The Bartlett Development Planning Unit

UCL

Uganda
Site Level Report 2/4

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REDUCING RELOCATION RISK
IN URBAN AREAS

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Development Planning Unit

Credits This report was elaborated by Charlotte Barrow, Cassidy Johnson, Shuaib Lwasa and Colin Marx.

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Cover picture: David McEwen. Kampala, Uganda. 2016

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List of Abbreviations

CDKN – Climate and Development Knowledge Network
DRR – Disaster Risk Reduction
DPU – Development Planning Unit at the Bartlett, University College London
EIA – Environmental Impact Assessment
IFM – Integrated Flood Management
IPCC – Intergovernmental Panel on Climate Change
KCCA – Kampala Capital City Authority
KIIDP – Kampala Institutional and Infrastructure Development Project
MAK – Makerere University
MoLHUD – Ministry of Lands, Housing and Urban Development
NEMA – National Environment Management Authority
NGO – Non-governmental Organisation
NRC – Norwegian Refugee Council
NSDFU – National Slum Dwellers Federation of Uganda
NWSC – National Water and Sewerage Corporation
OPM – Office of the Prime Minister
OPM DPM – Office of the Prime Minister, Department of Disaster Preparedness and Management
RPF – Resettlement Policy Framework
SSA – Shelter and Settlements Alternatives
SUDS – Sustainable Urban Drainage System
UBOS – Uganda Bureau of Statistics
UNISDR – United Nations International Strategy for Disaster Reduction
VIP – Ventilated Improved Pit (latrine)

Executive summary

This report, written by a team of researchers at the Bartlett Development Planning Unit (DPU) at University College London and Makerere University, Uganda provides an outline of the drivers behind decision-making and implementation of resettlement and relocation in Kampala, Uganda, from the perspectives of households and businesses as well as the state and non-governmental organizations. The report seeks to answer the following questions:

1. How do district/city-level strategies to mitigate flooding impact on relocation? What are the plans for the future?

2. If people are forcefully moved, what is the process of implementation?

3. What are the drivers, tipping points and limits of tolerable risks, which push or enable people to move out of the flooding areas?

Methods of data collection include interviews with local government bodies, a civic organisation and business owners and members of households in two case study settlements: Bwaise and Natete. Interviews were then transcribed and analysed. The interview schedules, survey instrument and transcript analyses can be found in appendices A – J.

A number of factors contribute to Kampala's high incidence of flash flooding, including its situation in the drainage catchment of Lake Victoria and a series of catchments that drain north. These factors are exacerbated by the high rate of urbanisation. This growth constitutes a major contribution to flood risk for a number of reasons. Firstly, much of this growth has occurred in wetlands, areas that previously acted as runoff retentions (UN-HABITAT 2013, p. 55). Secondly, development densification and reduced green space has increased the rates of runoff, particularly on the hillsides, due to reduced absorption capacity. Third, illegal backfilling of wetlands has contributed to a rising water level by constraining the water flow. Fourth, current storm drainage measures cannot meet the demands of rising water levels, siltification and solid waste blockages.

Although there is a clear understanding from government about the challenges associated with flooding and the necessity of managing this through resettlement, findings indicate that the latter is not being implemented in a consistent way but rather is taking place on a case-by-case basis, either through evictions with insufficient compensation, or autonomously, when individuals, families or communities relocate away from flooding areas without government assistance.

Thus, the report indicates a need for a more comprehensive urban flood management plan that includes a range of measures to reduce risk and vulnerability, of which resettlement should be viewed as only one component. In cases where resettlement is unavoidable, there is a further need for a national resettlement policy to be implemented consistently, which includes provisos for financing, livelihood reconstruction and participation from communities being resettled.

Introduction

Uganda is experiencing impacts resulting from climate change, including rising temperatures and fluctuating intensity of precipitation and storm events, trends which are likely to increase by the end of the 21st century, according to the IPCC's Fifth Assessment Report (in Overseas Development Institute and Climate and Development Knowledge Network 2014). These changes are increasing the rate and severity of disasters - including droughts, landslides and flooding - causing damage to property and infrastructure and loss of life. According to IPCC projections, temperatures in Uganda will increase by up to 1.5ºC over the next 20 years (Fourth Assessment Report, in Lwasa et al. 2009, p. 7), which could cause large-scale disruptions to farming and agriculture, particularly in the northern regions where droughts have been most severe. Across Uganda, residential buildings make up around half the cost of climate related damage and adaptation within the infrastructure sector (Markandya et al. 2015, p. v), with floods destroying 18,650 houses across the country and damaging a further 1,303 in the period 2006 – 2013 (UNISDR 2016).

In addition to the likely increase in the intensity and frequency of heavy rains, changes in precipitation levels will have impacts for drinking water and agriculture due to the effect of flash floods on agricultural fields, as well as siltation of surface water bodies from intense runoff.

