas.

Figure 13 displays the number of admissions into therapeutic feeding programs at Mwanamugimu for all of and the total admissions for the outpatient programs at Mwanamugimu and supported health centres III and IV throughout the city from December 2010 until May 2012.

The doctors and nurses at each interviewed health centre had stated that cases of malnutrition are rarely ever brought to the health centre expressly for malnutrition. Rather, they present with another illness and malnutrition is an ancillary diagnosis.

Exploring peaks in the admission trends

Considering the framework as utilised in this study, it is evident that cases of malnutrition can arise from

multidimensional causes.

To investigate the increase that spurred this study, one must regard one of the primary factors influencing a successful livelihood in this context- the price of food. Furthermore the most often cited issue with living in a slum area, flooding, is displayed.

By overlaying this information, the correlations between trends become evident. While considering rainfall and new admissions, one can postulate that high levels of rainfall will cause flooding in some areas (slums in this case) bringing waterborne diseases along with them and causing children to seek medical assistance and, if malnourished, being diagnosed as such.

There is also an apparent correlation between admissions and price index. As households in urban centres depend principally on cash for maintaining their livelihood, an increase in prices when incomes do not increase in turn may cause duress in providing appropriate amounts of food to the household members. As this is an urban centre, markets may source their inventory from any number of areas, and thus shortages due to seasonality are not common. However, any circumstance that results in low yields will raise the prices within the markets in-kind. As income

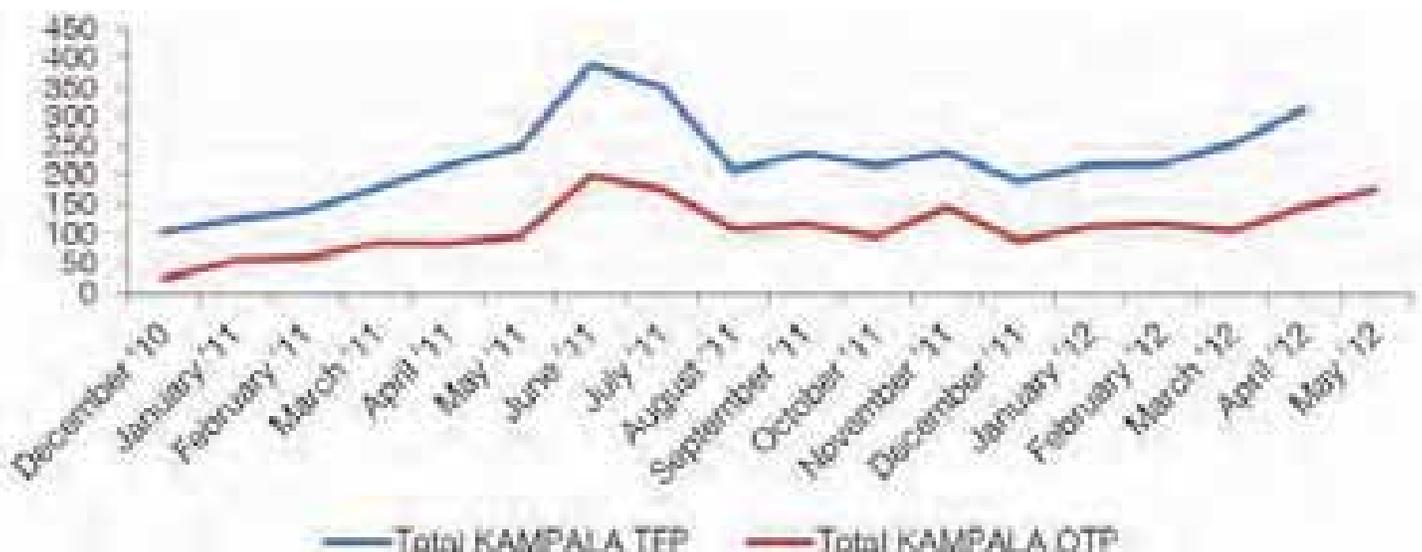


FIGURE 13. NUMBER OF ADMISSIONS TO THERAPEUTIC FEEDING PROGRAMMES AND OUTPATIENT TREATMENT PROGRAMMES

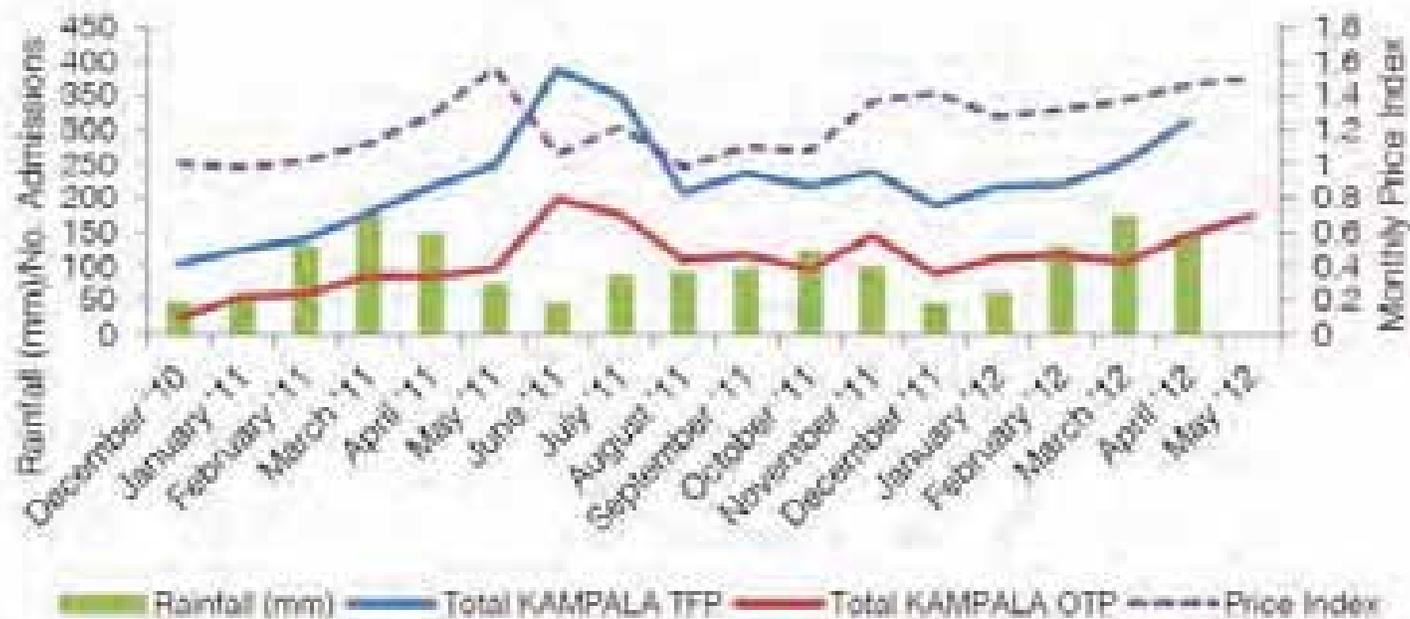


FIGURE 14: TRENDS POSSIBLY ASSOCIATED WITH MALNUTRITION TREATMENT PROGRAMME ADMISSIONS

activities in Kampala are widely varied, any rise or fall in their levels may not be in-line with the seasonality of prices, leaving the population vulnerable.

With that, price index and rainfall are also strongly correlated. As the growing/rainy season continues, food stores become more depleted until the next harvest. Thus, scarcity in the agricultural regions will relay an increase in price at the markets.

Anecdotal evidence of malnutrition in the slums

It was noted by nurses at Kisugu health centre that when outreach programs are performed in the slums, observation dictates that malnutrition is widespread throughout the slum areas, though these claims are not confirmed through testing by the staff. The interviewee claimed that the health centre diagnoses 3-5 cases of malnutrition (of a total of 200 outpatients) per workday (M-F) on a yearlong basis. The cases that are identified as severe malnutrition are referred to Mwanamugimu for treatment. Though the programs are free of charge, many of the patients do not follow this referral as they cannot afford transport costs, they would have no one to look after their other children, or that they cannot afford to miss a day of income to seek treatment.

Less severe cases of malnourishment at Kisugu

Health Centre are simply given education on proper nutrition, as Kisugu health centre is not a centre that has a sponsored OTP programme by Mwanamugimu. It should be noted that Kisugu does not keep statistics the number cases of diagnosed malnourishment.

As not all cases of malnourishment follow through on the referral to Mwanamugimu, and that Mwanamugimu and supported health centres receive cases of malnourishment from both within and outside Kampala District, the collected and reported statistics may not be accurately describing the prevalence of malnourishment specifically within Kampala. As area of residence is not recorded during admission, no collected data can relate malnourishment to the slum areas, despite its apparent presence.

5.3.4 Social Capital

Community groups, networks, and political influence were all considered to demonstrate the use of social capital within the areas.

5.3.4.1 Community Groups and Networks

In terms of social capital, nearly half of the interviewees are a member of a community group or organization. The majority are members of the NSDF savings

organization, though these results may be skewed as some of the enumerators were also members. Drama and church groups came in second and third on the list, respectively.

As an example of the work that social support can accomplish, the NSDF in Kisenyi slum spent the better part of a decade raising money and soliciting grants to build a new community building. The now operational facility contains pay toilets, access to water from the city water network, meeting rooms, health service offices and the offices of the organisation.

represent each area in the local government, and the LCs provide a forum for suggestions and complaints about life in the slums. One LC represents a certain area of the city, as a result each slum may have several LCs dependent on its size. The LCs are typically from the areas that they represent and continue to reside in the said area. Many residents stated that though the LCs are normally open to listen to the concerns of their constituency, little change eventuates from their meetings.

TABLE 9: PROPORTION RECEIVING SUPPORT

Namuwongo	67%
Bwaise	46%
Kisenyi	49%
All	54%

Reception of different forms of support was measured during the survey. Items investigated were cash, remittance, food or labour and

were separated by six different sources. 49 of 119 respondents had claimed to have received some form of support, 23 of which claimed more than one source. The most frequent was receiving cash from friends or family with 86% of those who received support claiming so.

5.3.4.2 Political Influence

It was noted during interviews that the large population of the slums yield a high potential political influence, if only due to their numbers. This, however, is not taken advantage of as community organization beyond savings, drama and church groups is limited and those that do exist represent a small fraction of the community. Local Council (LC) leaders are elected to



TABLE 10: FORMS OF SUPPORT RECEIVED

	Friends/ Family	Financial groups	Church groups	Community leaders	Government	UN/NGO	Other
Cash (n=70)	60%	26%	4%	1%	3%	6%	
Remittance (n=8)	25%	13%				63%	
Food (n=34)	62%		12%	3%	3%	18%	3%
Labour (n=3)	100%						

5.3.5 Physical Capital

Physical infrastructure in any slum area is notoriously poor. Housing is often substandard as once-temporary structures have become permanent, roads are ill-maintained (if at all existent), and unregulated and unmetered electricity presenting multiple risks are some of the issues that may affect slum dwellers (UN-HABITAT 2003).

5.3.5.1 Housing

The majority of housing materials in the slum areas consist of brick, wood frame and mud, or recovered timber walls with corrugated metal roofs. Mud walls bring opportunities for rodent, insect, and microbiological growth, increasing the chance of disease. Poor ventilation in these structures are catalysts to respiratory diseases such as tuberculosis (MT Ruel et al. 1998; UN-HABITAT 2008; UN-HABITAT 2003). Flooring is typically either dirt or concrete, depending on the level of construction. Structures found on main thoroughfares typically have concrete foundations with dirt footpaths. Shop owners tend to live within the shop themselves along with their families.

The houses are located along dirt paths that often have open drains and sewage running through them. The houses are constructed in very high-density and share their land with livestock such as goats, cows and chickens, as well as with local businesses. The high density housing leave very cramped walkways that are poorly lit, leaving risk of physical violence and rape (Massey 2011).

5.3.5.2 Crowding

82% of the households contained two rooms or less, of which nearly half claimed just one room. Combining this with an average household size of 4.8 persons, overcrowding is a major concern. The crowding index is a validated indicator as a ratio of members of a household to number of rooms in the home and is adjusted for couples (counted as 1) and small children

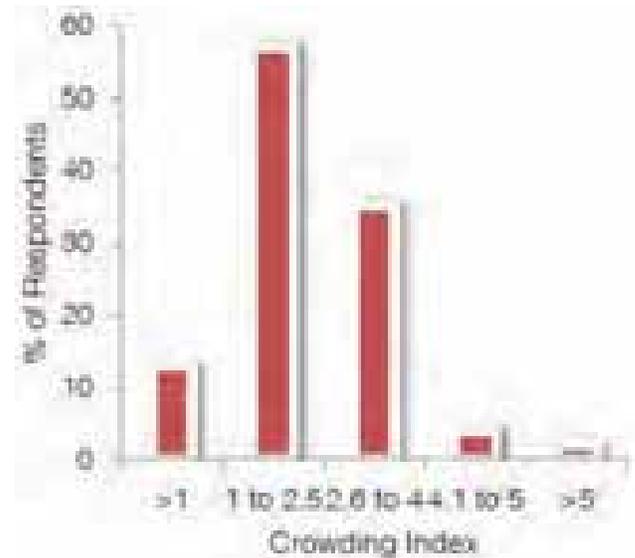


FIGURE 15: PREVALENCE OF OVERCROWDING BY CROWDING INDEX

(counted as 0.5). A household is overcrowded if the index is greater than 1. An overall overcrowding rate of 88% is found in the investigated slums. Overcrowding can heighten the possibility of disease transmission between household members.

5.3.5.3 Energy and Communication

Electricity connections were not investigated aside from cost. Typically, dwellings are connected to the energy grid through a third party; one house will have an official connection which is then split to other households. The connected houses pay a flat rate of 20,000 shillings per month for an unmetered connection.

As evidenced through the interviews with the slum dwellers, an overwhelming majority have a mobile phone or access to a mobile phone. Charcoal is the primary form of energy for cooking and is widely available.

5.3.5.4 Transport

Not officially investigated in the household survey, transport is an issue for the slum dwellers. There are no formal roads within the slums themselves, though paths that would allow vehicle access are available, however sparse. The walkways and alleys within the

slums are typically made of mud and contain open concrete or natural drains.

Due to cost and spatial restrictions, most transport within the slums is done on foot. Because of this, most businesses and services that are frequented by the slum dwellers are within a reasonable distance to the slum area. Public transport is available in the form of Matatu taxis (who follow pre-defined routes) or Boda boda motorcycle taxis, as well as a newly initiated publically subsidized private bus system, though the routes are not yet very extensive. Boda bodas are an important source of income for slum dwellers, though the service is over-saturated with providers thereby yielding inconsistent incomes as competition for passengers is high.

5.3.5.5 Water

One of the key aspects of this study and areas of intervention is examining the availability, access, and quality of water to the slum populations. Kampala has an extensive water network that draws from Lake Victoria at the southern shore of Makindye division, along with three treatment plants. There is one sewage treatment plant in the west of the district, serving mostly the colonial business district. Other sewage drains into Nakirubo channel or Lake Victoria.



5.3.5.5a Water Access

According to the 2010 Uganda Water Supply Atlas, 85% of residents in Kampala have access to the water network (UMoWE 2010). Kisenyi and Bwaise areas have had prepaid metered taps installed throughout the areas, however they are no longer functional in Bwaise. The meters in Kisenyi function by a magnetized key ring which the users can recharge when needed. They are charged 20 shilling for 20 litres of water.

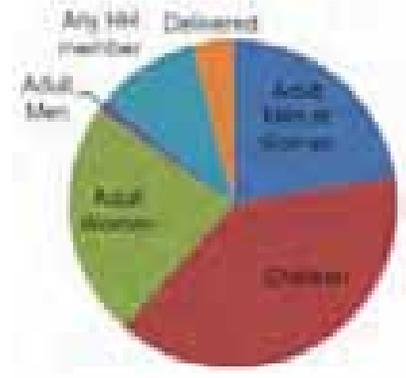


FIGURE 16. WHO FIT TO USE WATER?

Water source access is not distinguished by rainy and dry seasons, as may be the case in rural Uganda. The majority of respondents (69%) access water through the city water network, by means of the aforementioned taps or a private owner/operator. 76% had done so according to the 2009 nutrition assessment (UMoH et al. 2009). The majority of respondents (88%) said that primarily they pay for water, though water costs are typically charged per 20 litres and can vary between 20 shillings as previously noted, to between 100-200 shillings at privately operated taps. Protected wells and springs are available in the slum

areas and are the second most common source of water. Unprotected wells are also available and are the third highest usage rate, though interviewees said that children typically frequent these sources for the reason that the protected source is too far.

81% of respondents said that their primary source of water was less than 400 meters from their residence (57% less than 200m).

Water is collected mostly by children, with women and 'any adult in the household' sharing second place. Water delivery provides a source of income for poor casual labourers and children. It is fetched from the public wells and is usually charged at 100 shillings per 20L jerry can.

5.3.5.5b Water Use and Quality

An overwhelming majority transport and store their water in jerry cans, typically in 20 L capacity, though only 56% have covered vessels for both transport and storage.

On median, a household will use 80 litres of water per day, translating into 20 litres per person. Specific uses of the water were not determined, but one may assume that at these large volumes, the water will have multiple purposes outside of drinking. 59% of households make three or more trips to collect water each day, while considering that 70% of respondents take less than 30 minutes to fetch water per trip, with 16%



FIGURE 17: VARIANCE OF WATER USE PER INDIVIDUAL PER DAY

TABLE 11: ARE WATER CONTAINERS COVERED?

Container	Covered	Uncovered
Storage	72.9%	27.1%
Transport	38.1%	61.9%

taking over 50 minutes.

Two water sources from each slum were tested for faecal coliform bacteria by means of E. coli as an indication of contamination. All but one sample were from the most frequented wells in the areas of investigation. The outlier sample was taken from the water dispensers in Kisenyi to test for any contamination or seepage through the pipes.

All samples returned negative results for contamination. Although these results were clean, one CBO had stated during an interview that 78 of 79 wells tested in slum areas of Kampala were contaminated. The samples for this study were taken after four days of dry weather, therefore rainfall and/or flooding may have an impact on contamination of the sources as toilets and drains overflow.

88% of 112 respondents claimed to treat their water before use, with 98% claiming that boiling was the primary method.

5.3.5.6 Sanitation and Hygiene

Sanitation and hygiene are very sensitive subjects for the respondents, consequently some results from the survey may not be reliably indicative. Observations noted by the enumerators are offered to better illustrate the scenario.

Privately owned improved pit latrines are available in all slum areas and are charged at a cost of 100-200 shillings per use. Many of the latrines are in a state of disrepair, and cleanliness is a prime concern and deterrent to potential users (EUWI 2011; Massey 2011). As mentioned previously, Kisenyi has a large community centre that contains flush toilets at a cost of 100 shillings/use.

All areas report at least 88% of residents using latrines as opposed to other forms of human waste disposal.

A previous study indicates that a latrine carries an average of 82 daily users (EUWI 2011). Most are public (70%), though 35% of residents in Kisenyi use toilets that are in the house, contrasting with only 3% in Namuwongo. Households that use an improved or unimproved latrine or that do not use latrines at all held a slightly higher rate of illnesses, averaging 3.9 in the last 30 days, compared to 3.1 for households that use flush toilets in the house. Cost is a prohibitive factor to using latrines; consequently, alternatives such as green spaces, flying latrines, drainage, or canals had evidence of quite frequent use in some areas. Enumerators had observed that 27% of households had human faeces in the vicinity of the residence, likewise 16% in Namuwongo and 9% in Kisenyi. For those that responded affirmatively to not using latrines, reasoning was evenly split between cost and cleanliness of the facilities. A previous study has noted that night time trips to latrines carry a risk of danger, such as theft, rape or assault, most notably for women (Massey 2011)

Regular flooding in the areas cause the latrines to overflow, and this mixing with excrement that is strewn about in drains, channels and lying about in plastic bags, can lead to serious sanitation and health concerns. The poor drainage of the areas also means this fetid floodwater remains standing days after the rain, notably in structures with concrete floors. Namuwongo and Bwaise are particularly susceptible to this as they have not had upgrading projects implemented. This is demonstrated by enumerators observing stagnant and often green-coloured water at 44 and 47% of households in each slum respectively. Hand washing with soap is a common practice, and 92% laid claim to doing so after using the toilet as well as before eating.

Rubbish is disposed of mainly in wastelands and green spaces, though bins that are collected by the KCCA are available in Kisenyi slum. Piles of rubbish are typically burned, though if there is an abandoned structure, this

usually serves as a secondary landfill if it is not flooded with water. A common complaint from the respondents was that there were no designated dumping sites. This is demonstrated by the enumerator's observations that 19% of households had rubbish openly lying about, with Bwaise particularly affected at 37% of households. Rubbish also accumulates in drains resulting in blockages that can catalyze flooding, though in some areas the KCCA employs workers to clear the drains once per week (though natural drains are not accounted for). Flooding caused by rubbish was listed as one of the main concerns by the respondents when given the chance to freely respond to what is the main issue with slum life.

5.3.5.7 Land Tenure

Multiple systems of tenure dictate ownership and use of the land within the slums. Four types of tenure exist within Kampala: Mailo tenure (explained below), Customary tenure (traditional land ownership), Freehold (similar to Mailo yet smaller parcels and not royally decreed), and Leasehold (an agreement between the owner and lessee).

Mailo tenure describes land that was divided between the Kabaka (king) of Uganda, other nobles, and the protectorate government as a result of the 1900 Buganda Agreement and may hold either private or official status. All official Mailo land was transformed into public land in 1967, while private lands remained unchanged. This form of ownership sees the land as held in permanent title, though it persuades squatters and slum development in that the land owners are typically absentee, and therefore do not regulate the activities (Daniel 2011; Lastarria-Cornhiel 2003).

Kampala City Council held official Mailo land within the district until the constitution of 1995 was enacted which abolished all statutory leases. The land subsequently reverted to customary tenure. In 1998, the Land Act gave customary land owners the option to petition to convert their land to either Mailo or freehold land, leading many of the land owners to convert to private

Mailo tenure. Along with this conversion, the constitution of 1995 makes formal planning a non-requirement for acquisition of this land, meaning Kampala city does not own nor have jurisdiction over the land, yet has the power to control development within the city, yielding multiple conflicts and land disputes throughout the years (Daniel 2011; UN-HABITAT 2007).

To date, approximately 50% of the land in Kampala is under Mailo tenure and most slum areas are located on either private Mailo land or under customary land titles. Slums resting on Mailo land has seen that the residents are often reluctant to invest in its development or maintaining a sustainable environment on the plot, as fear of any investment in this course could be nullified at any instant by the landowner through eviction (Daniel 2011; UN-HABITAT 2007).

In the investigated slums, 84% of respondents were tenants who pay rent to either a land or structure owner or both. Bwaise had the highest rate of ownership at 26% with Namuwongo the lowest at 7%. The majority of owners in Kisenyi owned the structure in which they lived while either paying rent or squatting on the land holding the structure. In Bwaise, the majority owned the land and likewise paid someone to build the structure and now pay rent for the structure. In Namuwongo, all of those who claimed ownership happened to own both the land and the shelter, possibly as a result of the resettlement after the slum upgrading projects in the mid-1990s (all respondent owners were either born in Kampala or have been in the area longer than 16 years).

88% of all respondents worried about being evicted from their residence. The primary fear of eviction was by way of the landlord for all respondents. This was stated as that they have no legal claim to the land on which they live; the landlord may sell their parcel at any point and thereby evict those who live in the structure. The second major reason for fear of eviction was by means of local authorities. The tenuous and

complex arrangement between land owners, renters, and city planning officials yields continual fear that their residences could be evicted and possibly demolished.

5.3.6 Natural Capital

Urban agriculture is one of the main trends presently to increase food security in urban poor populations worldwide. In fact, urban agriculture in Kampala is apparent due to the presence of livestock and zero-grazing activities in the slums, however it has not realised its full potential. Additionally, as flooding was cited as the primary concern by the respondents, this was developed to the capacity possible for this study.

5.3.6.1 Urban Agriculture

Urban agriculture has been legal in Kampala since 2004, though legalization did not significantly alter the levels of agriculture that were already being practiced (Lee-Smith 2005). This being said, agriculture is practiced mainly outside of the densely populated central areas of Kampala District, as the lack of land for grazing livestock or raising crops at a volume sufficient for sale and/or self-consumption in the urban centre is prohibitive for the poor (Nuwagaba et al. 2003; D. Maxwell et al. 1998). It has been noted that slum dwellers may travel up to two kilometres out of town to have access to land. Within the slum areas, zero-grazing livestock systems have been supported by a number of projects in the past, however it has been seen that water sources are shared with the animals which can be conducive to microbiological contamination by creating breeding grounds for water-borne and insect and animal vectored diseases. The enumerators noted livestock nearby the households in nearly 13% of all residences of the respondents in Bwaise slum, though this number is notably less in Namuwongo (7%) and Kisenyi (2%). However, animal faeces were observed in the vicinity of 24% of the households in Namuwongo.

Overall, urban agriculture is not a common practice in the slums. As mentioned before, one of the main reasons for a farmer not continuing their occupation once migrating to Kampala is a lack of land. Sack gardens are a project that is being implemented by Community Shelters Uganda, though residents who

have participated in this project have experienced thefts of both produce and the sacks themselves.

Roof gardens are not present in the areas investigated, and one can postulate that the poor quality of roofing materials and construction (steep angles and instability) are a prohibitive factor.

SDI has projects where residents who partake in income generating activities in one slum will travel to another area to train other residents in their practice. For example, Nakawa slum has participated in this program with mushrooms, eggs and corn; and Kisenyi had the same experience with chickens, goats, and small community gardens.

Interviewees had stated that any sort of urban agriculture is at risk of theft and damage due to vandals.

Kisenyi slum has had a portion of it razed by the KCCA, leaving a vast open green space which would be ideal for gardening for supplementary food sources. Land tenure issues however inhibit this development, as the owners of the land have final say of any activities performed on the lot, as expanded upon in the physical capital section. If a garden was allowed to be planted, the landowner may at any point evict the persons and activities from the land.

Sharing soil and water with livestock can cause transfer of zoonotic diseases between animals and humans. One study found animal sourced food-borne gastroenteritis (causing diarrhoea and vomiting), brucellosis (loss of appetite and weakness), *Mycobacterium bovis tuberculosis* (respiratory distress), and neuro-cysticercosis (epilepsy, spasms, seizures) present in the slums of Kampala (Makita et al. 2011). Table 12 shows the prevalence of these identified diseases according to one study.

TABLE 12. PREVALENCE OF ZOOONOTIC DISEASE CASES AT MULAGO HOSPITAL, MAR '05-FEB '06 (ADAPTED FROM MAKITA ET AL. 2011)

Zoonoses	Estimated Cases	% of Total Cases
Animal source food-borne gastroenteritis	1201	34%
Brucellosis	679	N/A
<i>M. bovis</i> tuberculosis	98	12%
<i>Neuro-cysticercosis</i>	19-27	9-14%

Leptospirosis is a decreasingly rare bacterial disease that claims fatality rates of 10-50%. It is transferred through contact with animal urine or rodents and incidences are continually rising along with urbanization in slums around the world (Maciel et al. 2008; R. B. Reis et al. 2008). Its presence has been noted in Uganda though not specifically investigated in urban areas to date (Ellis 1984; Businge 2007; Senior 2010).

5.3.6.2 Flooding

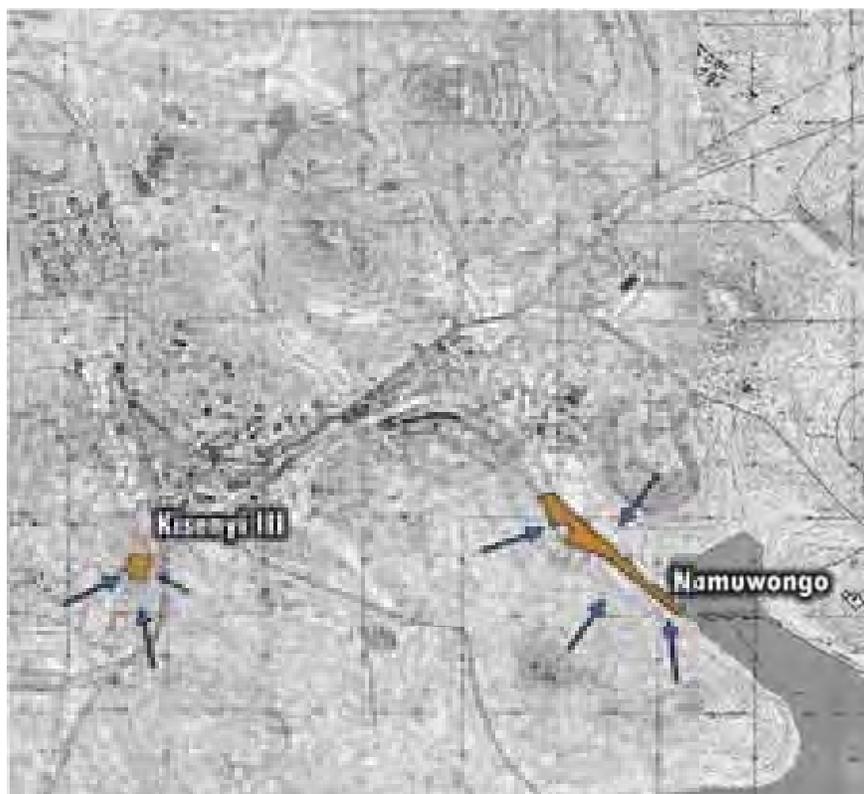
Because of the year-long rainfall and hilly landscape, the low-lying areas are constantly at risk of flooding.

There are areas of Kampala which have sufficient infrastructure to manage high levels of rainfall, though these are typically areas that are located on hillsides. The slum areas are generally on marginal land with poor drainage, typically in the valleys and bordering natural waterways such as the case of Namuwongo. Flooding is noted to occur nearly every time a rain passes, and because of the poor drainage in the areas the water remains, becoming stagnant and fetid. Map7 displays a topographic relief map of Kisenyi and Naumuwongo to illustrate the potential floodplain of the areas surrounding the slums.

Flooding was cited by the respondents as their largest concern about slum life. As previously noted, flooding may

cause latrines to overflow and bring with it fetid floodwater. Drains that run through the slums are often repositories for household rubbish and litter, and become easily blocked during rains. The drains then overflow, spreading their contents throughout the area. Floodwater may also enter the housing bringing with it human and animal excrement that would normally be found either in “flying toilets” (plastic bags) or in green spaces. Because of lack of exposure to sunlight, dirt floors can remain damp and muddy for days following the rains. Concrete floors hold stagnant water for a length of time after the flooding occurs, providing a breeding ground for mosquitoes and other disease vectors (MT Ruel et al. 1998; Chennamaneni 2007; UNDP & UMOLHUD 2008; Nzuma & Ochola 2010).

Beyond the implicit effects on health that flooding brings, it was also noted by multiple slum-dwellers that flooding induces children to not attend school, businesses to shut down or inhibiting their own income activities, ruining goods within and outside the home, and in some instances causing death of young children when the floods occur at night.



MAP 7. TOPOGRAPHIC RELIEF INDICATING FLOODPLAIN OF CENTRAL AND MAKINDYE DIVISIONS

5.3.7 Food Security

Food security, another main aspect of this study and area of intervention of ACF, is defined by the World Food Programme as 'when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life' (WFP 2009). The level of food security is determined in a number of ways, however the general goal is to describe the aspects of food availability (the physical presence of food), food access (the household's ability to acquire adequate amounts of food) and food utilisation (the households use of the food and an individual's ability to absorb and metabolise the nutrients) for a population, which are typically analysed by specific indicators.

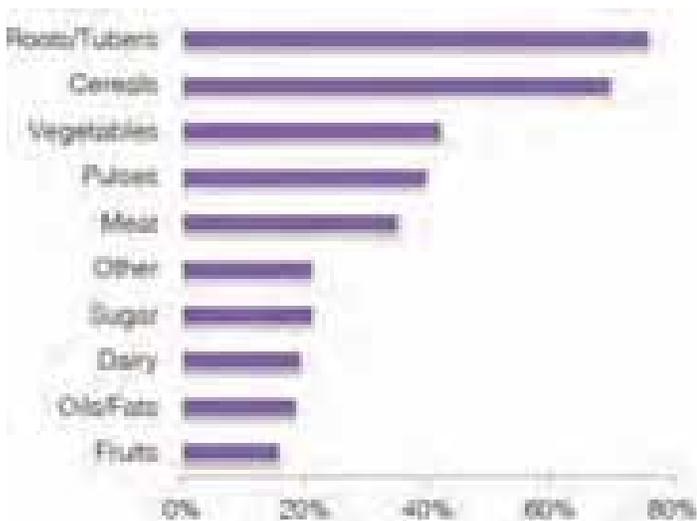


FIGURE 18: FOOD GROUPS CONSUMED WITHIN THE PAST 24 HOURS BY % OF RESPONDENTS

5.3.7.1 Indicators

Specific indicators are used by ACF to describe the access, availability, and utilisation of food within a population. This study specifically targeted child IDDS (Individual Dietary Diversity Score), Household Food Insecurity Access Scale (HFIAS), and the Food Consumption Score (FCS). Additional information was collected to describe the access to food.

Figure 18 shows that the principle food groups of the respondents within the past 24 hours consisted

primarily of starchy carbohydrates like roots/tubers (76%), complex carbohydrates like cereals and grains (70%). Just less than half of the respondents had consumed vegetables (47%), or protein from pulses/legumes (40%) or meat (35%). The questionnaire in Appendix III describes what foods were suggested to represent these categories.

5.3.7.1a Child Dietary Diversity

Dietary diversity was investigated as a key indicator of food and nutrition security, examining the number of different food groups eaten during the previous day by an individual. In general, individuals in urban areas tend to have a higher dietary diversity than their rural counterparts. This, however, is compensated in many

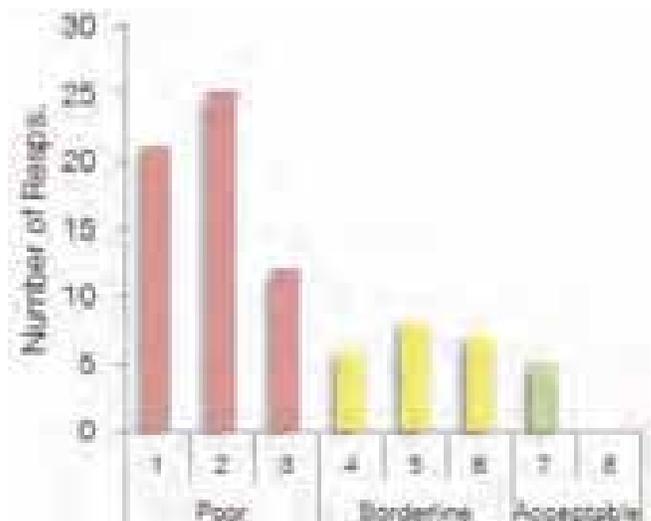


FIGURE 19: DISTRIBUTION OF CHILD DIETARY DIVERSITY SCORES AND THRESHOLDS (N=84)

cases by consuming smaller portions of the foods, a coping mechanism which can negate the effects of high dietary diversity (M Savy et al. 2008; Oldewage-Theron & Kruger 2011)

Dietary diversity scores have been cited as a good indicator of child general nutritional status and significant interaction with HfA z-Scores has also been noted, of particular importance when assessing non-breast fed children as complementary foods can make up for the lack of nutrition in feeding formula (Arimond & M. T. Ruel 2004). Dietary diversity must be looked

at alongside other food security indicators however, as alone it is not necessarily associated with other anthropometric measurements in children (Sealey-Potts 2010).

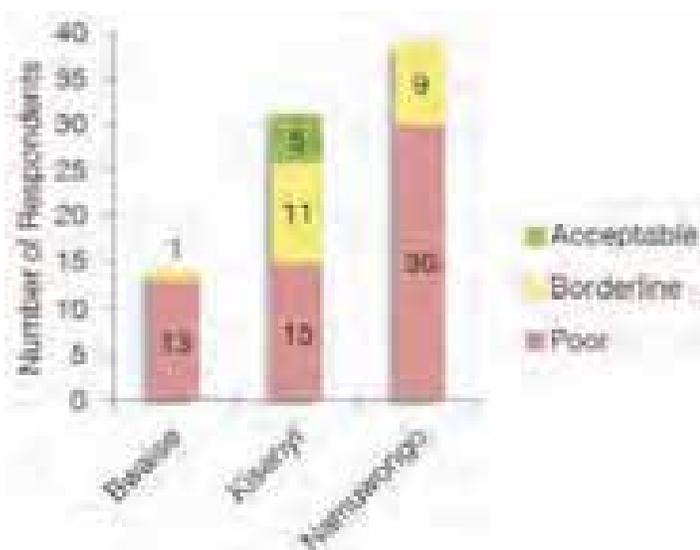


FIGURE 20: CHILD DIETARY DIVERSITY BY AREA (N=84)

Independent dietary diversity scores were calculated for 'the youngest child who is not currently breastfeeding.' The thresholds used were based on a previous study of the population in Amura, Uganda (ACF 2010b). A score of 1-3 yielded 'Poor' diversity, 4-6: 'Borderline', and 7-8: 'Acceptable'. Figure 19 displays the results of child IDDS and resultant thresholds for the entire population (n=84). This accounts for the majority (91%) of households with children between 6 months and 15 years.

Figure 20 displays these results as disaggregated by area. This amount of poor DDS is concerning within the sample population. 69% of the children in the households surveyed have a poor dietary diversity, and a further 25% are on the borderline. Only 6% of the households show and acceptable child dietary diversity, all of which were located in Kisenyi.

5.3.7.1b Household Food Insecurity Access

The HFIAS was utilized to measure food security and severity within the household at a population level.

The HFIAS utilises a set of 9 questions to determine a household's own perception of food security, as well as food deprivation at both quality and consumption levels. The questions were presented to the respondent with the options of never, once or twice every two weeks (rarely), once or twice every week (sometimes), and multiple times per week (often).

Conditions

The conditions section of the HFIAS presents a disaggregated viewpoint of the behaviours and perceptions of the respondent households. By displaying this information as separate responses, one assumes a better understanding of which conditions are particularly influencing the scale. This is meant to be indicative of food security at a community level, and is presented to give the reader a general idea of the conditions that the population is facing. The conditions show that at least 54% of the respondents have felt some level of food insecurity at any frequency. Frequency shows that once or twice per week and less than once per week make up the bulk of the responses for any category.

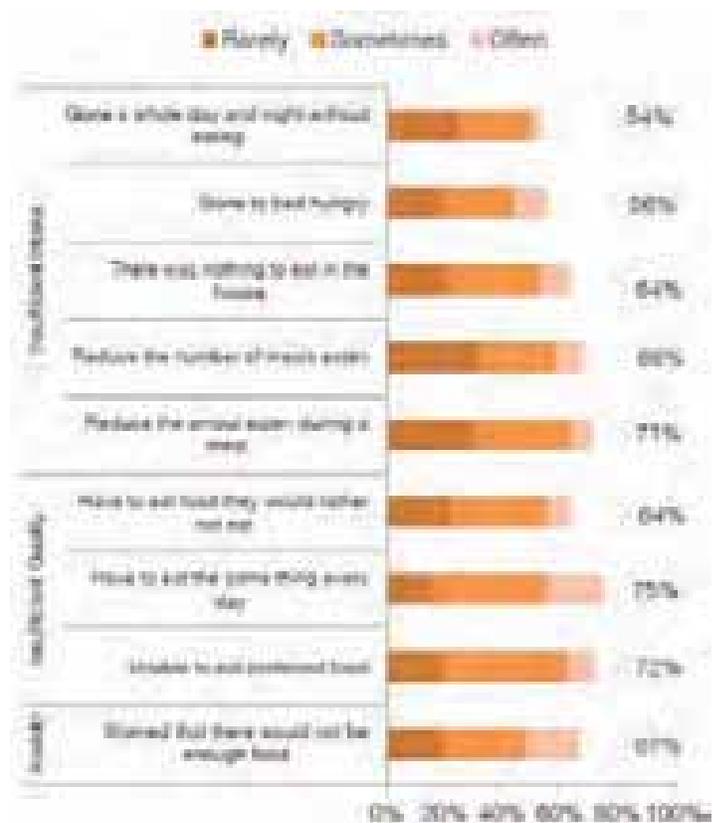


FIGURE 21: HFIAS CONDITIONS FOR TOTAL SAMPLE POPULATION

Domain

The questions presented in the HFIAS indicator come in the form of three domains. Figure 20 displays these results as indicative of all slum areas as a whole.

This is meant to display an idea of frequency of food security issues. Anxiety and uncertainty about household food supply is the least recognised domain, yet still describes 67% of households feeling some frequency thereof, with 19% often so. 95% of the population experiences a form of insufficient food quality, of which 29% experiences this multiple times every week. Lastly, insufficient intake is experienced by 86% of the sample, of which 25% happens often.

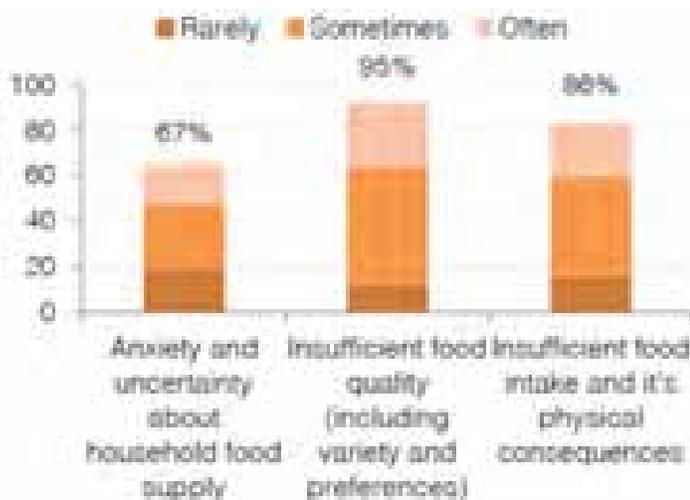


FIGURE 22: HFIAS DOMAIN BY NUMBER OF HFIAS RESPONDENTS

These results are disaggregated by slum area with Bwaise contributing 11 samples, Kisenyi 43, and Namuwongo 43. All domains are experienced by at least half of the sample population in each area. Figure 23 shows that Namuwongo has consistently responded to these three domains in the affirmative, with at least 33% stating that they experience these conditions multiple times per week.

HFIAS Score

This is a score that describes a household's food security by a numerical value from 0 (secure) to 27 (severely insecure). It can be considered a population

measure, by a reflection of a household's perception of its own food security. Given this, it can show how prevalent food insecurity is within the community.

The median score for the entirety of the sample population is 15. When regarding the disaggregated results, one can see that this score is significantly influenced by Kisenyi, whose median score is the lowest at 8. HFIAS is not conducted under the Ugandan Government DHS or NHS censuses, however for reference, independent studies have shown urban West African household median HFIAS scores of 4 to 5 (considered as secure) (Becquey et al. 2010). Furthermore, after the 2008 price crisis in Burkina Faso, scores in urban Ouagadougou averaged at 9.0 (SD 5.6) (Martin-Prevel et al. 2012). Urban slums in Bangladesh had mean food security scores of between 13.5 and 11.1, with an average value of 12.2 (Benson 2007). Within a Ugandan context, a referential mean score for a population of rural inhabitants living with HIV/AIDS was 15.2 (SD 5.0) (Kadiyala & Rawat 2012). In this study, the lowest average of all areas was Kisenyi at 10.3 (SD 7.1), with all areas representing an average of 16.0 (SD 9.0).

TABLE 13: HFIAS SCORE

Population	Median Score
All	15
Bwaise	20
Namuwongo	22
Kisenyi	8

Severity and Prevalence

Though severity and prevalence are not utilised by ACF as the thresholds have not been validated for universal use, the results as obtained by the FANTA guidelines are presented (Coates et al. 2007). Other studies in the past have used the same FANTA guidelines. This allows a minimal basis for comparison, despite the question of the applicability of the thresholds. It should be kept in mind however, that though these comparisons are presented, methodologies and aims of this study and those of the comparatives are notably disparate and therefore a direct correlation should not

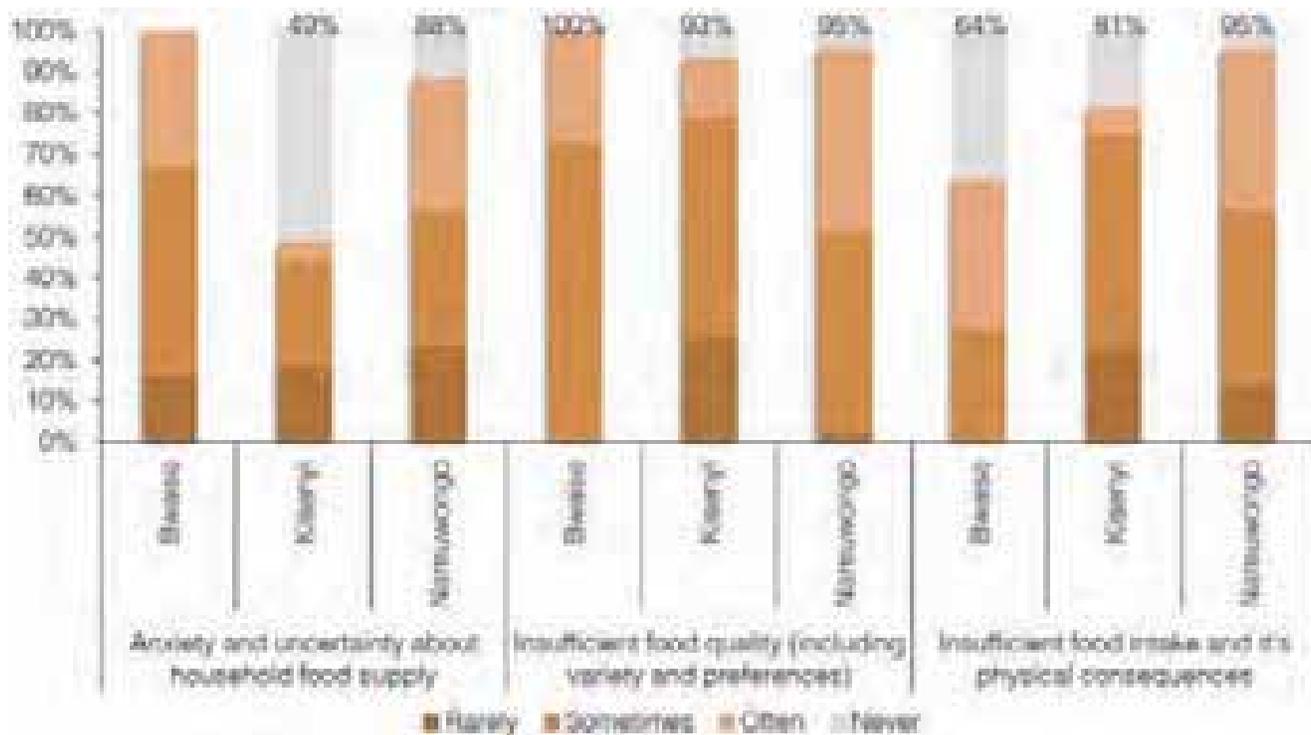


FIGURE 23. HFIAS DOMAIN DISAGGREGATED BY AREA

be drawn. These results display to what extent and severity food security is experienced by the sample population. The results in Figure 23 are presented as percentage totals of respondents and include both all areas as well as separated by slum.