Overview of Kampala city

Kampala, Uganda's capital city, is the country's largest, only city and most important urban area. Kampala city is within the equatorial region where rain is expected to continue increasing as a result of climate change. Its pattern of occurrence is also expected to keep changing and thus become even more unpredictable. It is projected that extreme weather events such as droughts and floods will continue to affect the city.

The functional region of the city has grown and spatially expanded to cover an area of 1450 km2 of which only about 196 km2 is under the control of the Kampala Capital City Authority (KCCA 2012). The administrative structure of the city includes five divisions of the Central Division: Makindye Division, Nakawa Division, Kawempe Division and Rubaga Division.

Kampala has experienced an increase in population, from 774,241 in 1991 to 1,516,210 million in 2014 (UBOS 2014). The population figures reflect the night populations but the estimates show that these numbers double during the day, as many people travel to the city for work and business and return to their homes outside the city at the end of the day. It is estimated that Kampala currently has a population of over 3 million and this is projected to grow to 5 million in the coming decade (KCCA 2012). The city is already overwhelmed by its current population, which is growing faster than the installation of infrastructure and services.

Flooding and risk in Kampala

This Greater Kampala region is defined by plateau hills that are surrounded by wide valleys with wetlands. The city is characterized by urban sprawl and increased growth of informal settlements and slums due to inadequate land use planning. This has resulted in settlements being located in high risk areas especially those prone to flooding and poor sanitation. Slum conditions in Kampala are aggravated by encroachment into marginal land especially the wetlands (KCCA 2012).

Kampala is highly vulnerable to climate-induced disasters including floods and landslides. The recurrence of flash floods in Kampala with a usual duration of several hours to at most 2 days is a major disruption to the lives of Kampala's citizens and they entail high economic and social costs. In 2013, flooding (including both damage and adaptation) cost an

estimated USD 1.3 – 7.3 million (Garcia & Markandya 2014, p. 7). Between 2006 and 2013, flooding caused 37 deaths and 2 missing persons (out of 102 deaths nationally); destroyed 122 houses and 2 education centres (out of 18,650 houses nationally) and damaged 41 meters of road. In total, flooding negatively affected an estimated 67,529 people in Kampala during this period, comprising more than 95% of the number affected by all hazards combined for which data was collected (UNISDR 2016). Flash floods in Kampala from September to December 2011 were among the worst on record for damages to buildings and infrastructure (including transport and energy and water supply systems); lowered food security and damage to livelihoods and health issues and loss of life. The combination of higher temperatures and changes in Lake Victoria's water level encourages the spread of vector-borne diseases, especially malaria (Garcia & Markandya 2014, p. 3). On the other hand, periodic rainfall reductions and contamination of freshwater sources mean the cost of clean drinking water is rising.

Floods thus pose a major threat to Kampala and are due to a range of causes, including heavy rains, low lying and flat terrain and underlying clayey soil with poor water infiltration. Frequent, high intensity tropical rainstorms generate extremely high run-off that quickly exceeds the capacity of the urban storm water drainage system. Undersized and waste-blocked drainage culverts or channels plus poor maintenance of structures exacerbate the problem (Mubangizi 2015). Thus, while some of the increase is likely due to climate change, some is also the direct result of land cover change (Douglas et al. 2008).

Direct anthropogenic causes also include encroachment on wetland developments such as buildings in the drainage or wetland areas. Recent urban developments have cleared the flood plains of the city. Buildings and other forms of infrastructure have replaced the forests, open spaces and the wetland vegetation. Most of Kampala's land surface in the built up areas is highly paved, leading to reduced water infiltration and hence to generation of high storm runoff (NEMA 2009).

For example, construction of unregulated shelters in slums such as Kalerwe Katanga, Kivulu and Bwaise has reduced infiltration of rainfall. This is coupled with increasing runoff from up-slope conversion of land cover. Industrial development and informal settlements in the wetland areas propagates the flooding problems in Kampala, leaving no room for rainstorm water. The major wetlands of Kampala, that is Lubigi, Nakivubo, Nalukolongo and Kinawata have been encroached on, thus making such areas prone to flooding.

However, flooding impacts affect communities disproportionately, posing adaptation challenges at various scales. In Kampala as elsewhere, the effects of climate change impact most strongly on the urban poor. Informal settlements in wetland areas are often comprised of vulnerable members of the population. Less resilient to disaster due to lower access to resources, these settlements are therefore both a contributing factor in flood risk, and highly vulnerable to the impacts of disasters. Both dwellings and livelihoods of the poor may be located in flood-prone zones, in close proximity or within the same structure, making them doubly vulnerable if flooding occurs in the area. Time that is used to repair damage to dwellings following a flood or other disaster can be time lost from wage earning. Household responsibilities of this kind often fall more heavily to female members of the household, contributing to gender imbalances. The cost of maintaining and repairing infrastructure such as roads and drainage systems has increased, while disruptions to public transport can also impact most heavily on those who cannot afford private transportation.