This result tells us that more than 75% of households in all slum areas are severely food insecure, paying notable attention to Bwaise (100%) and Namuwongo

(93%). For comparison, Benson (2007) found that in Dhaka, Bangladesh 66.3% were labelled as severely food insecure, and another 23.1% as moderately so. The same population of HIV/AIDS patients in Uganda claims a mean of 66.1% as severely food insecure (Kadiyala & Rawat 2012). The study examining food security in Ouagadougou after the 2008 price crisis saw all levels of food insecurity at 78.0%, whereas in this study the levels were 98%, with only 2% as food secure.

5.3.7.1c Food Consumption Score

Food consumption scores are presented as an indicator of household dietary adequacy, mainly focusing on macronutrients and energy. The FCS for this study was adapted from a 7-day model for information from a 24-hour recall. This is mostly because of respondent fatigue due to the large amount of other information that had been collected. It is possible that this may have skewed the results, though should still serve as complementary information to the other indicators. The standard thresholds were utilised as opposed to those that are altered to adjust for sugar and oil eaten on a daily basis (only 17% of the population had consumed

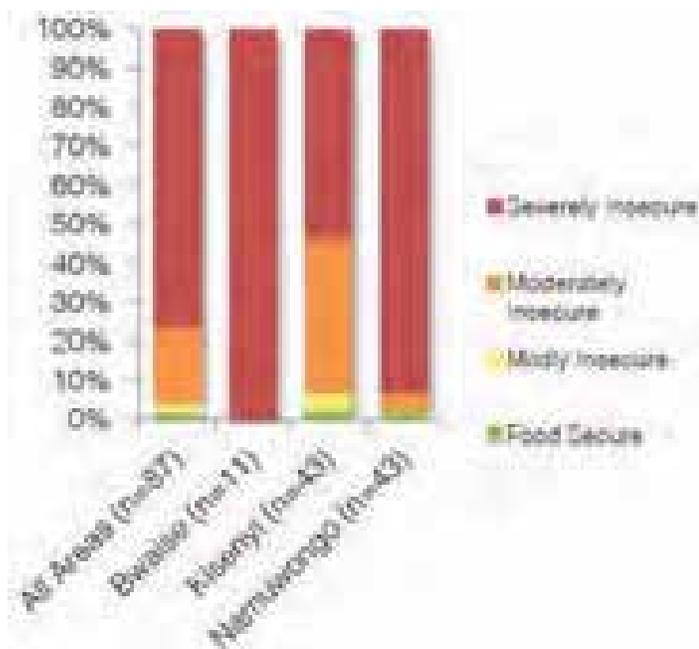


FIGURE 24. HFIAS SEVERITY AND PREVALENCE

sugar and 19% oils or fats within the recall period).



By disaggregating this information by area, we can see that Kisenyi has a high influence on the Acceptable consumption scores when part of the whole population, which is in line with both the HFIAS and the IDDS scores. Interesting to note is the difference of those results in Namuwongo, which does not reflect the results of the other indicators. This may be explained by the methodology, in that as this indicator was adapted from a 7-day model to a one-day model, anomalies in the diets may have occurred and may not be fully representative.

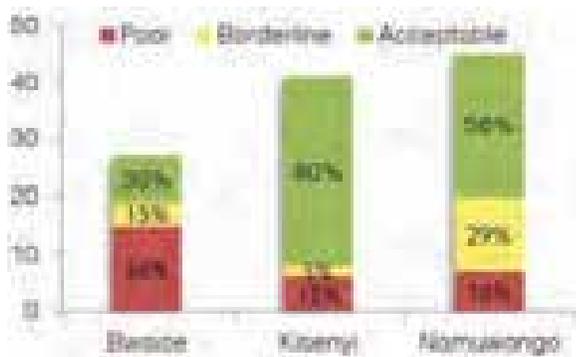


FIGURE 26: ADAPTED FOOD CONSUMPTION SCORE BY AREA

5.3.7.2 Other Food Security Information

Other information was collected that pertains to food security and the diets of the slum dwellers.

5.3.7.2a Frequency of meals

In addition to the 24 hour recall of the IDDS and FCS, frequency of meals eaten was obtained by asking how many times both the respondent and children

under the age of two have eaten in the past 24 hours. 'Eaten' can account for both meals and snacks and was differentiated as such because in Uganda, when eating it is only considered a meal if matooke, cassava or another starchy carbohydrate are consumed.

Two meals for the respondent seem to be the prevailing statistic in all areas beside Kisenyi where 3 or more accounted for 100%. This is keeping in line with the other food security indicators that displayed Kisenyi as relatively better off than both Namuwongo and Bwaise.

When considering children under two years of age, only 50 respondents had claimed to have a child fitting the age. Under the age of two was chosen as this is one of the most important periods to prevent stunting as caused by food intake. Bwaise was the only area who had children that have eaten 0 times in the past day, though this only represents 2 households.

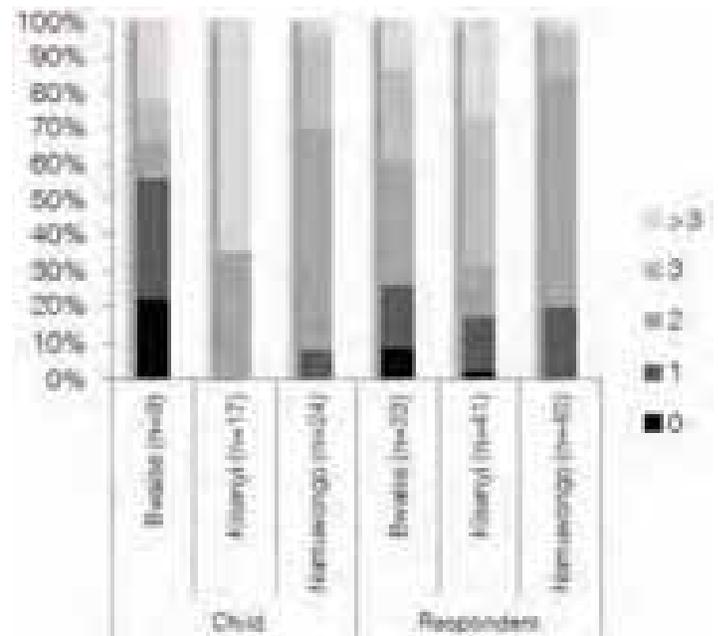
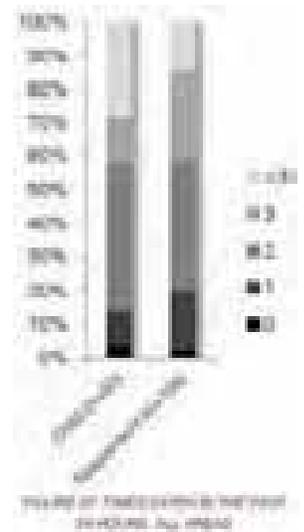


FIGURE 28: TIMES EATEN IN THE PAST 24 HOURS, BY AREA

5.3.7.2b Sources of Food

Table 14 displays the sources of food that the respondents had claimed. 93% of respondents had claimed just one food source, which aside from Bwaise slum, were all purchases. Bwaise had the most varied food sources, however the majority (76%) claimed purchasing as the primary method. 88 percent had said that they had acquired food by purchase in the last 24 hours. These results are not presented by area as purchase is overwhelmingly the main method of acquiring food, which is consistent with the literature.

TABLE 14: RANKED SOURCES OF FOOD

	# of Instances	Rank
Purchase	98	1
Food Aid	6	2
Household Farming/Livestock	5	3
Gift	1	4
Other	1	4
Exchange/Barter	0	--

5.4 Livelihood Profiles/Strategies

Livelihoods are multidimensional and can be difficult to differentiate due to the sheer amount of variables associated with them. For this study, multiple dimensions were indeed considered for livelihood profiles, but special consideration was taken with expenditure and incomes.

Poverty estimates for Kampala are widely varied, possibly due to limited data sources, method of calculation, or non-specificity toward populations. For the first step of the livelihood profile, four different calculations were assessed to determine the scale of poverty within the sample population. Though the sample size is too small to relate to the entire urban

poor population, this was done so to give evidence-based reasoning to the terms “very poor”, “poor”, “middle”, and “better off” when grouping by wealth.

The figures in Table 15 show a wide discrepancy between these classifications. It should be noted however that all are above the official rate of 4% for urban residents. Notably, the CBN measure reported 24% as below the poverty line, 20% more than the Ugandan Government's figure for Kampala using a similar measurement. Though interestingly, this more closely reflects the most recent official national poverty line statistic (including rural areas) at 24.5% (UBOS 2010b).

As an expense-based poverty limit is more suitable to this context and that nearly double the sample size had information available to calculate the absolute measures, this study will consider respondents who fell under the CBN line as ‘Poor’ and those that fall under the FEI line as ‘Very Poor’.

For the ‘Middle’ and ‘Better off’ groups, the thresholds were set based on the mean daily food expenditure, 1943 US\$hs. I.e. those that are above the CBN poverty line but below the mean are considered “Middle” while those above the mean are “Better Off”.

TABLE 15: DISTRIBUTION OF POPULATION UNDER DIFFERENT POVERTY LINES

Measure	Income Based		Expense Based	
	L	IF	CBN	FEI
Poverty Line (UBOS)	25000	18000	854	448
Below	80%	42%	17%	0%
Between	87%	39%	25%	7%
Above	13%	45%	58%	93%
All	73%	41%	24%	7%

5.4.1 Wealth Groupings

To further complement the justification of using the poverty line, wealth groupings were developed to demonstrate asset and financial wealth differentiation of the sample population. For this purpose, owning a residence is considered a measure of asset wealth and clearly differentiates those groups that fall below the CBN line. Crowding index is also used as a measure of asset wealth, though the only apparent differentiation separates the better off category.

Wealth Group	% Sample Population	Avg. Daily Expense	Med. Daily Income	Expense/Income Ratio	Crowding Index	% Owner of Residence (land and/or structure)
Very Poor	7	351	ND	ND	2.3	0%
Poor	17	1004	12750	0.08	2.9	0%
Middle	39	2265	12500	0.18	2.8	15%
Better Off	37	4501	17500	0.26	1.8	24%

Although, as previously noted, income levels in this study were questionable, the expense to income ratio was included to further demonstrate the differentiation between the groups.

Wealth groups were not particularly differentiated by number of income sources amongst the sample population. In line with previous urban studies, income source types varied greatly and, along with wealth groupings, formed a sufficient differentiation to define livelihood profiles. The sources were listed through open-ended response by the respondents and were recorded without a particular naming convention. These were then classified into broad groups.

To better define these income source types, some examples are given for each category as listed by the respondents:

Casual Labour: Usually listed as casual labour or self-employed (confirmed by interviews with the respondents). Others include Boda-boda (motorcycle) taxi drivers, timber carrying, or water fetching.

Petty Trade/Street vendor: Typically a vendor of single commodity foodstuffs (tomatoes, sugar cane, chapatti, etc.). Also includes 'local brew' vendors, water vendors (private tap operators) money changers, various non-food items (charcoal) and mechanical spare parts for cars or boda-bodas.

Vocation: Skilled service delivery or artisans such as hair dressers, welders, craft makers, electrical workers or carpenters.

Public/Private Salary – Nonqualified: unskilled salaried positions such as street sweepers, rubbish collectors, security guards, or savings group collectors

Public/Private Salary – Qualified: Salaried position that requires training such as Policemen, Nurses, teachers, or traditional birth attendants.



A common designation was that of businessman/woman. This term is used broadly and can mean anything from owning a storefront to infrequent casual labour.

As details were limited in the specification of income sources during the data collection, this was discounted in these groupings though it should be noted that it accounts for 6% of respondents primary source of income.



FIGURE 30: MEDIAN INCOMES VS MEDIAN TOTAL EXPENDITURES BY LIVELIHOOD PROFILE

5.4.2 Livelihood Strategies

From this information groupings can be developed that characterise different livelihood strategies. Considering the CBN poverty line as a poor/non poor cut-off and considering primary income sources and asset capitals, profiles have been developed for six livelihood strategies.

These classifications were developed in consideration of the guidelines as presented by the HEA. The most influential factor in determining the groupings were wealth grouping and type of income activity as described below. By using two of the most concrete characteristics available from the household study, the identification of these groups more accurately reflects how the respondents identify themselves. Additionally, complementary information taken from the four remaining capitals of the SLF has been considered in the development of the profiles.

Each profile is presented and described below, with charts examining their daily expenditure, a visual representation and explanation of their livelihood asset mix, and an example activity profile. Charts comparing the subsequently discussed information across the different profiles can be found in Appendix VIII. As income activities may vary dependent on location, size and demographics of slum areas, it should be noted that these profiles have been developed to describe the sample population investigated in this study only and may not pertain to the larger urban poor populace.

TABLE 16. LIVELIHOOD STRATEGY REPRESENTATION BY SLUM

	Bwaise n=12	Kiikya n=31	Namuwongo n=39
Non-poor casual labourers	17%	10%	38%
Poor casual labourers	0%	13%	12%
Non-qualified salary	8%	10%	13%
Qualified salary	0%	13%	3%
Vocational/Service	8%	13%	12%
Petty Trade/Street Vendor	58%	53%	18%
	100%	100%	100%

5.4.2.1 Poor Casual Labourers

Respondents claiming a type of casual labour as their primary source of income fall into this category. Making up 1/3rd of respondents and are spread nearly evenly across wealth groups. Hence, it was necessary to distinguish the profiles. They are differentiated as “poor” as they fall below the previously defined CBN poverty line for this population.

Demographics and Asset Capitals

70% of poor casual labourers claimed to have changed work since moving to Kampala, all of whom were formerly farmers and claimed the lack of land as their primary reason for not continuing the activity. This is the only group that did not have any respondents who owned neither the land nor structure they live in. Poor casual labourers claim the second-lowest rate of membership of groups or associations in their communities at only 1/3rd of respondents. Additionally

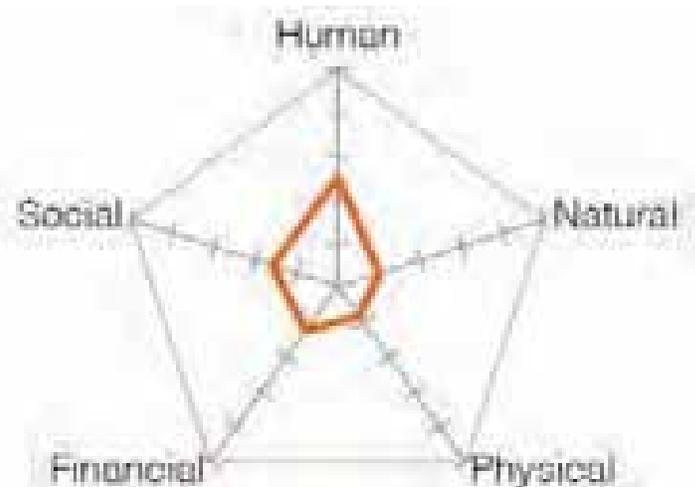


FIGURE 31: POOR CASUAL LABOURER ASSET MIX

this group is the least likely to have received a form of support (cash, food, work, etc.) from a network (mostly UN/NGO or family/friends); only 30% having claimed so. The financial capital portion was heavily influenced by the low debt/income ratio, despite 89% claiming to have taken on debt within the previous year, but subsequently adjusted for the wealth groupings being entirely in the poor and very poor categories. Poor casual labourers were also the users of the least amount of water per person per day at a median value of 10L, with a median cost of just 33 UShs.

Expenses

The daily expenses by poor casual labourers are kept minimal, with food expenses showing the widest variation. The median total daily expenditure in this group is 3110 UShs. Rent takes up the vast majority of their monthly expenses. This group claims the highest proportion of household with children attending school (80%), and 100% of households having at least one child under 5 years old despite education being the largest expenditure within the “other” expense periodicity.

Activity Profile

The activity profile of a man in Namuwongo slum is displayed in Figure 33. As a representation of a typical day, two main points can be taken from this schedule. First, that the man spends the bulk of the day searching for work.

Searching for work/Day labourer	
	07:30 Wakes up
07:30	08:30 Washes up, eats breakfast
08:30	19:00 Searches for work, visits friends, if work is found then he eats for the day
19:00	20:00 Eats supper
20:00	21:30 Washes up
21:30	Goes to bed

FIGURE 33: ACTIVITY PROFILE - POOR CASUAL LABOURER

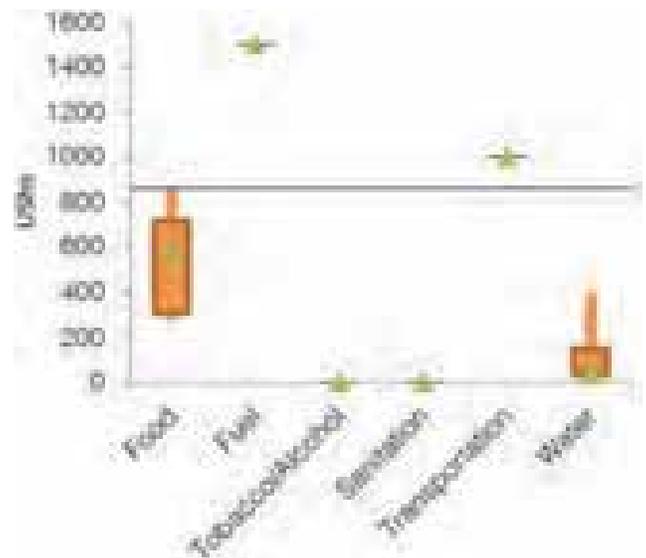


FIGURE 32: POOR CASUAL LABOURER DAILY EXPENSE VARIATION WITH CBN LINE

This may constitute him actively approaching job sites and asking for work, or waiting at his or a friend’s home or on a main footpath for someone to propose work to him. Second, the man stated that his eating for the day depended on whether or not he found work for the day. He said that when he did in fact find work, it was typically fetching water.

Food Security and Coping Mechanisms

Regarding food security indicators, poor casual labourers claimed the highest proportion of ‘poor’ FCS scores of all the livelihood strategies profiled. Additionally, the households in this group were the only ones to claim 100% of their child IDDS scores under the ‘poor’ threshold. When considering the HFIAS indicators, 85% of the group displayed some anxiety and uncertainty about the household food supply, similar to the non-poor casual labourers. 100% of respondents claimed insufficient food quality (30% responded as ‘often’), compared to 85% of their non-poor counterparts. Insufficient food intake was cited by 90% of residents, similar to the non-poor. Some form of food insecurity (mild, moderate, severe) was claimed by 100% of the respondents, as did all groups. The HFIAS score calculated for this group was 12.1, while the mean for all groups was 11.2.

Coping mechanisms that were employed by this group were identified by an altered coping mechanism index score, as noted in the methodology. Poor casual labourers were the only group to have a significantly higher coping strategies index score (17.6) from the mean (10.9). This was mostly influenced by 60% of respondents claiming to have sent a family member away to beg, the highest proportion of all groups. This group also claimed 80% of respondents have stopped health or education expenses within the last month, 40% more than the next highest group. Additionally, 100% of poor casual labourers claimed to have reduced all expenses within the same time period. They have also claimed the highest proportions of selling productive assets (60%) and taking on new debt (70%).

Hazards and Vulnerability Context

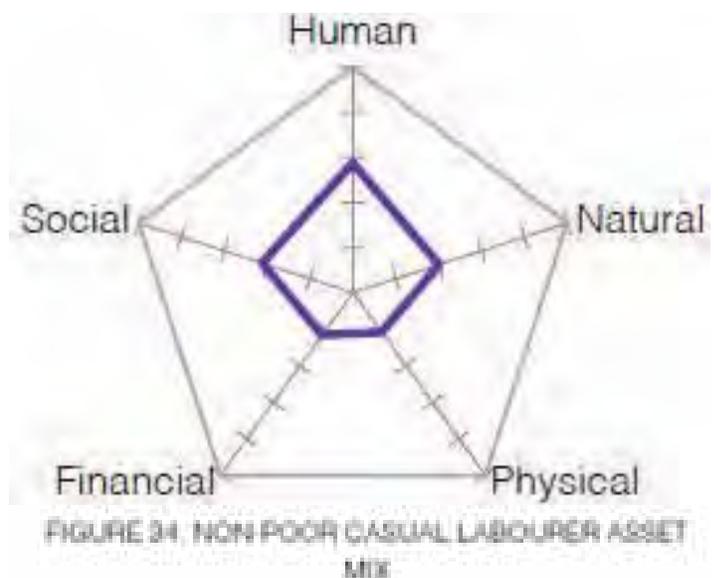
As their situation is primarily casual labour, the main hazards are any of those that can affect a daily income, such as illness of the head of household or child. The uncertainty of income can be considered the most apparent and persistent vulnerability, and because of this the casual labourer may need to seek other means to achieve their livelihood outcomes. As these poor casual labourers were located mostly in Namuwongo, an environmental hazard exists in their susceptibility to flooding. As mentioned in the natural capital section, flooding can spread disease and depreciate or destroy assets, and in some cases can be life-threatening. Lastly, land tenure affects this group. Ownership of a residence is a rarity amongst this group, and coupled with the uncertainty of income and the persistent threat by city planning regulators, a lack of shelter is a persistent threat.

5.4.2.2 Non-Poor Casual Labourers

Respondents who claimed casual labour as their primary source of income, but were fell into the 'Middle' and 'Better Off' (above the CBN line) categories, justified them as being non-poor. Non-poor casual labourers are also differentiated from their poor counterparts in that the majority (45%) have been living in Kampala for over 16 years.

Demographics and Asset Capitals

The majority of this group uses tap water during the rainy season. This is mostly represented by Namuwongo slum (private taps or water merchants) and prices may not be as regular as the public water dispensers in Kisenyi. It should be noted that during the dry season, use of public wells for water increases. Possibly, as rainfall slows, the risk of contamination by waste lessens. Physical capital was heavily influenced by the fact that only 5% were owners of the land or structure they lived in, and 0% had a toilet within the house. Only 20% of non-poor labourers claimed membership in a community group, the second lowest of all the groups. This group had the highest ratio of expenses/income and second highest ratio of debt to income, which heavily influenced the financial capital portion. This group did claim the highest natural capital level, as it had 5% of respondents sourcing food from urban



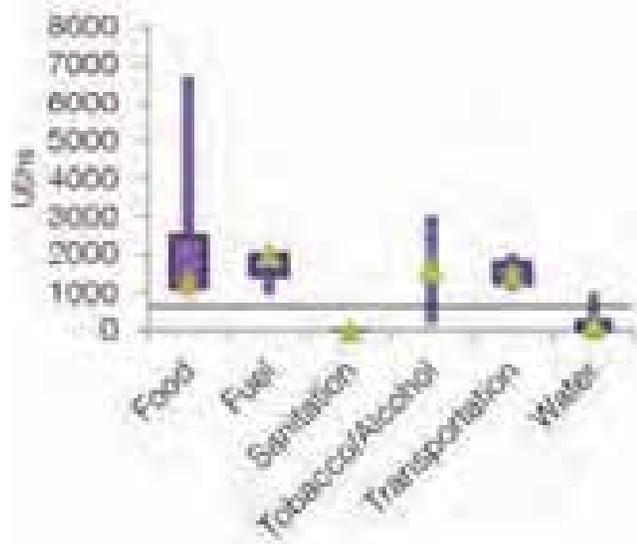


FIGURE 35. NON-POOR CASUAL LABOURER DAILY EXPENSE VARIATION WITH CBN LINE

agriculture or livestock as well as a high usage of water from wells during the dry season. Natural capital was adjusted to account for the exposure to flooding as the majority lived in Namuwongo, one of the most flood-prone areas due to its border on the Nakirubo canal.

Expenses

Non-poor and poor casual labourers are seen to have similar daily incomes, yet the differentiating factor is that the non-poor tends to have higher daily expenses. Once again, food makes up the largest variation of daily expenditure for this group, yet transportation has the highest median value. The total median daily expenditure for this group is more than double that of the Poor Casual Labourers at 6490 US\$. Rent is the predominant monthly expense with loan repayments as

the second highest, with an average debt taken out at 271,400 US\$. The debt taken out was used mostly for rent, though most of those that borrowed claimed at least two reasons for taking on the loan.

Activity Profile

The activity profile for this group sees the main difference from the poor casual labourer that the respondent had work to attend on the day of the interview. Additionally, having a regular job affords the worker to spend weekends as leisure time, in this instance, visiting with friends.

Food Security and Coping Mechanisms

Only 10% of the respondents had an FCS score fall under the 'poor' threshold, with 60% falling into the 'acceptable' margins. Contrasting this however is 60% of the households with children falling under the 'poor' child IDDS threshold, and the remaining 40% as 'borderline'. The HFIAS score was 13.2, the highest of all groups. Some frequency of anxiety and uncertainty as well as insufficient food quality was felt by 85% of households, the second highest and second lowest values of all groups, respectively. 95% of respondent households also claimed insufficient food intake at equal frequency proportions. Non-poor casual labourers were the only group in these calculations that had a respondent listed in the 'food secure' category of severity and prevalence, though 84% remained as severely insecure and the residual 11% moderately so.

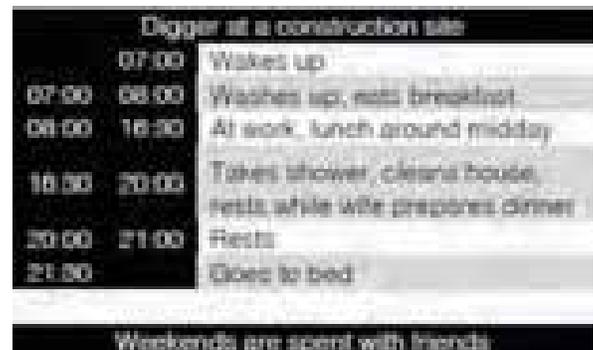


FIGURE 36. ACTIVITY PROFILE OF NON-POOR CASUAL LABOURER

Non-poor casual labourers claimed the lowest proportion of selling non-productive assets and the second lowest proportion of productive assets of all groups, suggesting selling off assets to compensate for lack of money is not a common mechanism for this group. This being said, the index score for this group was 9.8 (mean 10.9). This is influenced by the 42% of households having claimed sending a family member away to beg in the last month at least once, which is the highest weighted category of the six index indicators.

Hazards and Vulnerability Context

Like their poor counterparts, the main hazard is the uncertainty of income. The difference arises in their expenditure levels with their median food expenditure at 1300 US\$ per person, one and a half times larger than the limit imposed by the CBN line. This suggests a safety net in terms of food expenditure, in that the poor casual labourers are surviving on less than half, although according to the poverty line, this expense level registers as food insecure.

Additionally, high levels of debt repayments lead to higher financial insecurity, compounding the negative effects of casual labour as a primary income source.

5.4.2.3 Petty Traders/Street Vendors

The striking majority of those who were characterized as petty traders/street vendors were in the middle and better off wealth groups. Comprising another third of the respondents, all but 16% (four respondents) were classified as above the CBN limit.

Demographics and Asset Capitals

This group represents the lowest proportion of respondents who have changed their type of work since moving to Kampala, only 19%. Only 16% of the migrants of this group have been in Kampala less than 6 years, though it boasts the highest proportion (nearly one quarter) which were non-migrants and born within the district.

Petty traders claimed 100% membership of a social or community group, with 56% receiving at least one form of support such as cash, remittances and food. These primarily came from family and friends, but also from NGOs and their community or savings groups. Physical capital is the second highest of all the groups,

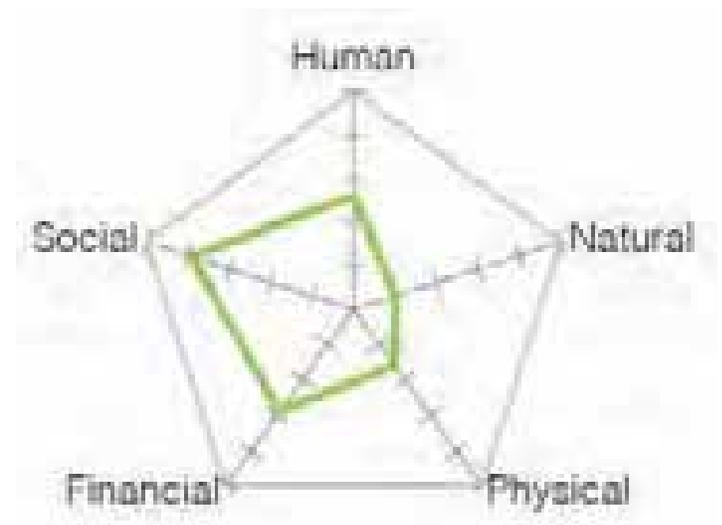


FIGURE 37: PETTY TRADER/STREET VENDOR ASSET MIX

yet due to low percentages of residence ownership and latrines in the house, this remains relatively low. Natural capital remains low due to low usage of water from wells, though this was the only other group to claim food from urban farming.

Expenses

Transportation makes up the highest median expenditure for this group, which is expected as people that are trading may need to be able to move to collect their products and as well to find customers. Many of the petty traders do their business by walking in an area and hawking their goods, rather than sitting

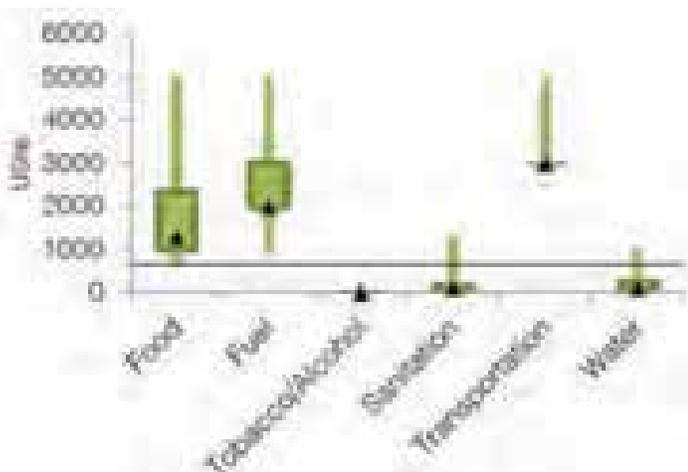


FIGURE 39: PETTY TRADER/STREET VENDOR DAILY EXPENSE VARIATION WITH CBN LINE

in one spot and waiting for customers to come to them. Types of fuel were not differentiated in the questionnaire, thus the fact that fuel is second highest expenditure could imply charcoal use for selling street food, or petrol costs for transportation. The total median daily expenses for this group are 6550 US\$. Rent is once again the highest monthly cost, with education being the highest cost in the 'other' category.

Activity Profiles

Two activity profiles are listed for this group as two different types of vendor are presented. One owns and lives in his shop in Namuwongo slum, and the other sells second hand shoes on a blanket next to the railroad tracks that demarcate the old slum area from the new one.

The shoe saleswoman's activities are largely influenced by the weather. As she works on a footpath on an uncovered parcel whose location can change daily, any rain can prevent her from doing business which can have high consequences during the two rainy seasons. She works 12 hours per day and shares lunch and dinner with the other vendors along the footpath.

Second hand shoe saleswoman	
05:00	Wakes up
05:00 - 07:00	Domestic work, clearing, collecting water, preparing breakfast
07:00 - 19:00	At work selling shoes on a blanket on a main footpath in the slum. Shares lunch with other vendors
19:00 - 21:00	Evening service at church
21:00 - 23:00	Watches TV, relaxes
23:00	Goes to bed

If it rains she leaves and returns once it stops

FIGURE 38. ACTIVITY PROFILE OF STREET VENDOR

The shop owner lives in a house that is attached to the shop. This allows him to stay at work longer, but also have the conveniences of eating at home with his family. He leaves the shop for 3 hours every Wednesday to go to the larger Owino or Nakasero markets to re-stock on inventory.

Owner of small food shop in slum	
00:00	Wakes up
06:00 - 08:30	Clean, washes up, eats breakfast
08:30 - 21:00	Works at shop (attached to house). Meals prepared by family
21:00	Goes to bed

Wednesdays at 13:00 he goes to purchase new inventory and returns at 16:00

FIGURE 40. MARKET VENDOR ACTIVITY PROFILE

Food Security and Coping Mechanisms

Petty traders and street vendors had overall the highest proportion of respondents in positive food security classifications according to the indicators. This group had the highest proportion (72%) in the acceptable range of food consumption scores. Additionally, only 68% or so were labelled in the poor grouping of child IDDS, with the second highest percentage (7%) in the acceptable bracket of all groups. This group had the lowest HFIAS score at 9.1 (mean 11.2). Likewise, this group had the lowest proportion of respondents claiming any frequency of

anxiety or uncertainty of food (40%), insufficient food quality (75%), and insufficient food intake (65%). When considering severity and prevalence, petty traders/street vendors had the lowest proportion of all groups falling into severe food insecurity (70%).

Petty traders/street vendors held to the mean in terms of the modified coping strategies index at 10.9. The mechanism most often cited was 'reducing all expenses' at 78%. They also held the second highest rate of sending a family member away to beg at 45% of respondents. Like the non-poor casual labourers, there were not high instances of selling non-productive (21%) or productive assets (11%).

Hazards and Vulnerability Context

Being in an urban setting, as cash is the primary means to achieving livelihood objectives, income once again plays the most important role. Hazards that can directly affect the petty traders' incomes can be considered that which would lessen their customer base such as inclement weather.

Food vendors may be more subject to seasonal production of crops and the resultant price fluctuations. Hazards may also come in the form of a short supply of a particular commodity in the city, though this is rare. More likely, price shifts throughout the year as noted by the price index may have a larger impact.

For those who utilise a large amount of transport, they may be more vulnerable to fluctuations in petrol costs. As a large proportion of this group are food vendors, they seem to be less susceptible to food insecurity according to the indicators. Most food vendors claimed multiple products to adapt to seasonality.

5.4.2.4 Vocation/Services

Vocation or services require a skill that is learned or materials that are not necessarily available to the general population. These respondents were limited in numbers, however were represented in each of the wealth groups, so separation based by expenditure levels was not needed.

Demographics and Asset Capitals

This group had the highest education expenses, yet interestingly also claimed the highest proportion of children not attending school (7 of 10 respondents with school aged-children) with about half reasoning that school fees are too high. A household may put higher value on having a trade, skill, or education and therefore spends more money on training for their children. Likewise, the children may be working alongside the primary income earners, though no households claimed this reasoning for not sending children to school. Natural capital is the lowest of all the groups, and this is displaying the lowest water usage rate from wells of all the groups, as well as no food sourced from urban farming.

Expenses

The largest variation by far for this grouping is fuel. The boxplot was scaled to 10000 US\$ to allow for comparisons, though it should be noted that the maximum fuel use for this group topped out at 25000 US\$/day.

The highest median expense, transportation, may be related to the variation in fuel costs. Average daily expenditure for this group was 9520 US\$, the highest of all groups. Rent had the lowest median of all the groups in terms of monthly expenditure.

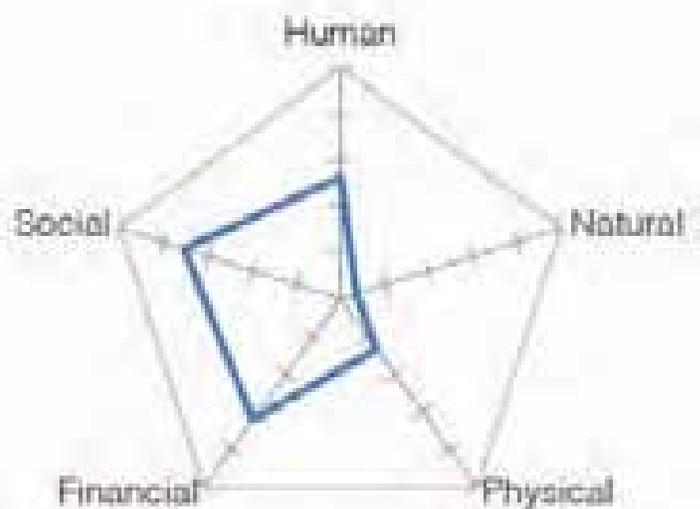


FIGURE 41. VOCATION/SERVICE ASSET MIX

Activity Profile

The activity profile for this group is demonstrated by a man who was making small oil lamps from discarded aluminium food cans. The man works all week long and has a fairly normal schedule, working 11 hours per day making the small lamps at his workshop area which is 500 meters from his home. He is not married and prepares supper and breakfast for himself, though he prepares children to fetch lunch for him while he is working.

Food Security and Coping Mechanisms

The respondents in the Vocation/Service groups had the second highest proportion in the 'acceptable' range of food consumption scores at nearly 70%. Likewise, they had the second lowest proportion in the 'poor' range at 15%. This group claimed the highest proportion of children (10%) in the 'acceptable' range of IDDS and the lowest number categorised as 'poor' (just under 60%). In contrast to these indicators, severely food insecure described 92% of the population of respondents, with the remaining 8% as moderately so. This group also claimed the second highest HFIAS score of 12.9. Additionally, over 90% of all vocation/service respondents claimed at least 1 instance of anxiety and uncertainty of food, insufficient quality, and insufficient intake in the last 30 days.

Vocation/Service respondents claimed the lowest proportion of sending a family member away to beg at only 8%. They did claim the second highest percentage of respondent household who had reduced all expenses at least once in the previous month. The index score figured for this group was at 10.25 which is just below the mean.

Small oil lamp maker	
	07:30 Wakes up
07:30	09:00 Prepares and eats breakfast, organises self and washes up
09:00	20:00 All day making small oil lamps. Children deliver his lunch
20:00	21:00 Rests and eats supper
21:00	22:00 Rests
22:00	Goes to bed

Weekends are similar schedule

FIGURE 43. VOCATION/SERVICE ACTIVITY PROFILE

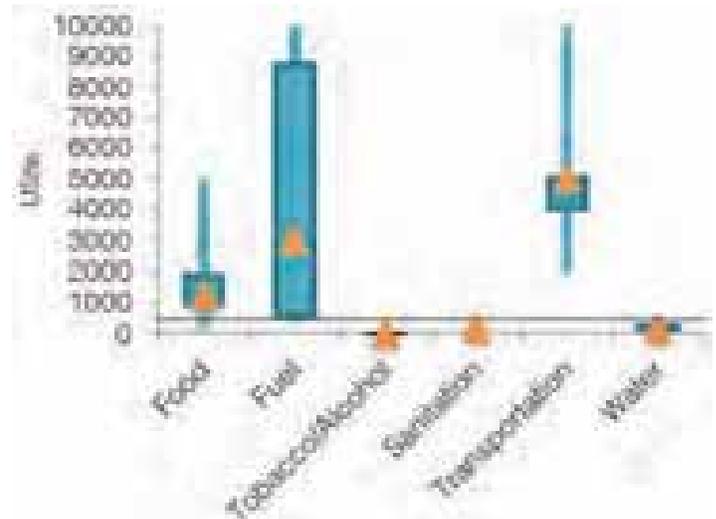


FIGURE 42. VOCATION/SERVICE DAILY EXPENSE VARIATION WITH CBN LINE

Hazards

Hazards and shocks are evidently related with fuel. This may come in the form of oil prices, price of charcoal, or price of paraffin (the main fuel used for lighting inside a house when electricity is not present). If the individual uses transportation to sell their goods at major markets where, as evidenced earlier, food is notably cheaper, the individual may be forced to pay more for food at a smaller market if transportation costs rise to prohibitive levels.

5.4.2.5 Qualified Salary

Salary positions that require a qualification, whether it be formal education or training, are considered another group. These are generally represented by the 'Better off' groups as well as those in the higher strata of

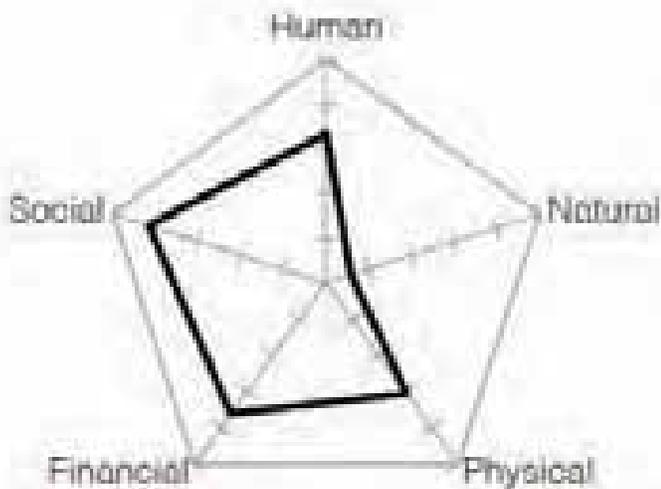


FIGURE 44: QUALIFIED SALARY ASSET MIX

This group claims the second lowest natural capital due to non-use of public wells nor urban farming. They do claim the second lowest natural capital due to non-use of public wells nor urban farming.

This group claims the highest proportion of households that are owners of either the land or the structure. It is plausible that ownership of one or both of these assets reduces the amount of expenditure on rent, as rent is the second lowest of all the groups. As they exert some form of ownership over their household, 50% have a toilet within the household, compared to the entire sample population which only claims 20% toilet ownership.

Expenses

The qualified salary groups claims the highest cost of water per day at an average of 400 shillings, yet use the least amount per person at 12 litres/day. This group also boasts the highest usage rate of water from the city network (83%), influencing physical capital, though this group is mostly represented by Kisenyi slum which has metered access to water.

Education fees are the lowest of all groups, yet only half of this group have children attending school. As there are many respondents who are teachers in this category, there may be government subsidies on school fees for their children. This group was also the only group that reported a giving a loan to others, though this is only one respondent.

Food is the largest median expenditure and has the largest variation. Total median daily expenditure figures at 2390 UShs per household member.

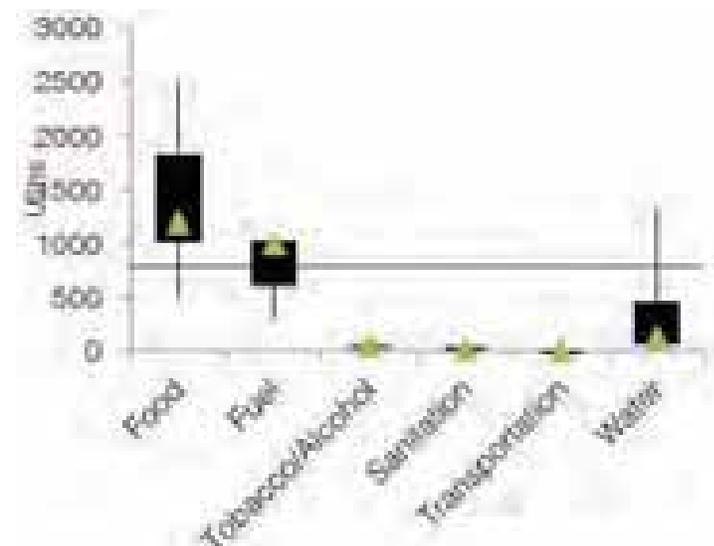


FIGURE 45: QUALIFIED SALARY DAILY EXPENSE VARIATION WITH CBN LINE

Activity Profile

The activity profile was taken from one of the nurses at Kisugu Health Centre near Namuwongo slum. The nurse has a more rigid schedule to conform to when compared to previous groups due to the institutional nature of her work. She works all week long between a 12-13 hour shift. In order to make time to go to church, she must come in to work early before church to compensate for the lost time, then return to work once the service has finished.

Food Security and Coping Mechanisms

Interestingly, despite the relative high levels and regularity of income, expenditure and asset capital security, the food security indicators do not show a group that is significantly better off than the others. The food consumption scores were directly in line with the averages of all groups at a 3-1-1 ratio (60% poor, 20% borderline, 20% acceptable). Likewise, 80% of households with children have a 'poor' IDDS, with the remaining 20% as 'borderline'. 83% of households were noted as severely food insecure, with the remaining 17% as moderately so and none as food secure. The HFIAS score was 10.2, just below the mean but not significantly so. The qualified salary households did feel the second lowest occurrences of anxiety and uncertainty about food, though 100% of households felt both insufficient quality and intake of food in the previous month.

The differentiating factor from the food security indicators however, is that qualified salary households have the only coping strategies score that is notably less than the mean at 6.7. This is mostly because none of the respondents indicated for any of the index measures that they have experienced them 'often' in the previous month. Additionally, the only index measure that was above 33% of respondents was the coping strategy of reducing all expenses at 83% doing so at least once in the previous month.

The differentiating factor from the food security indicators however, is that qualified salary households have the only coping strategies score that is notably less than the mean at 6.7. This is mostly because none of the respondents indicated for any of the index measures that they have experienced them 'often' in the previous month. Additionally, the only index measure that was above 33% of respondents was the coping strategy of reducing all expenses at 83% doing so at least once in the previous month.

Hazards and Vulnerability Context

Having a salaried income, this group is less vulnerable to the daily uncertainty that comes with casual or less formal income sources. Hazards still exist in that those who are employed by the government will be subject to shifts in policy to the degree that it may alter their job and income security. Vulnerabilities to price shocks still exist, though to a lesser extent than the other profiles.

5.4.2.6 Non-Qualified Salary

Non-Qualified Salary households are employed by either the public or private sector. Specific positions include street sweepers, rubbish collectors and security guards. This represents the second smallest grouping of respondents. Most included in this group were in the 'middle' and 'better off' wealth groupings.

Nurse- Kisugu health Centre		
	05:00	Wake up
05:00	05:30	Prepares children for school, cleans house, prepares breakfast for household
05:45	19:00	At work with breaks for lunch
19:00	22:00	Relaxes, sees friends, prepares dinner, prepares children for bed
22:00	23:00	Eats dinner, washes up, children fetch water
23:00	00:00	Relaxes
00:00		Goes to bed

Goes to work early on Sundays to allow for time to go to church. Returns to work after church

FIGURE 48: QUALIFIED SALARY ACTIVITY PROFILE

Demographics and Asset Capitals

This group represents the highest proportion of migrants that come from a rural area at 90% of respondents, suggesting ease of adaptation from rural to urban employment, despite 86% of respondents saying they have changed their type of work since coming to Kampala. Reasons vary from a lack of capital to re-open a shop that they used to operate, to no land to continue agricultural activities, to a former teacher and current NSDF savings group collector saying that a teacher's salary (reported as approximately 8000 USHs/day) is too low to live on in Kampala. 66% have lived in Kampala for longer than 7 years, and 22% of the respondents were non-migrants who were born within the district.