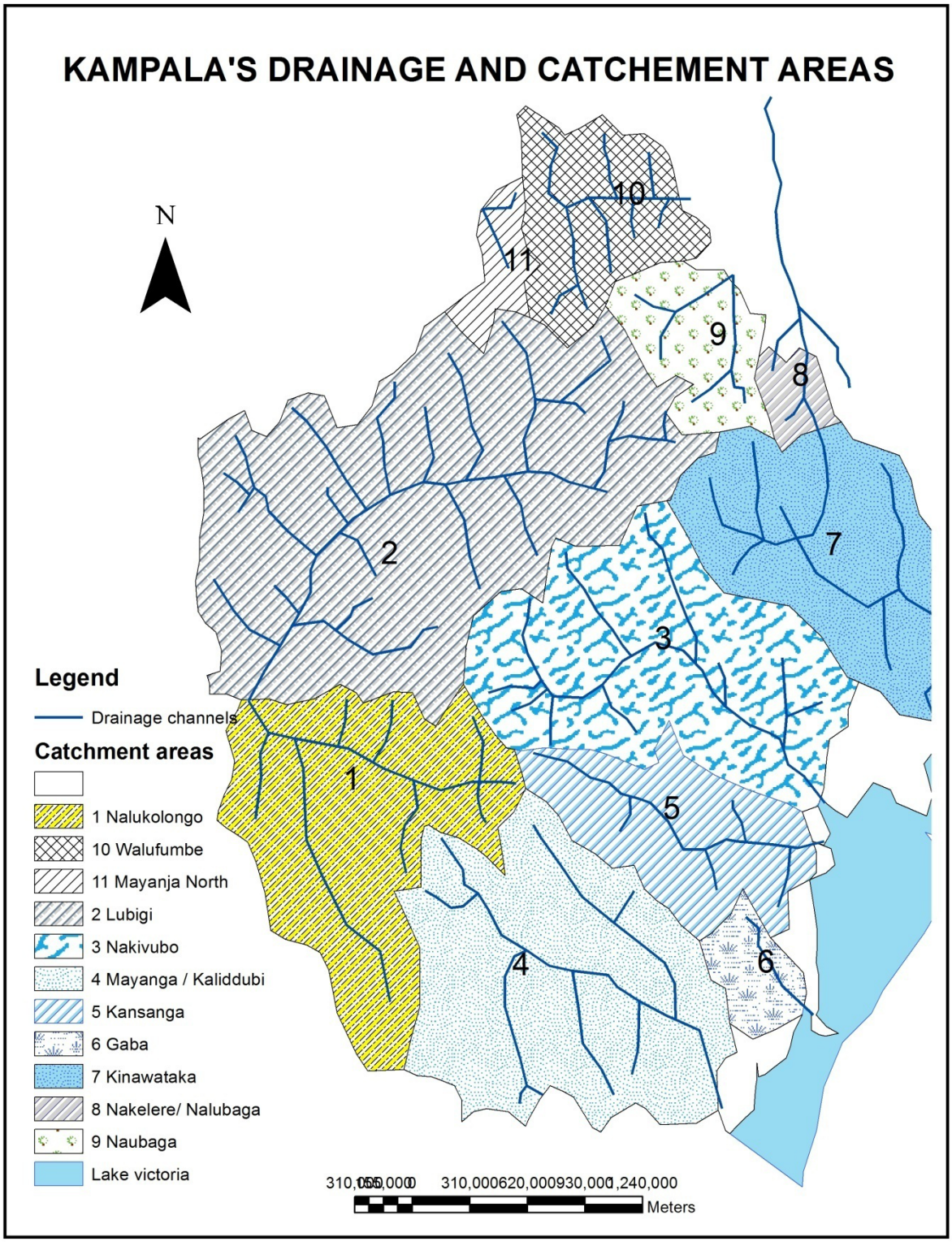
With unemployment, poor housing, inadequate water supply, sanitation and waste management systems, the population of Kampala is exposed to climate change induced risk. Voluntary and involuntary relocation and/or resettlement are happening in a continuous process. Relocation, whether temporally or on a permanent basis, is happening in Kampala (Lwasa 2010; Sliuzas & Flacke 2013) despite adaptation measures including 'hardening up' of urban infrastructure such as roads, culverts, bridges and drainage systems; water and sewerage networks and neighbourhood-scale adaptation in the form of livelihood-based measures to enable communities to build resilience.