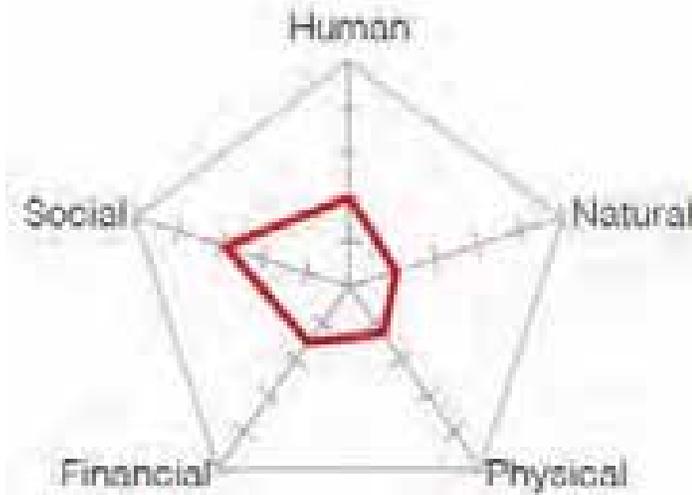


FIGURE 47: NON-QUALIFIED SALARY ASSET MIX

the respondents were non-migrants who were born within the district.

Non qualified salary households hold the title of the highest median use of water per day per person at 25 litres, and the second highest expense on water at 150USHs/person/.day. This group also claims the best accessibility to healthcare, with only 22% claiming insufficient access to health services. This group claims the second-lowest financial capital, primarily due to having the highest debt/income and second highest expense/income ratio.

Expenses

Food was the highest expenditure in this group, averaging nearly 2700 USHs per day, though transportation claiming a higher median value (1750 to 1110 USHs). Total median daily expenditure was calculated at 4040 USHs per day per household member. Rent figures continue the trend of being the highest median monthly cost.

Activity Profile

The activity profile representing this group is from a security guard who was returning from work in Namuwongo slum. At only 8 hours per day, the guard claims the least amount of hours worked of all the profiles. The profile shows that there is a significant more amount of time for leisure time between work and going to bed for the day, with time to go to church on Sundays as well.

Food Security and Coping Mechanisms

The non-qualified salary worker profile has the second highest amount of respondents with an FCS in the 'acceptable' range at 65%, while also having the second highest amount in the 'poor' bracket, second to the poor casual labourers. They also have the second highest proportion of respondents labelled as severely food insecure at 88%, with the remaining 12% classified a moderately food insecure. The non-qualified salary

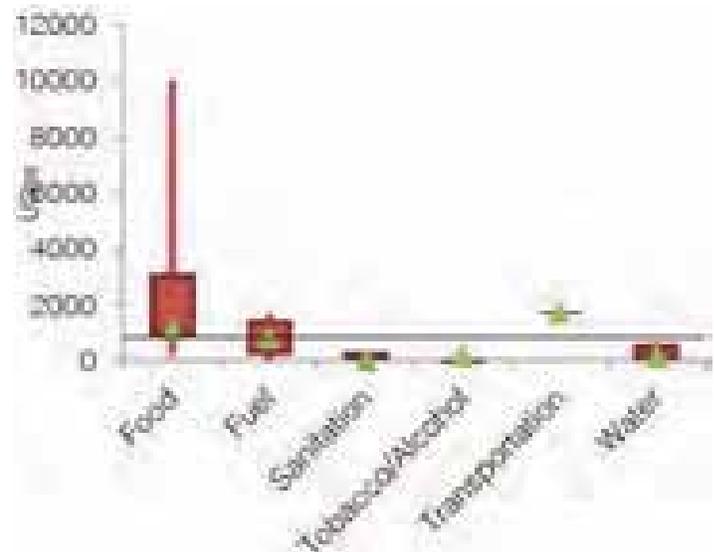


FIGURE 48: NON-QUALIFIED SALARY DAILY EXPENSE VARIATION WITH CBN LINE



FIGURE 49: NON-QUALIFIED SALARY ACTIVITY PROFILE

households have an HFIAS score of 12.5, a full point above the mean, though only the third highest of all groups. This profile fell into the middle of the pack of all the groups concerning anxiety and uncertainty about food supply, though touted the highest proportion of households claiming insufficient quality at the 'often' frequency. It was also the only other group beside qualified salary to have 100% of all respondents claim insufficient food intake at least once in the previous month.

The households within this profile claim a modified coping index score which is slightly above the mean at 10.4. The most common strategies indicated were taking on new debt and reducing all expenses with 63% of respondents claiming so. This profile did claim the highest proportion of households who had sold non-productive assets at 50%, and the second lowest of sending a family member to beg at 25%.

Hazards and Vulnerability Context

Once again the salaried groups are less prone to variation in their daily incomes; however they are more at risk to the whim of their employer. The vulnerability comes with the low median incomes, as further described by the high debt to income ratio.

Long working hours may have negative affects on one's health as well as similarly negative affects on social capital. The unavailability of the individual to partake in regular social activities such as church, leisure activities, or spending time with friends and family may impede the development of social safety nets should the need for them arise.

Additionally, any shock that may affect the availability or access to water may have an impact on either water usage or expenses.

Discussion

The results section of this report displayed findings in three manners, at a global level which concerns policies, organisations and key actors who influence livelihoods in the slums as an outside force; at a community level which considers the population of respondents both as a whole and disaggregated to consider each area's unique context; and at the level of households while considering their livelihood strategies for a different perspective of context and a more holistic analysis.

The patterns identified in each of these sections represent significant issues that affect the sustainability of the livelihoods of the slum dwellers. In this manner, the issues are highlighted as possible areas for future programming.

6.1 Global Level

Key actors that have direct influence over life in the slums of Kampala but do not necessarily live in the slums themselves nor perform direct programming in the areas are typically policy makers at a government level. This investigation included information given by many Ministries of the Government of Uganda which provide coordination and support services to CBOs and local NGOs who do deliver programming in the slums.

The issues identified by these actors can be

considered transversal, in that shifts in macro-level policy can affect not just slum-dwellers, but also any number of other possible groups (i.e. money for slum projects can be raised in the national or local budgets, though the money to pay for such shifts may be taken from other programmes). The level of impact of these decisions and resultant shifts in programming direction are potentially widespread and need to be considered carefully by those who form policies.

6.1.1 Census and Statistics of Slums and Their Residents

The lack of statistics at a government level needs to be improved to properly address the issues faced by the slum populace. The gap in knowledge of even the most basic components of a census such as number of households or population yields an inconsistent and ultimately incoherent viewpoint of the dynamics of slum life.

Statistics that indeed do exist to describe the poor in Kampala do not reflect the information given by NGOs and UN organisations that have done independent studies, much less the findings in this report (given that this report was not meant to represent the entire slum populace). Information such as number under the poverty line, distribution of wealth in the district, and number of members of household per rooms in a house are either lacking or misleading as they compare the entire population of Kampala (not just slum dwellers) to the national stage. This information needs to be

disaggregated for slum dwellers and other groups of urban poor to properly identify and ultimately monitor issues over a long term that are addressed in the NHS and DHS when they are performed.

Obviously it is not feasible to do this during the NHS and DHS studies at their current capacities; however a comprehensive baseline study of all slum areas in Kampala funded and/or administered by the government which focuses on these populations is a necessary first step toward acknowledgement of their inhabitants and effective policy and programming targeting the betterment of the slums.

6.1.2 Land Tenure

An issue that has attempted to be addressed in the past by government is that of land tenure and planning. Though the government has made inroads toward a system of land ownership and property rights that is both more simplified and accessible for the poor in the past, there is still more that can be done. Fear of eviction at any moment is pervasive and poses a continuous threat to those in the slum areas. For example, a resident may face eviction even if they have paid rent once their landlord decides to sell the plot to developers; if the district government decides that a slum area is too close to main roads or condemns the construction of the houses and shops; or if the national government enacts a policy to further develop public lands within the city that may impact livelihoods by limiting resources or opportunities such as urban farming. The lack of insufficient official land title or certain guarantee of residence for the renters, or legal perpetuity of ownership for the landlords in some instances offers large areas for improvement.

Once a more certain and direct land tenure structure can be realised, the residents of the slums may be more inclined to invest in their own community. These investments may come in the form of community gardens, groups of people who are trained to regularly maintain infrastructure such as drains and electrical

connections, sanitation committees offering low-cost or free latrines in exchange for cleaning or other services, or installation of lights above the pathways to the latrines to lessen security risks and diminish use of flying toilets, for example.

This does pose difficulties however. The official government policy towards slum areas within Kampala is one of slum upgrading as laid out in the National Slum Upgrading Strategy and Action Plan, though to accomplish this objective it is necessary that the policy makers enforce and enact these policies as well as continue to develop them further in a participatory manner, as had been done with the original document. The success of slum upgrading in Kisenyi II parish and Namuwongo had ultimately led to a form of gentrification of these communities. These issues were addressed by the 2008 upgrading policy document which acknowledged the need for tenure statute reform, though examples of slum upgrading to similar degrees eventuating after this policy document was instituted are not currently available.

It needs to be recognised officially at a policy level that slum dwellers contribute a vital part to the city and national economy, and in some cases, contribute to the economies of other areas by sending remittances to family and friends in other parts of the country. That is not to disregard the fact that each slum has an economy within itself, along with multiple types of livelihoods that depend on it.

6.1.3 Scaling-up Nutrition Monitoring and Health Capacities

One of the key findings is that malnutrition is not explicitly viewed as a major area of concentration for government health centres in Kampala, aside from Mwanamugimu Child Nutrition Unit and the five supported health centres. Patients visiting a government health centre that is not supported by Mwanamugimu are limited in their options of treating malnutrition to either education about proper nutrition

or a referral to a supported centre or Mwanamugimu itself.

As stated, referred patients may not follow through on the referral due to fear of a loss of income for the day or travel distance, among others. Additionally, as Mwanamugimu receives patients from outside the district, this data should not be seen as representative of only Kampala. These patient records from Mwanamugimu and the supported centres are the only government-sponsored data dealing with malnutrition in Kampala.

Extending the capacities of the supported treatment centres to the remaining 55 health centres III and IV in the district (those that could be equipped to deal with outpatient programmes) may not be economically feasible. This said, basic knowledge of malnutrition cases such as number and prevalence in an area is not available outside of those centres which already conduct programming.

Simple recordkeeping tasks performed by the doctor or nurse who diagnoses and/or refers malnutrition cases could be easily updated and centralised at Mwanamugimu. Information such as location of residence of the individual and number of cases diagnosed per centre would greatly improve the knowledge and the monitoring of malnutrition in Kampala in-kind. This would allow better temporal analysis and add a spatial dimension, allowing identification of malnutrition in selected areas. This extension of nutrition record keeping and centralisation and analysis at Mwanamugimu could also be applied to other medical issues that have known relation to malnutrition, such as diarrhoea and HIV/AIDS.

Furthermore, as outreach programmes are already performed in the slums by most health centres, monitoring of child anthropometric measurements could be completed by the nurses after proper training on techniques and service delivery has been

performed.

Health centres with a perpetual low inventory of drugs which deters people from seeking necessary treatment and/or spending unnecessarily at private pharmacies for drugs that are normally offered for free is a health issue that is district and nation-wide. Providing drugs at regular intervals in quantities that make up the gap is something that could lessen prevalence of both illnesses and malnutrition. However, it would be potentially costly to organise supply of the drugs, logistically difficult to coordinate all the centres in Kampala, and ultimately unsustainable without continual funding.

6.2 Community and Area Levels

There are actors that currently contribute to the continuation and development of slums in Kampala. Both local and international NGOs that have programming directed explicitly toward slum dwellers and/or all urban poor populations, local government agencies and officials, local council representatives, and UN departments have all contributed or are currently contributing to increasing awareness and programming in the slum areas.

The issues identified at this level are not as transversal as those implicated by policy, however they can affect either multiple or all slum areas within Kampala with a concerning regularity. Planning of projects to alleviate these issues must take place only after proper identification of those areas most in need.

It has been shown throughout this report that the three areas contrast in as many ways as they can be compared. The differing contexts amongst three slum areas that are identified by institutional actors as the 'worst off' in Kampala, show that each area has a unique identity that has developed through demographics

and previous interventions to name a few. Additionally, income activities can differ widely between areas, as those found within the areas investigated are well mixed, however in the case of Luzira slum which is of close proximity to Murchison Bay, a large proportion of individuals' income activities center around the water, such as fishing. Kampala being the large district that it is, there are areas that are more rural and less dense, those that are less prone to flooding, those that are less reliant on markets because of urban farming, and those that are principally populated by people originating from a particular area of Uganda, to name a few.

All of the contexts listed above validate the need for study and targeting of each potentially vulnerable area and population, with livelihood profiles subsequently developed for each.

6.2.1 Flooding and Infrastructure

One of the main issues raised by interviews at institutional, community and individual levels is the persistent risk of flooding of the areas. Instant effects from flooding can eventuate most notably during the rainy season: economies can shut down as workers are unable to access their workplace or their materials are damaged by flood water, children will not go to school as the roads and alleys within the slum become impassable, and in some instances flash flooding has resulted in death of young children.

Longer term risks are also a factor, as flood water may spread animal or human faeces as well as rubbish, creating a haven of growth for disease and vectors of these diseases. Flooding can also damage or destroy structures, as wood frames may rot and grow mould, mud walls may be washed away, and metal frames and roofs may rust, leading to financial implications along with the health consequences.

One of the key interventions of slum upgrading policies worldwide is the development of infrastructure. The

two areas that have undergone upgrading projects as identified in this study (Kisenyi II and Namuwongo), have all had successful improvements to their infrastructure due to major investment. Improved drainage has led to significantly less flooding in the areas and as a result less exposure to the aforementioned risks. Unfortunately, these projects were put in place without land tenure or renter protection as described in the previous section, and ultimately increased the cost of living in the areas and forced out those who could not afford the increases.

As stated previously, present day sees a degree of protection of land tenure after upgrading projects. Should these be deemed sufficient or that other protections or guarantees are put in place, infrastructural improvements would alleviate to a significant degree the exposure to the aforementioned risks. The community-wide scale would ensure a large amount of beneficiaries and would also be one of the more visible interventions to the residents themselves. Difficulties present themselves in obtaining planning permissions for these projects. As with any bureaucracy, the government acts as a sort of key holder to major public works projects and because of the complicated land tenure system, land owners may also need to be included in the planning process. Areas that undergo successful upgrading projects will also be more attractive to those residents who live in areas which are not upgraded, possibly forcing the cost of rent upward and/or raising the already egregious levels of crowding in these areas.

This said, major infrastructural improvements would be the ideal, but not necessarily the only option. A more economic and less politically demanding, albeit less permanent, option presents itself in improving the current open drains in the areas by placing ventilated concrete or wire mesh as covers. This would prevent rubbish and litter from entering the drains and clogging them, leading to a more efficient use of present infrastructure. Though this would not necessarily

account for heavy rainfalls that overflow drains, it may lessen the number of instances of flooding over the course of a rainy season.

6.2.2 Rubbish

Household rubbish and litter are ubiquitous throughout all of the visited slums and is a major concern for these areas. The residents readily make and acknowledge the connection between rubbish and flooding as mentioned in the previous section. What may not be as obvious is the connection to rubbish and disease. Aside from personal human waste, improperly disposed of rubbish can become a habitat and breeding ground for vectors of disease such as rodents and insects. The health implications can be serious, with a number of potentially fatal diseases and illnesses already found within the slums.

Some of the investigated areas have rubbish collection service, of which the residents are required to pay for. Properly designated dumping sites, as well as timely and cost-efficient (for both the provider and the user) collection services would greatly enhance not only the apparent aesthetic of the slum area to the beneficiaries, but also lessen the exposure to flooding and diseases.

6.2.3 Toilets

Latrines exist within each of the visited slum areas, though access is limited to some of the slum residents. As non-use of toilets is predominantly related to their cost, the most apparent method of improving access is to intervene in costs. As these latrines are largely privately owned, the fees from the toilets can vary depending on the owner of the facility. Introducing free or low cost latrines in exchange for cleaning services (cleanliness being another cause of non-usage) as suggested in the land tenure section may have competitive disadvantages to the owners of these latrines, affecting their daily income and ultimately their livelihood. As it is unknown to this study if the

owners of these latrines live in the slums themselves or not, this is an issue to be further investigated should it be a recommended course of action.

Personal security at the latrines and on the pathways to the latrines was also noted as a deterrent of use. While hiring guards to protect the areas is an extreme and costly measure, more patrols by police may help ease these fears. As the slum residents can be sceptical of new people in the area, enhancing police presence may have a negative effect. Police are viewed suspiciously by slum residents as they are employed by the KCCA, the institution most often associated with evictions. It would be paramount to assure the residents that police are there to heighten security as opposed to any malevolent purpose. Likewise, it would be necessary to assure that the police maintain this role.

Additionally, an economical and less politically involved method could be to install solar lighting for the areas and possibly along the pathways. Possibly deterring potential criminals, the security in the area overall may be lifted and would thereby generate beneficiaries throughout the community. Theft of the lights would need to be addressed, as well as potential objections by residents whose homes are directly exposed to the lights at night.

6.2.4 Social Networks

Social groups claim high membership rates in the slums and vary between common bonds. Savings groups, church groups and drama groups were all noted by the household level respondents. Developing on this theme, each group has a sense of community between its members. This can be seen through the potential bias of NSDF enumerators administering questionnaires to mostly other NSDF members. Thus, originally a study limit, this bias has shown that social groups within the slums form a sense of community. Developing new groups that bring people together

to work toward a common purpose, or even simply acknowledges that they have a common bond, can give a greater sense of community and thus a greater respect for their community. Identifying the possible avenues for group creation, the motivations to be part of a group, the commonalities between potential members, and the common goals to work toward may be a cumbersome and taxing process that will eventuate to a still relatively non-representative number of participants.

Forming a community group that residents are members of just by living in their slum, with issues identified at a community level and thus common goals to work toward and advocate for, can develop the sense of community even further. As it stands, there are a limited number of voices that have influence in a slum area. Forming an organised group which is detailed and motivated to achieve their goals as a community can empower not only the community members itself, but also the LC to advocate for their area even more so.

Alternatively, organising the already existent groups into a larger umbrella forum in each community could prove effective. As people are already members of social groups, they understand the usefulness and benefits of membership. Adding a 'power in numbers' element can prove a motivating factor. Representation on a national level is already evident through NSDF and other organisations advocating for slum rights and programming, however each slum area has its own unique context and can use that context to further its own social development. District organisation between communities could lead to opportunities such as trade, further skills exchange and training, and social events such as football matches.

Furthermore, taking advantage of higher levels of community organisation can allow the slums to realise their potential political power. Being an approximated

60% of Kampala's population, the voice of the slum dwellers could advocate much more effectively if they recognised their potential impact.

6.3 Household and Individual Level

Issues that were identified through the questionnaire data and discussions with the residents that could pertain to a household or an individual serve as guidance for future programming at this level. There is programming that is already in place which is supported by local NGOs and CBOs and deals with smaller scale interventions, such as income generating activities. Though the beneficiary base is relatively limited when compared to global and community level interventions, the positive effects are seen daily by the beneficiary and in such cases are much more visible and appreciated by the recipients.

6.3.1 Universal Significance

Similar issues were found in each of the investigated areas. The matters were discovered to be of significant importance regardless of livelihood strategy.

6.3.1.1 Urban Agriculture

Though urban agriculture has been legalised within the previous decade in Kampala, advantage has not necessarily been taken of this opportunity within the slum areas. As stated in the natural capital section, this may be because of the perceived risk of theft or vandalism as forms of urban agriculture such as sack gardens have been subjected to.

This said, food was the highest daily cost for all livelihood groups aside from Vocation and Services. Complementary sources of food to those of purchase could not only alleviate the costs, but also improve the nutritional content of the diets. To counteract

the fears of individual projects, implementing urban agriculture on a community basis would give a sense of proprietorship to a larger amount of individuals and households. Kisenyi and Bwaise slum all had large vacant areas which were left after evictions. Exploring ownership rights of these plots and subsequently determining a way to permit crop growth in a legal manner, as well as protecting the plantings from damage (such as hoop houses or locked gates), would greatly improve the food security of all those involved.

These could be implemented alongside the current social and community groups, or take on an even larger beneficiary base if community groups as presented earlier were to eventuate. Additionally, having permitted agricultural activities in the areas could ease the transition for new migrants who are coming from farming backgrounds, giving them time to adjust to a cash-based economy as well as time to learn new skills that better suit the types of work available in Kampala.

Increasing the urban agriculture would dramatically increase the natural capital in these areas, which is cited by the residents currently as the most limited capital.

6.3.1.2 Credit and Savings

Already present in the slum areas through a number of different actors, savings groups make up a significant portion of slum dweller community groups. These groups are locally organised and internationally supported by organisations like SDI. They are already present, working, and trusted in many of the slum areas in Kampala. As ACF does not directly work in savings or microfinance capacities, a partnership with SDI or a supporting role to the local organisations could help grow their membership base within the slums where they currently work, and extend it to those where they currently do not.

Formal credit was cited as largely unavailable to the slum residents. Small loans for food and education expenses were commonly noted, however inability to access credit to start or continue a business was a shortfall. Lenders are typically wary of slum dwellers due to their uncertain incomes and limited collateral to offer against larger loans. Supporting credit and financing to slum dwellers where there is a gap in service could offer potential benefits for business owners and those looking to start a formal business and break out of the informal sector.

6.3.2 By Livelihood Strategy

A way of identifying beneficiaries and designing programming that best suits their needs is by livelihood strategy. Sharing commonalities in type of work, in access to the asset capitals, and in daily life allow programming to be catered for a specific group.

6.3.2.1 Poor and Non-Poor Casual Labourers

One of the main hazards for casual labourers is the uncertainty of a daily income. The slight margins of income to expenditure which persist day to day leave these groups vulnerable to any shock which disrupts their ability or the availability of work. This being one of the most prevalent issues, programming directed at increasing the level or knowledge of work can be significantly beneficial.

A low-cost and high visibility programme would be a jobs board in each of the slums. Access to classified ads in newspapers or an internet connection both have cost implications, and even so, the jobs listed therein do not advertise for work typically suited to the casual labourer. Casual labourers will usually find work by asking friends, neighbours, family, passersby, or worksite foremen. Altering the dynamic so that employers seeking workers can give those casual labourers a more routine and therefore reliable way of finding work could raise the amount of jobs that the casual labourer can option on a daily basis. In essence,

those searching for help could post announcements on the jobs board when work becomes available. These positions could range from unskilled labour for one single task to highly skilled, multi-week projects. One of the main issues with a jobs board is it may exclude those who are illiterate, though an individual motivated to find work for the day is not discouraged from waiting for the poster to come to the board in the morning. This act could also act as a meeting point, so those looking for workers for a quick task could approach the board and hire a labourer who is waiting. Another issue may be vetting of the employers as it could also translate as an opportunity for exploitation of workers. If vetting were enacted for a period of time following the installation of the board, trust would build as employers become known. Logistical difficulties could arise in sensitization of the communities as well as identifying potential employers.

Skills training, handicrafts and education can also be implemented. Giving the casual labourers technical or trade skills can raise their chances at finding a better paying job that lasts for a longer period of time. This of course has cost and funding implications, and does not offer guarantees of work. As the availability of construction work in Kampala is highly seasonal due to rural agriculturalists migrating to the city for work in the off-season, trade jobs can be highly competitive at times.

Additionally, should infrastructural works such as drainage improvement be put in action, traditional programmes such as cash for work can be utilised and target this group as beneficiaries while also providing training on the trade skills necessary to complete the projects.

As noted previously, local NGOs in Kampala perform skill exchange, where slum-dwellers with a particular skill such as mushroom growing or charcoal production will travel to another area to teach this skill to the residents there, who then pay it forward. This type of

programming could be further identified, supported and expanded upon as it demonstrates model for skill development and growth throughout all communities.

6.3.2.2 Vocation and Services

Slums typically have rather insular economies. Most provisions for daily life are bought within the slums and products produced in the slums are designed for and principally sold to other slum dwellers. Expanding their market base by encouraging trade avenues for hand-crafted products at the larger Owino or Nakasero Markets or at tourist souvenir outlets would mitigate the stigma a potential buyer may have from buying in a slum area or from someone who is selling on the side of the road. This could be accomplished by forming a cooperative of tradesmen and craft makers and aiding them to open a storefront in an area with higher foot traffic, lending a higher perception of legitimacy to the sellers and products. Likewise, a branding effort could help promote products from the slums. As packaging is limited for these products, this could be done by signs or badges worn by the vendors and service deliverers.

Expanding their product base could also be accomplished. Training on new methods of production or service delivery as well as supplying a resource for new or better productive goods can enhance their business opportunities.

As this groups main variation and highest expenditure is related to fuel, this is the most obvious economic hazard for the group. However as the information is limited in this study on what types of fuel this accounts for, further investigation would need to be performed to properly plan and decide which areas are most in need of assistance.

6.3.2.3 Petty Traders and Street Vendors

The largest representation of households in this study are the Petty Traders and Street Vendors. This group sells a wide variety of products although they are typically single or a limited number of commodity

goods. The group's 100% membership rate in social or community groups allows for relatively easy access for any programming that may be developed to benefit these households.

As most of these households deal with either selling raw commodities or street food, not only their own food intake but also their daily incomes may be threatened by any price hikes at the markets that are relayed by a shortage in the areas where they are grown. Therefore, this group could take particular advantage of urban agriculture. The group membership could act as an organising force, finding land within the slum or at a nearby location in the district to raise crops or livestock. Communal ownership of these agricultural plots would deter theft or vandalism as any crime acted upon these gardens would affect significantly more people. The power in numbers, mutual respect and cooperation within the group would account for any disturbance to the success of the project. This could also be organised as a cooperative, thereby giving equal power to each individual who is a member. Additionally, an organisation of the members at this level could act once again as a branding mechanism, where street vendors may wear badges while working. This would let buyers know that not only can they trust the products they are buying, but that they are contributing to the successful livelihood of a specific group.

6.3.2.4 Non-Qualified Salary

Salaried households have the advantage over casual labourers and other daily income earners in that a salary is guaranteed and they can therefore more properly design and apply a household budget. Trainings on creating household budgets to most efficiently use income over the course of a pay period could be beneficial in this course, as this group has the second highest expense to income ratio. This does not account for shocks, however an already high membership rate in social and community groups allows for ease of access to scale up savings programmes to account for unseen shocks.

High debt to income ratio is a noted issue for this group with loans taken out from a variety of different lenders. Improving access to affordable fixed-rate credit from a trusted organisation could alleviate troubles the household may experience with debt repayment.

Capacity building of skills that relate to their type of work could also improve their standing in their current workplace. Doing this independently would not be feasible as coordination of the different types of work alone would be logistically prohibitive. Aiding employers through sponsoring workshops at some of the most common employers may be an avenue to explore, however an understanding of improved incomes as a result of sponsoring the workshops would need to be agreed upon.

Lowering the daily expenses is an optimal approach. This group claims the highest water usage and the second highest water costs of any group. By protecting unprotected wells and encouraging their use this group could benefit from cost savings. This is in addition to the urban agriculture to lower food costs as noted earlier.

6.3.2.5 Qualified Salary

By most accounts the qualified salary is the best off of the identified groups. High asset values in all of the SLF capitals aside from Natural, and stability and sufficiency in their incomes lend this group to be the most stable. This however only considers their livelihoods relative to the other groupings in this study, that is to say, their situation in the context of living in Kampala does not qualify them as significantly better off than other slum dwellers.

The teaching of new skills or income generating activities to this group is difficult as many of the jobs consist of long hours (typically 12 hours/day), leaving little time to balance their social and work lives with another income source that demands more time resources. Should this avenue be pursued, these activities should target other members in the

household which have greater flexibility in their time commitments.

This group has high rates of ownership of the land and/or structure that they live in. This is a point that can be expanded upon as land tenure is one of the major issues for slum residents, as has been noted. Discovering opportunities and pathways to ownership, thereby increasing the physical capital for the remaining 50% who currently rent, would further lend a sense of pride and respect for their area of residence. This may then have the same knock-on effects as mentioned in the land tenure section.

Additionally, access to credit for structural improvement loans and/or training for the skills to complete the work would be beneficial for those who already own. Properly built structures that are built with materials that are not conducive to microbiological growth would lessen disease incidence within the household. Though the scope of this sort of project is small, it could have a large impact that is highly important to the beneficiaries.

6.4 Livelihood Capitals and Food Security

Urban life in Kampala relies on the five capitals of the SLF, as it does in rural contexts. The dynamics however are different, in that there is such a great emphasis placed on the financial and economic as it is the primary means to achieving livelihood goals such as being food secure or in good health. That being said, a brief summary of each capital and its importance to a sustainable livelihood is given.

6.4.1 Financial

As stated incomes and expenses dominate life in urban settings, not only for the poor and vulnerable,

but for the greater population. Food security and, to a lesser extent, access to health services are principally achieved through cash transactions at markets.

The implications for this can be great, as steady gainful employment can be a rarity amongst certain populations. Job skills development is limited for the poorer populations and adaptation of rural skills to an urban environment can be challenging for recent migrants. Additionally, the demand of unskilled work for these populations can change with seasonality, as workers from the rural areas convene in Kampala to search for employment during the lean period.

The availability and access to gainful employment does however lead to a rather robust informal sector. Each area that was investigated had an economy unto itself. The insular nature of many of the economic activities within an area provides a steady yet stifled base for incomes and expenses. It does however also lend itself to higher social capital, as many actors in the slums take part in savings groups that are specific to each slum area and receive support in its varying forms.

6.4.2 Human

Within the sample populations, health services were available at minimal cost to all through government programming. The acceptance and use of these services were only partially developed in this study, however certain issues did become apparent.

Malnutrition has been noted anecdotally to exist within the slum populations. The extent and root causes of this condition are unknown to this study, yet similarly display the need for improved monitoring.

Though school enrolment was rather high, education was consistently noted as one of the largest expenses for a household. Universal free primary education is given free through government programmes, though

the ancillary costs can reach prohibitive levels for some families. Formal education's inherent liaison with lifetime income earning potential proves a great need for affordability and quality of these programmes.

6.4.3 Social

The importance of networking and social groups was inadvertently displayed through this research as enumerators from Kisenyi utilised these groups to complete their surveys. Whether this displays a bias in the methodology or that social groups are in large adherence within Kisenyi is unknown, however the use and value of these groups as seen by their participants becomes evident.

Church, drama, and savings groups are all areas that bring the community together and give a form of power to the participants. Harnessing this social power and utilising it to improve programming and to help one another achieve livelihood objectives is a key area that should be utilised to the fullest extent.

In a broader context, the political influence of the sheer number of slum dwellers within Kampala needs to be realised. This influence can be used appropriately to advocate to institutions for improved infrastructure, improved access to basic services, and improved sustainability in day to day life.

6.4.4 Physical

Housing and land tenure are of prime concern for physical capital. Uncertainty of permanence in an individuals' residence may be inhibiting investment in the community or the household. Should tenure be secured through the appropriate channels, investment in community gardens and farms, schools, rubbish collection, and social capital can all be expected to improve.

Overcrowding is an issue that is not easily dealt with

in the slums, as one room houses for large families are the norm. Expanding structures means a substantial capital investment and is limited due to the physical crowding of the already present structures in the area.

Infrastructure development can be of great use. Not only roads to access markets and improve transportation of both people and goods, but improved drainage of rainwater and scheduled refuse collection are areas for needed improvement.

6.4.5 Natural

Urban farming is not present as a large force to combat food insecurity in the slums and is limited by space, by crime, and by opportunity. Water is available through wells, though is subject to the seasonality that comes with the two rainy seasons. Furthermore, this water may be contaminated by bacteria, yielding water that is not potable and may have unexpected health implications.

Urban livestock farming has been shown by previous studies to be a source of zoonotic diseases, and as such proper farm hygiene practices need to be adhered to for those currently raising animals, and for any future programming.

6.4.6 Food Security

Though the food security indicators come from a small sample population, it raises some red flags. Largely, the most reliable indicators represented in this study (that is, those that have been validated and not altered to fit the constraints of this exercise) display self-perception of the respondent's own food security. This self-perception is largely negative, in that the majority identify themselves as severely food insecure.

Indicators such as childhood dietary diversity and food consumption score do display trends between the areas of investigation, though the degree of the two do differ. When considering IDDS for children and

the HFIAS when disaggregated by area, one notes that both Bwaise and Namuwongo are notably worse off than Kisenyi which has profited from institutional programs and interventions. FCS tells a similar story, though the degree of severity is lessened.

The indicators do diverge, however, when considering the objective measures of IDDS and FCS. Not meant to reflect self-perception, the data suggests conflicting extents of food insecurity. As FCS is a household measure, it could be explained by adults that have a higher dietary diversity than children, and therefore represents a more food secure situation than a child IDDS. It must not be forgotten, however, that the FCS was altered to suit this particular study, and therefore the methodology has not been validated and may yield misleading results.

The results on the whole do indicate potential drastic levels of food insecurity, and as such further exemplifies the need for more targeted and specialised study and monitoring.

6.5 Further Research

This study has highlighted some of the major issues that face slum dwellers in three different area contexts. The scope and aims of this study however only describe a selection of the issues from a selected portion of slum residents. Because of this, further research and development of the understanding of the presented ideas is necessary to fully comprehend the livelihoods of the broader slum population in Kampala and the various contexts in which they exist.

The primary need is proper enumeration of the slum populations. The lack of information that exists about slum dwellers, let alone their livelihoods, is a call in itself for further investigation. Demographic statistics, complete and detailed area descriptions, expanded

understanding of the capacities and weaknesses of slum dwellers are all needed to know not only the context of their livelihood situations, but also to what extent specific issues impede their sustainability as well as how the population manages these issues.

Once the enumeration has been done, a formal baseline study should be implemented within the populations. These baseline surveys should be multi-dimensional and cooperative between organisations and government, so as to include information pertinent to all organisations that are participating in a form of urban programming in Kampala.

Expanding from the baseline studies, on-going monitoring activities of the issues highlighted herein and those subsequently discovered should be performed at regular periods. These should be focused on the activities of the coordinating institutions, but also include statistics that can be used to monitor population growth within the areas on a shorter term basis than the national censuses allow.

Specific to ACF, nutrition monitoring should be completed that focuses on slums yet disaggregated by area. Price monitoring at major markets of Kampala (possibly in conjunction with Infotrade Uganda) in addition to locating the sources of inventory for these markets and monitoring their climates and seasonal production data could aid in preventing price hikes or allow for interventions for when steep price hikes occur.

After development of these monitoring and record keeping programmes, the causal factors influencing spikes in admission rates need to be properly identified and characterised.

Seasonality should also be monitored with regard to income activities and levels. This may identify lean periods throughout the year that are specific to Kampala's slum residents and possibly the greater

urban population. By identifying these, more effective programming measures can be implemented to mitigate any negative effects that variables such as weather and annual migration cycles may cause.

Information sharing between organisations working in the slums should be developed. Because of the limited knowledge of which organisations and agencies are targeting this population, a cooperative inter-organisation slum working group should be proposed. This group should hold access to all of the resources developed by each of the organisations working in the areas to centralise the data collected. This would include both international and local NGOs as well as CBOs.

Additionally, even though urban programming is on the rise, donor organisations are either not properly sensitized to the issues at hand in Kampala or lack the funds or interest to develop these programmes. Information sharing and advocacy to donor organisations could develop the awareness needed to properly address the issues at hand.

Conclusion



A comprehensive livelihood analysis had not before been completed in the slums of Kampala. With the realization of this study, issues have been identified that can affect slum residents throughout the district, within the communities that were investigated, and within the households that were surveyed. This research paints a picture of what successes and failures urban life has on the poorer populations of Kampala city, though through this picture, one understands that an urban livelihood is dependent on context.

Each of the areas investigated have a context unto themselves, and therefore to properly understand the lives of the 1,000,000 residents in the slums, further research is necessary. Kisenyi, an area that has profited from interventions, can act as the poster child for successes and gaps in slum programming. Comparison of Kisenyi to Bwaise and Namuwongo brings about stark differences in the quality and standard of living in each of these areas. Citing these three areas as a precedent, one can see that similar areas as viewed by institutional actors can be differentiated through multiple means. Slum areas in the hinterland of Kampala District may have differences in income activities, in demographics, and in access to services, and therefore demand their own investigation.

The identification of such striking different livelihood profiles within the relatively small sample population of this study shows that even at an area level, programming needs to be further targeted. All groups were identified as dependent on cash to achieve their livelihood objectives, through regularity and amount of incomes became a defining factor. Casual laborers are found to be at a significantly higher vulnerability to price shocks, where Qualified Salary workers that can afford to live in areas with better developed infrastructure are less vulnerable to environmental shocks such as flooding.

Along with the need for further study on the areas and the people, this paper has identified instances of services and institutions that can benefit from immediate action. Population enumeration is the first step to properly targeted programming. In the case of ACF, malnutrition and health baselines and regular monitoring are needed to determine the seasonality and susceptibility of succumbing to malnutrition for selected groups.

The capacities for development within the slums are great, though without proper understanding of the people within, that potential is limited. This said, one can now ascertain that there is a need for improved recognition of the population at an institution and policy level, there is a need for surveillance and monitoring of the vulnerabilities of these populations, and there is a need for intervention to give the help they require.

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List of Appendices

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Appendix I - Example SLF Capital Interview Guides

Human Capital

Health Centre Semi-Structured Interviews

About the Health Centre

Since when has this health center been operating?

How many employees? Volunteers?

Sources of funding?

What areas does the centre serve? (re: catchment)

Where do the clients come from? (are there clients from outside this area)

Which organisations or groups provide support, either financial or practical?

About the services

What types of services does the Health Center offer?

For what services do you refer clients?

Are there any community programs offered? (outreach, etc.)

What are the costs to the users?

How are the services made known to the population? (advertising, word of mouth, etc.)

About the clientele

How many people does the center serve on a weekly/monthly basis? (regular patients, irregular)

Are there seasonal changes in the amount of people served (rainy season → higher disease?)

Can you characterize the different groups of people who come in?

-Area of residence

-Areas of origin (if migrants)

-Parent? Child?

-Age of Both?

-Size of households

-Type of work/Sources of income

-Income level

-Sources of water

Is malnutrition prevalent amongst any of these groups? (is one group more prone than another)

What is the typical level of malnutrition severity that presents in the health centers?

Do the cases of malnutrition usually present with other illnesses? (Diarrhea, measles, cholera?)

Do people who successfully complete a malnutrition program come back for further treatment? (re-admitted to feeding programme)

Which illnesses seem to be the most prevalent?

-Who are the people most affected

Which illnesses seem to be related to seasonal changes?

-Who are the people most affected

Physical Capital

Community Shelters Uganda

General description of users

What sort of work does CSU do?

What programmes do they have in Kampala?

Where?

How are recipients determined?

How is it funded?

Who are the primary users of the service in Kampala?

Where do the users come from?

Description of the users

Can you characterize the different groups of users?

Area of origin

Families? Single parents? Ages?

H (health education, nutrition, knowledge, capacity to work)

S

P (Rented Owned? Watsan below)

N (use of land?)

F (below)

Wat/san

Where in Kampala are the primary projects related to watsan

How are the areas determined

Who are the target populations/where are the areas (delimitations)

Legal awareness

Can you describe the services provided?

Is it advocacy or legal representation provided? Land rights?

Economic

What programmes?

What sort of income generating activities?

Labour assistance?

Credit services?

Savings?

Housing

What sort of housing is provided in Kampala?

Size based on number of people?

Families? Singles?

How are the beneficiaries determined?

Characterizations of beneficiaries in which areas are housing provided?

Natural Capital

Ministry for Lands, Housing and Urban Development

What are the planning objectives for Kampala? How have they changed in the past 10 years?

What is the Ministry responsible for in Kampala?

Have there been any formal investigations relating to the population increase and the urban poor?

What is the state of the art on the subject?

Have there been any formal investigations in to the informal settlements? (slums)

What are the current national policies regarding slums in Kampala, and nationwide?

Are policies seen as effective methods of intervention?

Which, in yours and the opinion of your colleagues, would you assume to be the slums that have the worst circumstances when regarding things like poverty, infrastructure, and access to basic services?

How do you believe slum-dwellers perceive the government?

Appendix II: SDI Key Informant Interviews

About you

What is your role in the organization? In the community?

What is your profession?

How long have you been with SDI/NSDF?

About the organization

How many members of NSDF are in your area?

How long has NSDF been active in your area?

How many people does NSDF employ as savings collectors/other work in your area?

What programs does NSDF offer in your area? Which are the most popular?

About the issues

Can you describe the situation of food? Is it always available? Is it affordable? Is it fresh and healthy?

How do most people get their food/where do they shop (if purchase)?

Is there any agriculture in the area?

What is the hardest thing for residents in your area when considering food?

Is there a government health centre nearby?

What are the main illnesses? Do they change with the time of year?

Do you know if malnutrition is an issue or not in your area?

Where do most people get their water? Do they pay for it? Is it always available?

Are there any other popular sources of water?

What are the typical types of employment?

How many jobs/sources of income do people have, on average?

Can you describe the system of renting or owning a house?

What are the main expenses for an average person? Daily? Monthly?

What are the main issues associated with living in your area?

What are the main benefits associated with living in your area?

What, in your opinion, should be the first thing to be improved in your area?

Appendix III - Questionnaire Form

DIVISION	
-----------------	--

PARISH	
---------------	--

ZONE	
-------------	--

HOUSEHOLD ID	
---------------------	--

INTERVIEWER NAME	
-------------------------	--

DATE	____ / ____ / 2012
-------------	--------------------

1. NUMBER OF ROOMS IN THE HOUSE	
--	--

2. HEAD OF HOUSEHOLD <i>Person responsible for the running of the household every day, and who makes final decisions regarding distribution and use of resources</i>	Male	1	Age
	Female	2	

3	Total number of members of the household (including interviewee)	
----------	--	--

COMPOSITION OF HOUSEHOLD		MALE	FEMALE
---------------------------------	--	-------------	---------------

4	Number of children under the age of 6 months		
----------	--	--	--

5	Number of children between the ages of 6 and 59 months		
----------	--	--	--

6	Number of children between 5 and 15 years of age		
----------	--	--	--

7	<i>Of the children between 5 and 15 years of age, how many attend school?</i>		
----------	---	--	--

8	Number of adults between the ages of 16 and 60		
----------	--	--	--

9	Number of adults over the age of 60		
----------	-------------------------------------	--	--

10	IF THE CHILDREN DO NOT ATTEND SCHOOL, WHAT IS THE REASON? MARK ALL THAT APPLY
-----------	--

School fees/costs	1
-------------------	---

Transportation	2
----------------	---

The children must work	3
------------------------	---

School is not important	4
-------------------------	---

Discrimination (gender, religion, etc)	5
--	---

There is no school	6
--------------------	---

Other	7
-------	---

No response	98
-------------	----

11	HOW LONG HAVE YOU LIVED IN KAMPALA?
-----------	--

Born here (<i>go to question 14</i>)	1
--	---

Less than 6 months	2
--------------------	---

Less than 2 years	3
-------------------	---

Between 2 - 6 years	4
---------------------	---

Between 7 - 16 years	5
----------------------	---

More than 16 years	6
--------------------	---

12	BEFORE MOVING TO KAMPALA, WHICH AREA DID YOU LIVE? MARK (R) FOR RURAL AREA OR (U) FOR URBAN
-----------	--

Acholi		Lango	
--------	--	-------	--

Ankole		Sebel	
--------	--	-------	--

Buganda		Teso	
---------	--	------	--

Bugis		Toro	
-------	--	------	--

Bukedi		West Nile	
--------	--	-----------	--

Bunyoro		Outside of Uganda (specify country below)	
---------	--	--	--

Busoga			
--------	--	--	--

Karamoja			
----------	--	--	--

Kigezi			
--------	--	--	--

13	IF YOU MOVED TO KAMPALA, WHAT WERE THE MAIN REASONS? MARK ALL THAT APPLY
-----------	---

To find work	1
--------------	---

For services available in the city (school, health, urban life, electricity, etc.)	2
--	---

Social pressure	3
-----------------	---

Less exposure to natural hazard	4
---------------------------------	---

To reunite with family in Kampala/family reasons	5
--	---

Better housing conditions	6
---------------------------	---

Other (specify):	7
------------------	---

--	--

No response	98
-------------	----

14	WHAT LANGUAGE DO YOU SPEAK WITH YOUR FAMILY IN THE HOUSE?
-----------	--

1	English	10	Masaba
---	---------	----	--------

2	Luganda	11	Nyankore
---	---------	----	----------

3	Swahili	12	Rwanda
---	---------	----	--------

4	Adhola	13	Saamia
---	--------	----	--------

5	French	14	Soga
---	--------	----	------

6	Gwere	15	Teso
---	-------	----	------

7	Karamojong	16	Tooro
---	------------	----	-------

8	Lugbara	17	Other (specify)
---	---------	----	-----------------

9	Luo		
---	-----	--	--

15 WHAT IS YOUR RELIGION?	
Christian	1
Muslim	2
Traditional	5
None	6
Other (specify)	7
No response	99

16 WHAT IS YOUR HOUSING STATUS? MARK WITH AN (X)			
Owner <i>Mark all that apply</i>	LAND		STRUCTURE
Renter <i>Mark one</i>	TENANT	SUBTENANT FOR FREE	SUBTENANT FOR SERVICES/ EXCHANGE
Homeless			
Other (specify)			
No response	98		

17 ARE YOU WORRIED THAT YOU MAY BE EVICTED FROM YOUR RESIDENCE?		
Yes	No (<i>skip to question 19</i>)	Does not know/Refuse to answer
1	2	98

18 IF YES, FOR WHAT REASONS? MARK ALL THAT APPLY	
Rent owed	1
Risk of eviction by the Local authorities	2
Risk of eviction by National authorities	3
Risk of eviction by landlord	4
The documents I have do not protect me (no contract, no identity documents, etc.)	5
By my spouse/family member	6
Other (specify)	7

19 ARE YOU A MEMBER OF ANY GROUPS OR ASSOCIATIONS IN YOUR COMMUNITY?	
Yes (please list name and type below)	No

.....
WATER AND SANITATION
.....

20 WHERE DO YOU GET YOUR DRINKING WATER?		
RAINY SEASON/DRY SEASON	R	D
Tap/city water network	1	1
Protected well/spring	2	2
Unprotected/Natural well/spring	3	3
Rainwater harvesting	4	4
Buy from water merchant	5	5
Bottled water	6	6
Other (specify)	7	7
No response	98	98

21 DO YOU PAY FOR WATER?	
1 Yes	2 No
How much for one 20L jerry can? (<i>if other unit is used, please specify</i>)	

22 TYPE OF STORAGE CONTAINER		23 TYPE OF TRANSPORT CONTAINER	
Clay pot	1	Clay pot	1
Jerry can	2	Jerry can	2
Bucket	3	Bucket	3
Other (specify)	4	Other (specify)	4

24 ARE THE CONTAINERS COVERED? IF YES, MARK WITH AN (X)	
Storage	
Transport	

25 COLLECTING WATER FROM A WELL OR STREET FOUNTAIN	
Number of times per day	
Volume of containers used	
Number of containers for each trip	
Who collects the water?	
Time needed to go to the water point (round trip + waiting time)	
Distance to the most often used water source	

26 DO YOU USE LATRINES? FOLLOW THE ARROWS	
Yes ↓	No ↓
26A THE LATRINES ARE: ↓	26B WHY NOT? ↓
In the house 1	Too expensive 1
At a neighbours 2	Not safe 2
Public 3	Too dirty 3
	It is too far 4
	Other (specify) 5
27A. TYPES OF LATRINES ↓	27B WHERE DO YOU GO? ↓
Simple pit latrine 1	River/Canal 1
Drainable pit latrine 2	Drainage 2
Flush toilet 3	Plastic bags 3
ECOSAN 4	Green spaces 4
Other (specify) 5	Other (specify) 5

28 WHERE DO YOU PUT YOUR HOUSEHOLD RUBBISH?			
Bins	1	Wasteland	7
Burning	2	Open channel/drain	8
In the street	4	Other (Specify)	10
Swamp/River/ Natural areas	5		
Secondary landfill	6	No response	98

29 WHAT ARE THE TIMES THAT YOU WASH YOUR HANDS? MARK (X) ALL THAT APPLY	
After using the toilet	
Washing the babies bottom	
Before feeding the child	
Before food preparation	
Before eating	

30 DO YOU TREAT YOUR DRINKING WATER?					
	What method do you use?				
Yes → 1	Boil	Chlorination	Solar (Sodis)	Filter	Other (specify)
	1	2	3	4	
No 2					

31 DESCRIBE THE AVAILABILITY OF WATER		
	Dry Season	Rainy Season
Good, enough water is available at all times	1	1
Fair, water is available but there is low pressure	2	2
Poor, water is unavailable or inconsistent	3	3

FOOD AND HEALTH

32 COULD YOU TELL US WHAT THE YOUNGEST CHILD WHO IS NOT CURRENTLY BREASTFEEDING ATE AND DRANK YESTERDAY? Read the list of foods below and mark with an (X) if yes	
Millet, sorghum, maize, rice, gruel or any other cereal?	
Potatoes, cassava, any other food based on roots or tubers	
Vegetables rich in vitamin A (pumpkin, carrots, sweet potatoes, mangoes, papayas, etc.?)	
Other fruits and vegetables? (bananas, apples, avocados, tomatoes, etc.)	
Meat or poultry, fish or seafood (beef, mutton, goat, pork, liver, offal, etc.)	
Eggs	
Food based on peas, lentils, beans, soy, groundnuts?	
Dairy products (cheese, yoghurt, milk, fresh cream, etc.)	
Food cooked with oil or fat?	

NOTES

COULD YOU TELL US ABOUT THE FOOD YOU HAVE CONSUMED IN PAST 24 HOURS?

33 Number of times the CHILDREN UNDER THE AGE OF 2 have eaten in the past 24 hours?

0	1
1	2
2	3
3	4
More than 3	7
No children under 2	8
No response	98

34 Number of times the RESPONDANT has eaten?

0	1
1	2
2	3
3	4
More than 3	5
No response	98

35. Sources of food
mark all that apply

Purchase	1
Exchange/barter	2
Gift	3
Household farming/livestock	4
Food aid	5
Other (specify)	6
No response	98

36 WHICH FOODS HAS THE RESPONDANT EATEN IN THE LAST 24 HOURS?

Read the list below and mark an (X) if the respondent has eaten that food

Cereals (Maize, sorghum, bread, rice, millet, wheat, biscuits)	
Roots (potatoes, yams, cassava, sweet potatoes) or Matoke	
Vegetables? (Tomatoes, eggplants, courgettes, cabbage, turnips, cassava leaves, any other wild leaves)	
Fruits? (Mango, papaya, banana, etc.)	
Meat or poultry? (Beef, mutton, chicken, goat, pork, bush meat, liver, offal-kidneys, spleen, lung, etc)	
Eggs?	
Fish or seafood?	
Food made with peas, lentils, beans?	
Dairy products? (cheese, yogurt, milk, fresh cream, etc)	
Oils and fats? (palm oil or other vegetable oil, butter, mayonnaise, etc.)	
Sugar? (granulated or cubed, sweet drinks, honey, jam, candies, etc.)	
Other foods? (condiments, coffee, tea, etc.)	

37 WHAT ARE THE MAIN PROBLEMS ASSOCIATED WITH, IF ANY, THAT YOU ENCOUNTER LIVING IN THIS NEIGHBOURHOOD?

WRITE DOWN THE PROBLEM AND ASK THEM TO DESCRIBE IT, HOW THEY MANAGE THESE DIFFICULTIES, AND WHO IS IN CHARGE OF THEM IN THE COMMUNITY (POLICE, LC, ETC...)

**38 CAN YOU TELL US ABOUT THE MEALS YOU'VE HAD IN THE LAST 30 DAYS?
IF THEY RESPOND "YES", ASK HOW OFTEN WITH THE POSSIBLE ANSWERS BELOW**

**POSSIBLE
ANSWERS:**

0 - No/Never

1 - Yes, once or twice per week

2 - Yes, once or twice every 2 weeks

3 - Yes, multiple times every week

In the last 30 days have you been **worried your household would not have enough food?**

...was anybody in your household **unable to eat some of the food you usually prefer to eat** because of a **lack of resources?**

...did anybody in your household **have to eat the same thing every day?**

...did anybody in your household **have to eat food that would usually rather not eat?**

...did anybody in your household **have to reduce the amount eaten during a meal?**

...did it happen that there was **nothing to eat** at all **in your house?**

...has anybody in your household **gone a whole day without eating?**

...did you have to **send a family member to beg** because of a lack of **resources to buy food?**

...did you have to **sell non-productive assets** (jewellery, carpets, house furniture, clothing, etc.)?

...did you have to **sell productive assets** (tools and machines for work, materials for work, etc.)?

...did you have to **stop education or health expenditures?**

...did you have to **get into debt** by taking out a loan or mortgage?

...did you have to **reduce all expenses?**

...did you have to **send at least one family member away for work?**

...did you have to **send all family members away for work?**

...did anybody in your household have to **reduce the usual number of daily meals** because of a lack of **food?**

...did anybody in your **household go to bed hungry** at night?

39 MOST OF THE TIME, WHERE DO YOU GO FIRST TO SEEK ADVICE OR TREATMENT FOR ILLNESS?	
Nowhere, it will pass	1
Traditional healer	2
Government health centre/hospital	3
Private clinic	5
Pharmacy	6
Parents/Family/Friends	7
Others (specify)	8
No response	98

40 DO YOU USE HEALTH SERVICES AS OFTEN AS YOU NEED TO?	
Yes (<i>skip to question 42</i>)	1
No	2
No response	98

41 IF YOU ANSWERED NO TO THE PREVIOUS QUESTION, WHAT ARE THE REASONS? MARK ALL THAT APPLY	
No facilities nearby	1
Waiting time too long	2
Facilities not adequately equipped	3
Staff shortcomings	4
Consultations too expensive	5
Tests too expensive	6
Medicine too expensive	7
Lack of medicine	8
Not aware of their existence	9
Staff attitude not good	10
Other (specify)	11
No response	98

42 DO YOU USE MOSQUITO NETS WITHIN THE HOUSEHOLD?	
Yes, untreated nets (without insecticide)	1
Yes, treated nets (with insecticide)	2
No	3
No response	98

43 WHO SLEEPS UNDER THE MOSQUITO NETS? (MARK (X) FOR ALL THAT APPLY)		
Adult Men	Adult Women	Children

44 COULD YOU TELL US ABOUT THE ILLNESSES YOUR HOUSEHOLD HAS EXPERIENCED IN THE LAST MONTH?		
MARK HOW MANY TIMES THEY HAVE SOUGHT TREATMENT IN THE PAST MONTH FOR EACH	Respondent	Children under the age of 5
Diarrhoea		
Malaria		
Respiratory illness		
Measles		
Skin Infection		
Chronic Disease (HIV/AIDS, Hepatitis, etc.)		
Other (specify)		

.....
INCOME AND EXPENSES
.....

WOULD YOU TELL US ABOUT YOUR HOUSEHOLD'S 5 MAIN DAILY EXPENDITURES?			
45. List 1 to 5 main expenditures	1-5	46 Amount (Shillings)	47 Change of price in the last year (+/=/-)
1 Food			
2 Water			
3 Sanitation, waste			
4 Hygiene products			
5 Housing/rent			
6 Transportation			
7 Electricity			
8 Telephone			
9 Health			
10 Clothing			
11 Fuel (wood, etc)			
12 Education			
13 Debt repayment			
14 Loan to others			
15 Savings			
16 Tobacco/Alcohol			
17 Other (specify)			

48 SOURCE OF INCOME	49 WHO (FATHER, MOTHER, GRAND-PARENT, AUNT, UNCLE, CHILD, ETC...)	50 SITUATION 1= EVERY DAY 2= A FEW TIMES/WEEK 3=ONCE PER WEEK OR LESS	DAILY INCOMES	
			51 LOW AMOUNT	52 HIGH AMOUNT
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

53 IF YOU HAVE MOVED TO KAMPALA FROM ANOTHER AREA, HAS YOUR TYPE OF WORK CHANGED?

Yes (please list the old type of work below, eg farmer)	No (skip to question 55)

54 IF YOU ANSWERED YES TO THE PREVIOUS QUESTION, WHY DID YOU NOT CONTINUE THIS TYPE OF WORK IN KAMPALA?

55 HAS YOUR HOUSEHOLD BEEN IN DEBT WITHIN THE PREVIOUS YEAR?
FOLLOW ARROWS

	56 FOR WHICH EXPENSE:		57 LOAN TAKEN WITH	
Yes 1 →	Food	1	Bank	1
	Medical costs/illness	2	NGO/Local association	2
	Business	3	Family	3
	Transportation/travel	4	Neighbour	4
	Wedding/funeral	5	Shopkeeper	5
	School expenses	6	Loan shark	6
	Other (specify)	7	Other (specify)	7
58. HOW MUCH WAS BORROWED?				

59 .HAVE YOU DONE ANYTHING EXCEPTIONAL TO ENSURE YOU HAVE ENOUGH MONEY?

No
2
→

60 PLEASE MARK THE FORMS OF SUPPORT YOU HAVE RECEIVED IN THE LAST MONTH, IF ANY

FROM WHOM →	Friends/Family	Credit/Savings Group	Church Groups	Community Leaders	Government	UN/NGO	Other
Cash							
Remittance							
Food							
Labour							
Other (specify)							

Thank you for your time!

To the interviewer: please note observations on the presence of human or animal faeces, stagnant water, or livestock that are near to the household.



Appendix IV: Enumerator Discussion Topics

- Thanks for helping with the study
- Initial reception by the respondents (open and willing or closed and skeptical?)
- Final perceptions of the respondent's opinion on the questionnaire
- Your perceptions on the questionnaire form (difficult to understand or explain?, etc.)
- Your perceptions on administering the questionnaire
- How long did an average questionnaire take? Shortest and longest as well.
- Trends noticed (between ages, genders, children/none, etc.)
- What topics were too sensitive? What topics were they happy to talk more about?
- Most commonly cited issue (question 37)
- Observations? (last sheet of questionnaire)
- Thank you once again.

Appendix V – Food Security Indicators

As adapted from FANTA and ACF guidance notes

Dietary Diversity Scores

IDDS is an indicator for individual nutrient adequacy, where the HDDS is used as a proxy measure of the socio-economic level of the household.

To identify a dietary diversity score for an individual or a household, a 24-hour recall of the food groups they had consumed in the past 24 hours is completed. This is done by reading a list of food groups and example foods that are typical to the local context. Each time a respondent individual or household has stated eating that food in the recall period, an (X) is marked on the questionnaire.

The number of food groups are then tallied. This number becomes the DDS. The score itself is then measured against certain thresholds to give a general categorization of Poor, Borderline, or Acceptable.

When compared across a population and with regular monitoring, the DDS scores can act as a proxy measure of food security.

Food Groups and Weights				
HDDS Food Groups (Score: 0-12)			IDDS (Children) Food Groups (Score: 0-8)	
No	Food group	Food items	No	Food group
1	Cereals (Staples)	Maize , maize porridge, rice, sorghum, millet pasta, bread	1	Grains, roots or tubers
2	Roots & Tubers (Staples)	Cassava, potatoes and sweet potatoes	2	Vitamin A-rich plant foods
3	Pulses / legumes / nuts	Beans, Peas, groundnuts and cashew nuts	3	Other fruits or vegetables
4	Vegetables	Vegetables and leaves	4	Meat, poultry, fish, seafood
5	Fruit	Fruit	5	Eggs
6	Meat, poultry, offal	Beef, goat, poultry, pork, eggs and fish	6	Pulses/legumes/nuts
7	Fish & seafood		7	Milk and milk products
8	Milk / Dairy products	Milk, yogurt, cheese or other	8	Foods cooked in oil/fat
9	Eggs			
10	Sugar	Sugar, sugar products, honey		
11	Oils	Oils, fats and butter		
12	Condiments	Tea, Coffee, Spices		

Food Consumption Score

Similar to the dietary diversity scores, the food consumption score is an index that takes into account not only the diversity of a diet, but by accounting for frequency and quality, a more representative indicator of an individual's food security. This is done through weighting different food groups based on their nutritional and caloric values.

The data is collected in a similar manner, though traditionally the recall period is 7 days. For this study, 24 hours were used to account for respondent fatigue. This may have had an impact on the results as this adaptation has not been validated in previous studies.

The results of the scores can then be cross-tabulated with other food security indicators to gain a more holistic viewpoint of the food security situation of a household.

Food Groups and Weights				
No	Food group	Food items	Weights	Reason for weights
1	Cereals (Staples)	Maize, maize porridge, rice, sorghum, millet pasta, bread	2	Energy dense, protein content lower and poorer quality than legumes, micro-nutrients
2	Tubers (Staples)	Cassava, potatoes and sweet potatoes	2	Energy dense, protein content lower and poorer quality than legumes, micro-nutrients
3	Pulses	Beans, Peas, groundnuts and cashew nuts	3	Energy dense, high amounts of protein but of lower quality than meats, micronutrients, low fat.
4	Vegetables	Vegetables and leaves	1	Low energy, low protein, no fat, micro-nutrients
5	Fruit	Fruits	1	Low energy, low protein, no fat, micro-nutrients
6	Meat and fish	Beef, goat, poultry, pork, eggs and fish	4	Highest quality protein, easily absorbable micronutrients, energy dense, fat. Even when consumed in small quantities, improvements to the quality of diet are large.
7	Milk	Milk yogurt and other diary	4	Highest quality protein, micro-nutrients, vitamin A, energy. However, milk could be consumed only in very small amounts and should then be treated as condiment and therefore reclassification in such cases is needed.
8	Sugar	Sugar and sugar products	0.5	Empty calories. Usually consumed in small quantities.
9	Oils	Oils, fats and butter	0.5	Energy dense but usually no other micronutrients. Usually consumed in small quantities.
10	Condiments	Condiments	0	

Household Food Insecurity Access Scale

This scale measures food security and its severity at a household level. A set of 9 questions are used (see question 38 on the questionnaire in Annex III) to distinguish:

- Feelings of uncertainty or anxiety over food;
- Perceptions that food is of insufficient quantity;
- Perceptions that food is of insufficient quality;
- Reported reductions of food intake;
- Reported consequences of reduced food intake;
- Feelings of shame for resorting to socially unacceptable means to obtain food resources.

Along with frequency of occurrence information, a number of different indicating variables can be calculated.

Conditions

<p>Household Food Insecurity Access-related Conditions</p> <p>Households experiencing condition at any time during the recall period.</p>	<p>Percent of households that responded, "yes" to a specific occurrence question. For example: "Percent of households that ran out of food."</p> <p>Example:</p> $\frac{\text{Number of households with response = 1 to Q7}}{\text{Total number of households responding to Q7}} \times 100$
--	--

<p>Households experiencing condition at a given frequency</p>	<p>Percent of households that responded "often" to a specific frequency-of-occurrence question. For example: "Percent of households that ran out of food often."</p> <p>Example:</p> $\frac{\text{Number of households with response = 3 to Q7a}}{\text{Total number of households responding to Q7}} \times 100$
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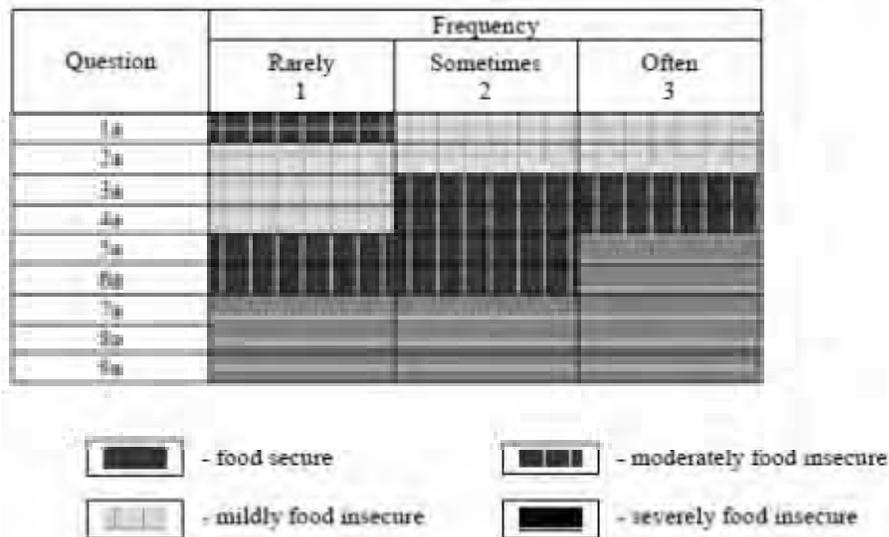
Domain

<p>Household Food Insecurity Access-related Domains</p> <p>Households experiencing any of the conditions at any level of severity in each domain</p>	<p>Percent of households that responded "yes" to any of the conditions in a specific domain. For example: "Percent of households with insufficient food quality."</p> <p>Example:</p> $\frac{\text{Number of households with response = 1 to Q2 OR 1 to Q3 OR 1 to Q4}}{\text{Total number of households responding to Q2 OR Q3 OR Q4}} \times 100$
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HFIAS Scale Score

HFIAS Score (0-27)	<p>Sum of the frequency-of-occurrence during the past four weeks for the 9 food insecurity-related conditions</p> <p>Sum frequency-of-occurrence question response code (Q1a + Q2a + Q3a + Q4a + Q5a + Q6a + Q7a + Q8a + Q9a)</p>
Average HFIAS Score	<p>Calculate the average of the Household Food Insecurity Access Scale Scores²³</p> <hr/> <p>Sum of HFIAS Scores in the sample</p> <hr/> <p>Number of HFIAS Scores (i.e., households) in the sample</p>

Prevalence and Severity



Once again, these indicators can be cross-tabulated with other food security indicators to form a more holistic comprehension of the situation.

Coping Strategies Index

The coping strategies index measures behavior in terms of the actions people take (coping strategies) when they cannot access enough food. This can be either food security or livelihoods coping strategies. This is typically a 7-day recall period where the respondent is asked to cite how many times in a week they have used a particular coping method. For this study, the coping strategies questions were adapted from livelihood strategies rather than food security, and combined with the HFIAS questions to:

1. Account for respondent fatigue
2. Give a longer recall period (30 days)
3. Add a more qualitative scale of frequency (rarely, sometimes, often)

These coping strategies were then weighted according to their severity and multiplied by the corresponding frequency variable.

This disaggregated information was analysed for key points. The information was also ultimately put into a Livelihood Coping Strategy Index Scale Score (similar to the HFIAS score), which gave a more definitive viewpoint of the difference between groupings.

Livelihoods Coping Strategy Index Weights		
In the past 30 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to: (rarely, sometimes often)		
No	Livelihoods Coping Strategy	CS Weight 1=least severe, 2=moderate, 3=severe, 4=very severe
1	Sell non-productive assets (jewellery, carpets, house furniture, etc.)	1
2	Beg	4
3	Get into debt, take out loan or mortgage	3
4	Sell productive assets (female livestock, grinder, sowing machine, tools, piece of land, etc.)	3
5	Stop education/health expenditures	2
6	Reduce all expenses	2

Originally, the index contained a question about sending family members away to work, though data validation confirmed that this was misrepresented by the enumerators or misunderstood by the respondents and was subsequently omitted.

Appendix VI: Malnutrition Glossary

Acute malnutrition

Acute malnutrition is caused by a decrease in food consumption and/or illness that results in sudden weight loss or oedema. This can be caused by emergency situations, seasonal variances, or parasitic infections, for example.

Weight for height (WfH) is a measure that considers a ratio of a child's weight to their height (2-18 years old) or length (0-24 months old). A score that is figured to be -2 z-scores below the internationally defined mean for children of the same age can be labelled moderate wasting. A score that is -3 z-scores below the mean represents severe wasting.

Mid-upper Arm Circumference (MUAC) takes the numeric measurement of circumference on a child's upper arm. Thresholds may vary, though for a child between 6 and 59 months of age, a MUAC of less than 12.5cm is considered moderately malnourished, and below 11cm severely malnourished.

Nutritional/bilateral pitting oedema is a sign of retention of water in the tissues of the body. This diagnosis in the field comes about from applying thumb pressure for approximately 3 seconds to the tops of feet. If oedema is present, the impression of the thumb print will remain for at least a few seconds after the thumb is removed. Presence of oedema on both feet is a sign of severe acute malnutrition, namely kwashiorkor.

Marasmus – A form of severe acute malnutrition that is characterized by the wasting of body tissues. This typically results from a lack of sufficient caloric dietary intake. Symptoms can include over-definition of bones (primarily the ribs), skinny limbs, and loose skin.

Kwashiorkor – A form of severe acute malnutrition that is characterized by the presence of bi-lateral oedema and a weight for height z-score of greater than or equal to -2. Typically results from a severe protein deficiency. Symptoms can include hair changes, dermatosis, and a large belly.

Marasmic kwashiorkor – A combination of protein and caloric deficiency. The condition is characterized by severe tissue wasting, dehydration, loss of subcutaneous fat, lethargy, and growth retardation.

Global Acute Malnutrition (GAM) – The cumulative prevalence of both moderate and severe malnourishment within a population.

Chronic Malnutrition

Chronic malnutrition – a form of malnutrition that is caused by improper dietary intake over a long time period or by repeated infection/disease.

Height for Age (HfA) compares the height of a child to the median height of a reference population for children of the same age. This is a measure of stunting.

Stunting is a condition where an individual is shorter than a well-nourished person of the same age. This is caused primarily by chronic malnutrition. A z-score of -2 below the mean is referred to as moderately stunted, and a score of -3 is referred to as severely stunted.

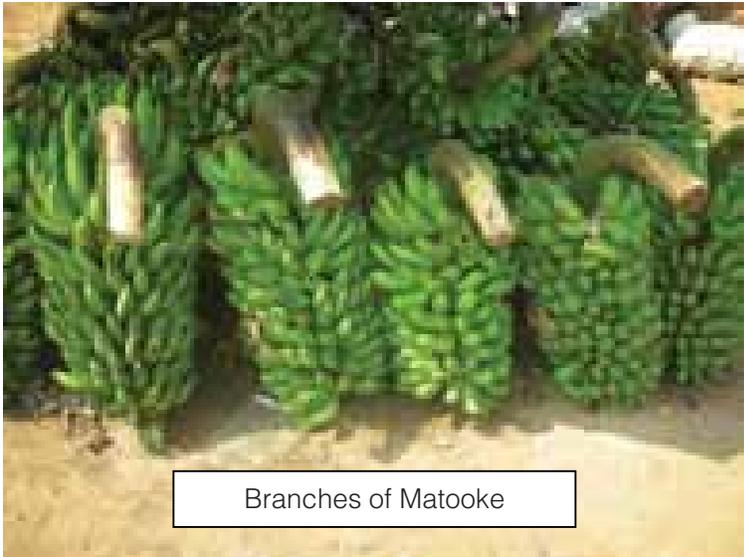
Appendix VII – Visual Reference of Units of Sale



Roots/half roots of cassava



Piles of local yams



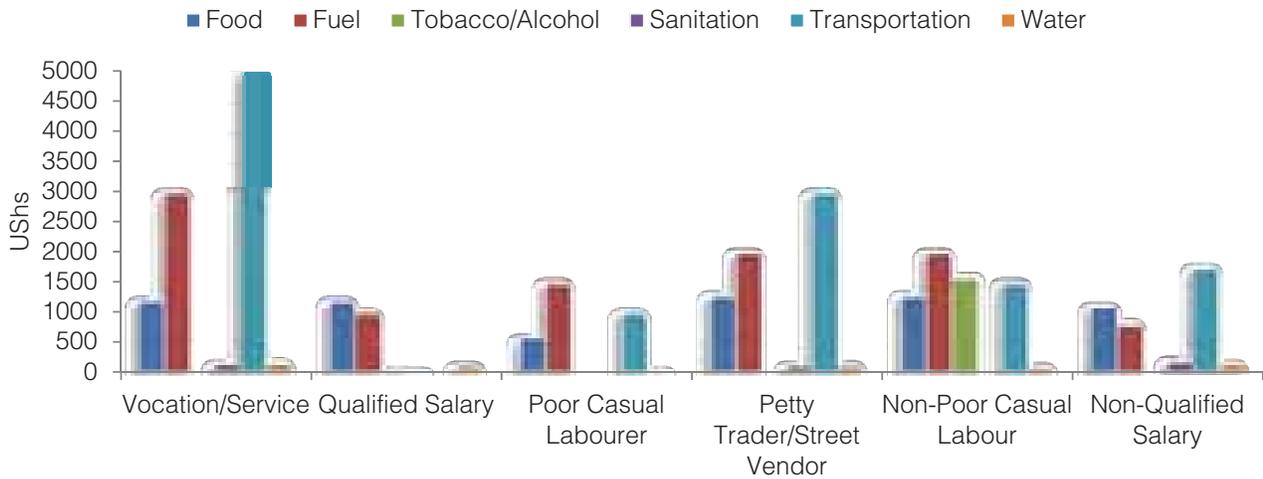
Branches of Matooke



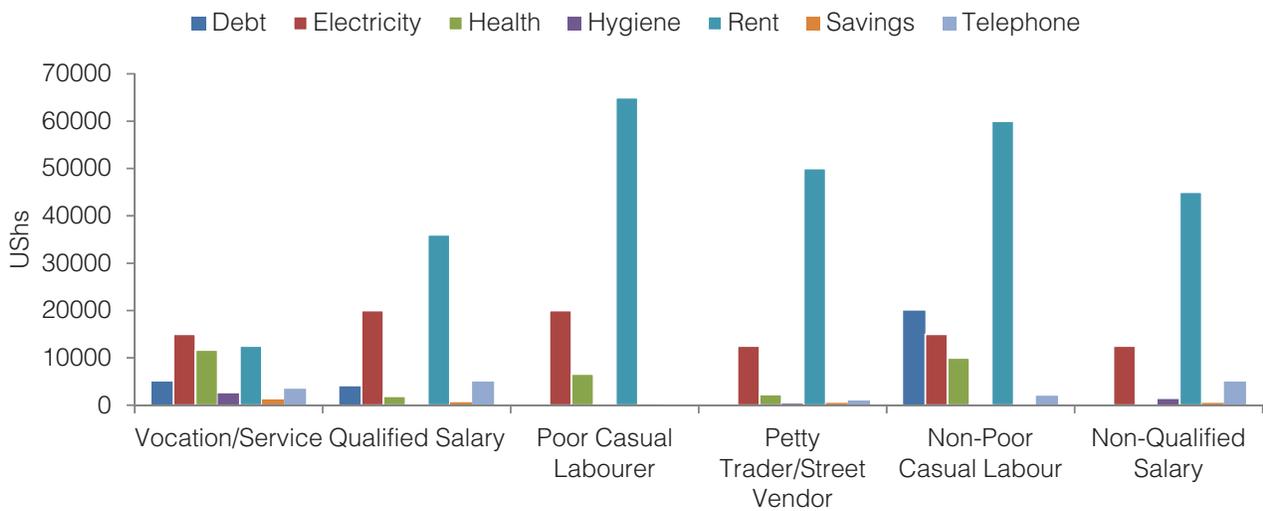
Bins/bags of Irish potatoes

Appendix VIII – Comparative Livelihood Charts

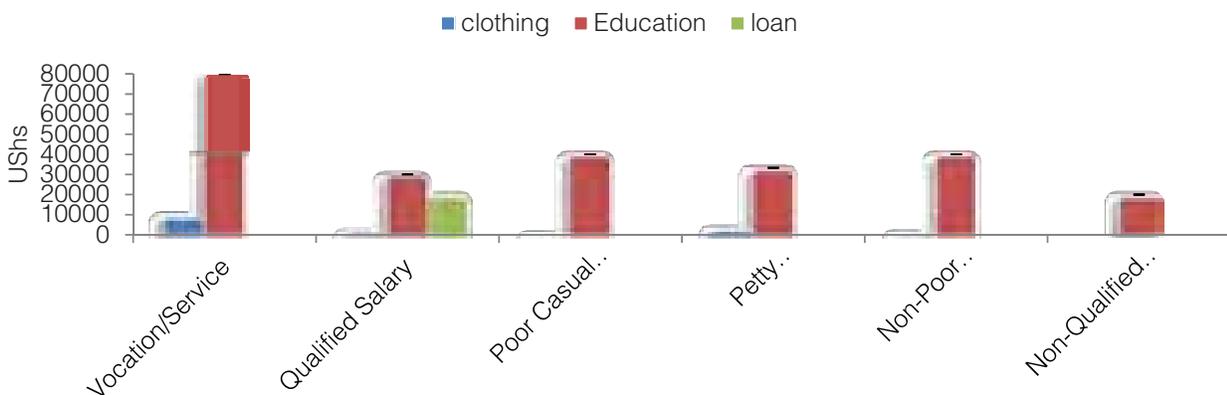
Daily Expense Medians



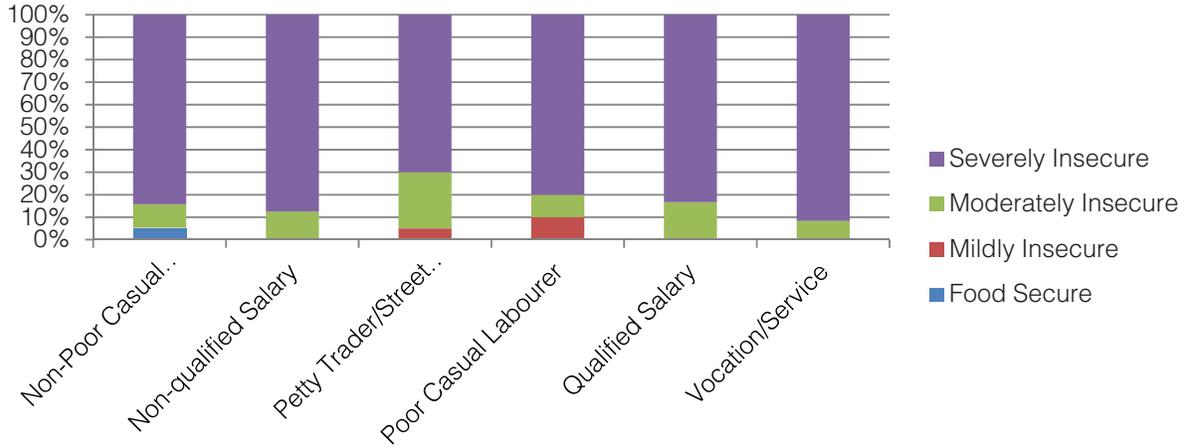
Monthly Expense Medians



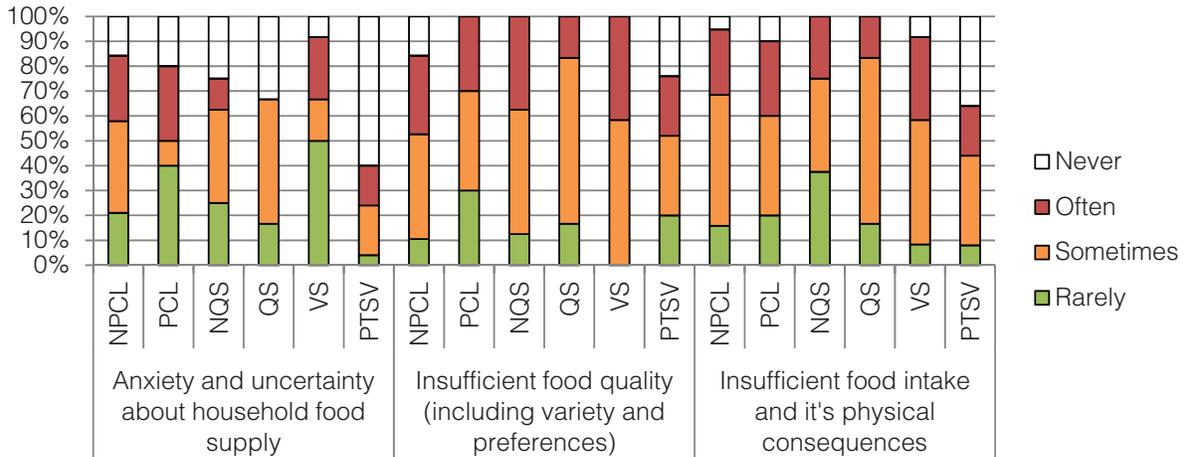
Other Periodicity Expense Medians



HFIAS Severity and Prevalence



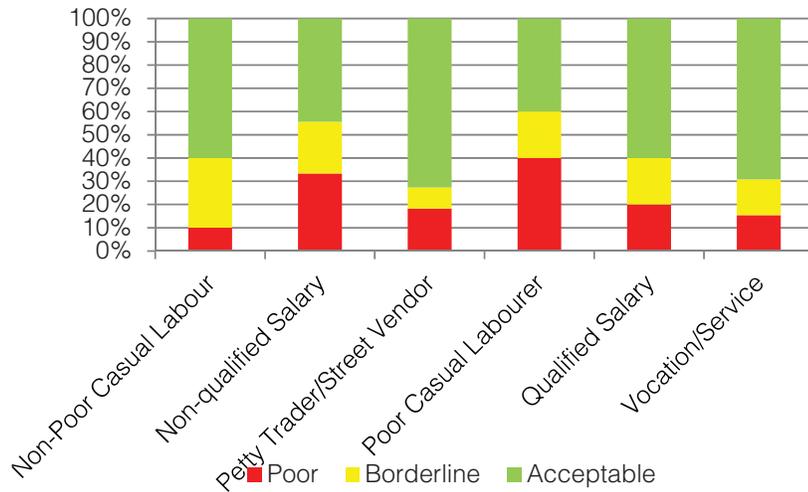
HFIAS Domain



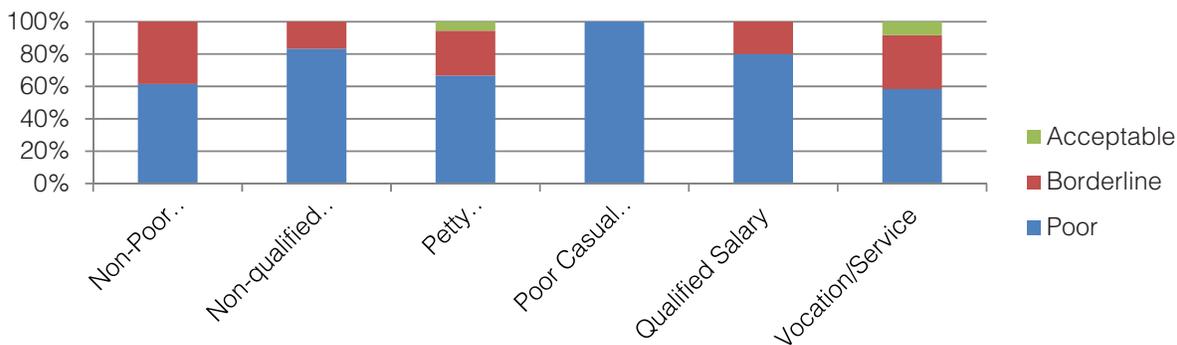
HFIAS Scale Score

All	11.2
NPCL	13.2
PCL	12.1
NQS	12.5
QS	10.2
VS	12.9
PTSV	9.1

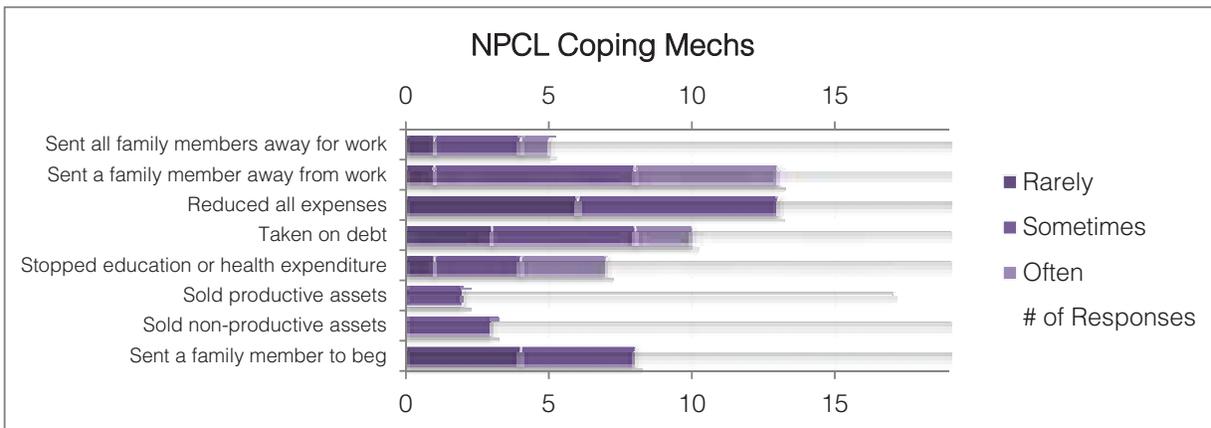
Food Consumption Scores



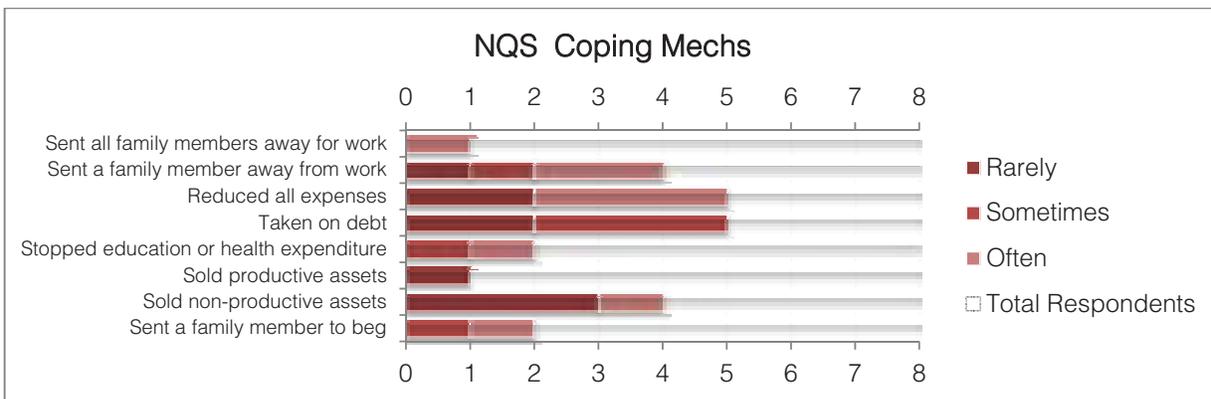
Child IDDS



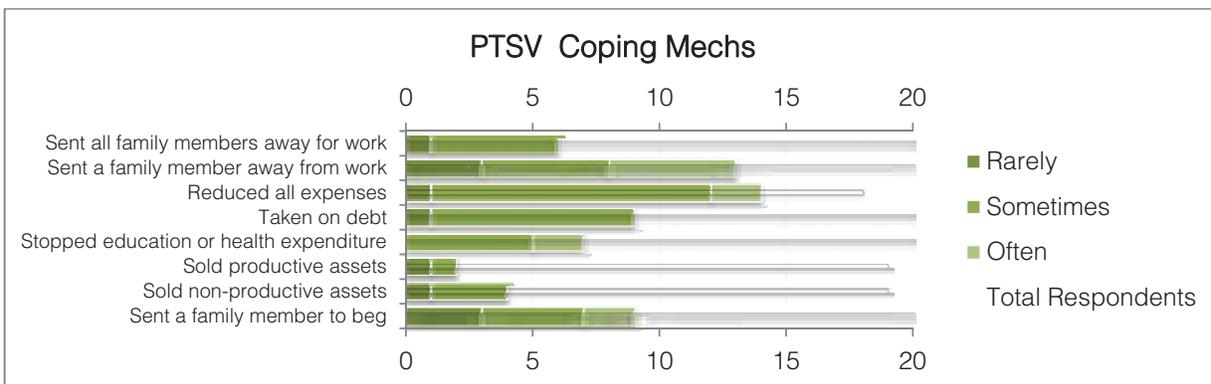
NPCL Coping Mechs

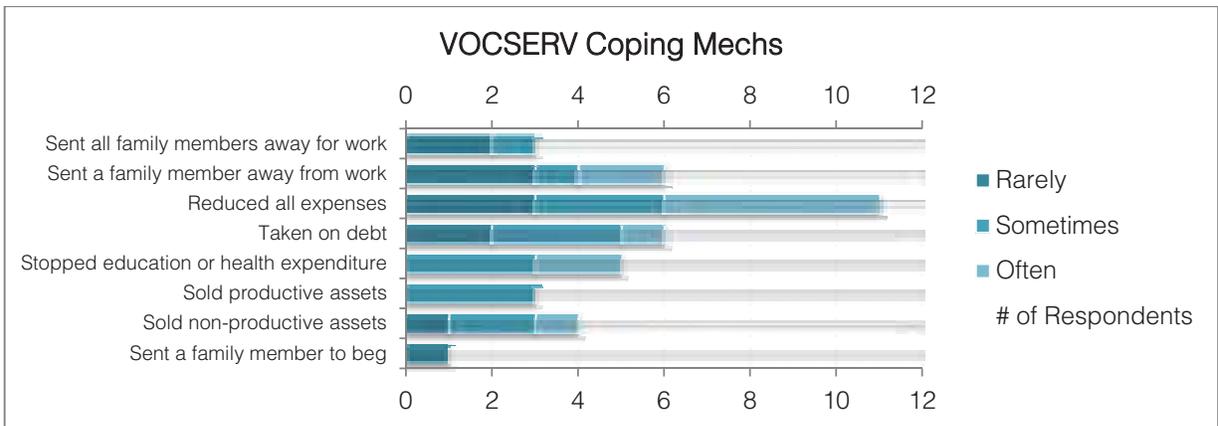
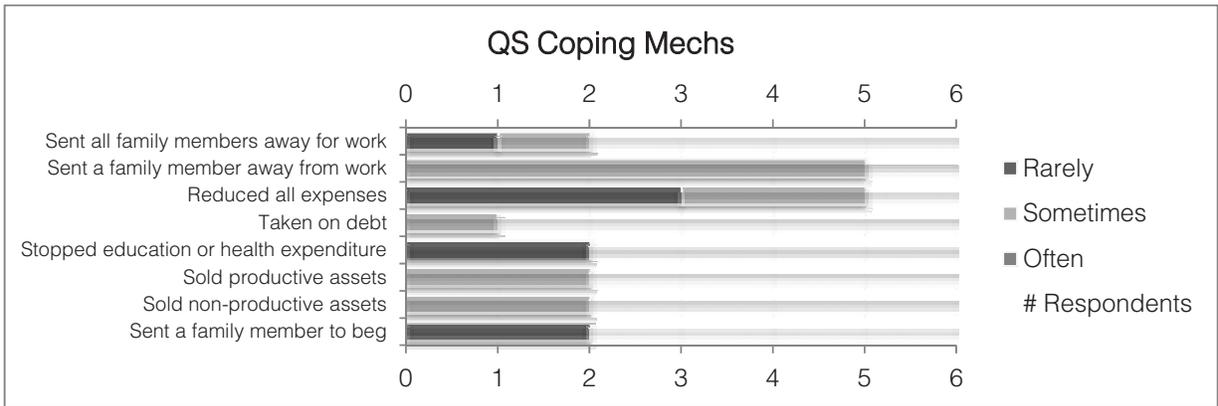
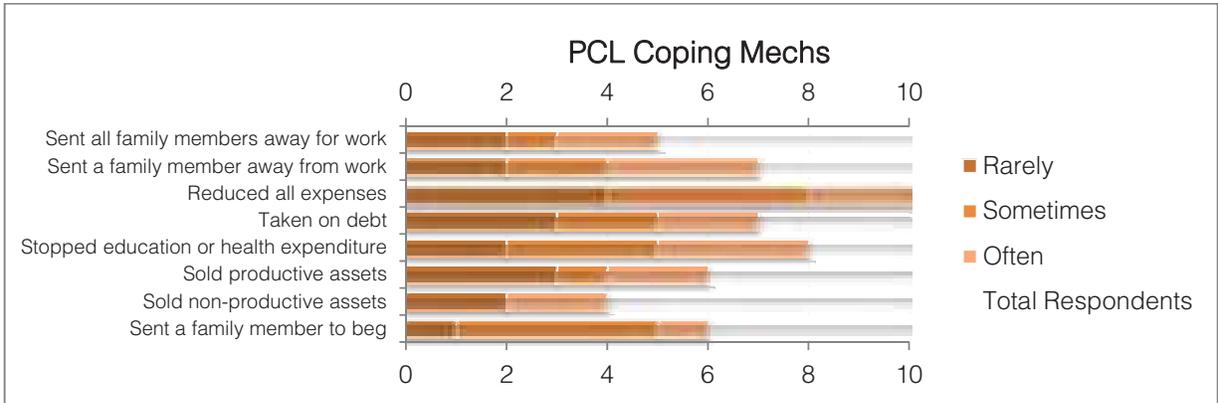


NQS Coping Mechs



PTSV Coping Mechs





	Median Daily Income	Median Daily Expense	Has Debt	Financial			
				Debt amts	Monthly Income	Debt/Income Ratio	Debt/Expense Ratio
Non-Poor Casual Labourer	10250	6492	83%	271429	307500	0.88	0.63
Poor Casual Labourer	15125	4036	89%	193333	453750	0.43	0.27
Non-qualified Salary	15000	6547	75%	418786	450000	0.93	0.44
Qualified Salary	15000	3111	100	156714	450000	0.35	0.21
Vocation/Service	18571	2387	90%	300000	557143	0.54	0.13
Petty Trader/Street Vendor	26429	9517	69%	196000	792870	0.25	0.36

	Human		Physical		
	Child Not In School	Sufficient Access to Healthcare	Owners of structures/land	Tap water in rainy season	latrine in the house?
Non-Poor Casual Labourer	50%	65%	5%	60%	0%
Poor Casual Labourer	20%	50%	0%	50%	0%
Non-qualified Salary	43%	22%	11%	44%	22%
Qualified Salary	50%	83%	50%	83%	50%
Vocation/Service	70%	75%	25%	55%	0%
Petty Trader/Street Vendor	40%	44%	8%	72%	16%

	Social		Other		
	Member of Social Group	Received at least 1 form of support	Percent of Sample	Work Change?	Median Water pp/day
Non-Poor Casual Labourer	20%	65%	24%	53%	20.0
Poor Casual Labourer	33%	30%	12%	70%	10.0
Non-qualified Salary	38%	78%	11%	86%	25.0
Qualified Salary	100%	67%	7%	25%	13.3
Vocation/Service	58%	83%	15%	56%	20.0
Petty Trader/Street Vendor	100%	56%	30%	19%	20.0