Kampala's drainage

As discussed, Kampala is built on a series of hills that are separated by valleys and wetlands of varying gradients. The valleys form essential natural drains for the city. The city is drained by eleven main drainage systems or catchments as shown in Map 1 and Map 2. Each main drainage system is divided into a major system and numerous minor sub-catchments. The primary and secondary channels are the major systems while the tertiary channels are the minor systems. The major systems are planned and designed to accommodate less frequent storms of higher intensity to minimize physical damage, flooding of houses and industrial properties, and to ensure public safety in general - especially at road crossings of the major systems. The minor or tertiary system conveys storm water to the primary and secondary channels and corresponds to pipe and small open drains between buildings and mainly along roads as has traditionally been provided in Kampala, although they are

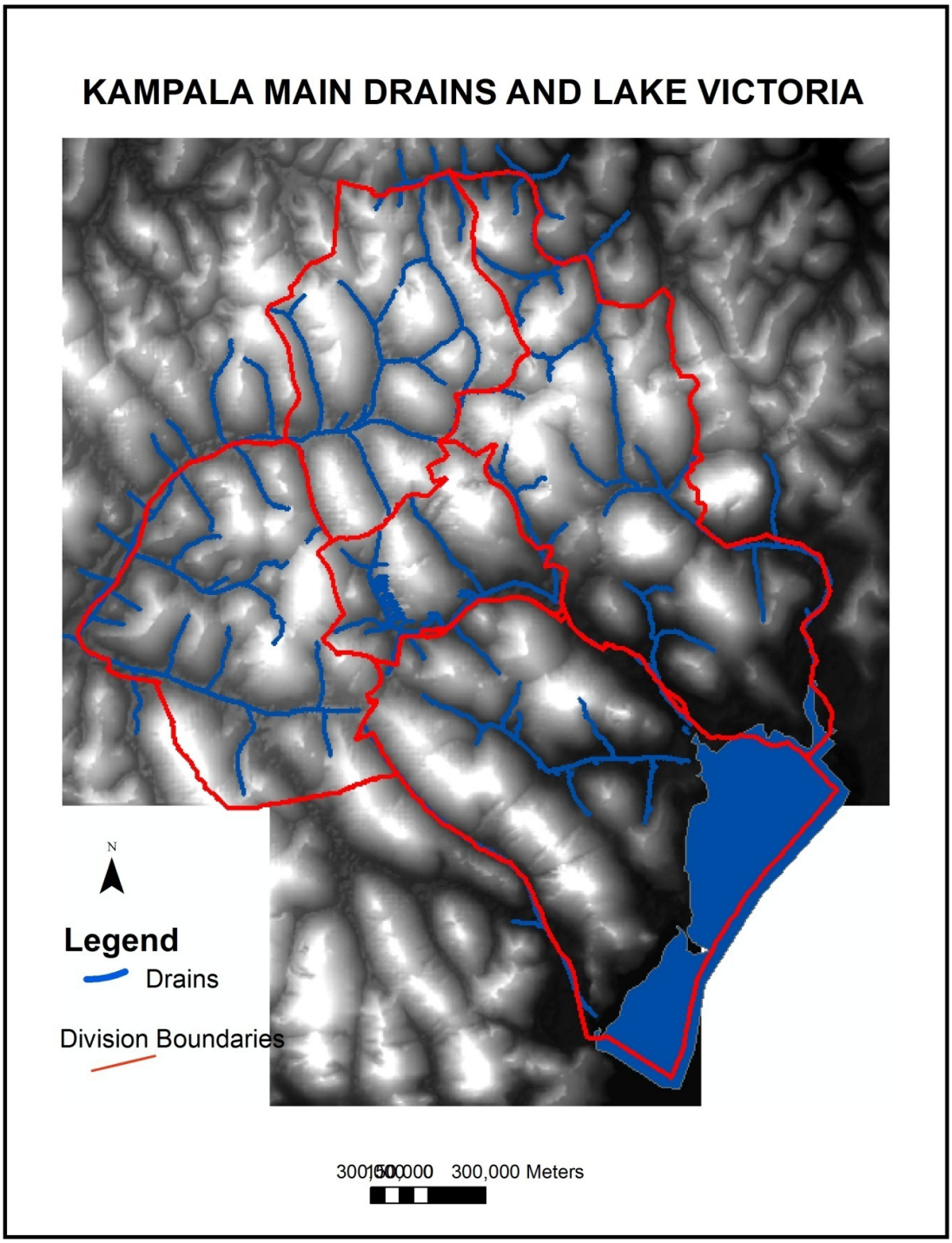
inadequate and are not mapped in many places. Most drainage in the built areas is in open culverts, of varying type, along the roadside. As a result, road widths and pedestrian sidewalks vary. Given low maintenance levels they constitute severe health and localised flood risks (KCCA 2012). Two of the drainage systems are Lubigi and Nalukolongo where the settlements of focus in understanding climate change induced relocation and resettlement are situated (see Map 3).

Map 1. Drainage system of Kampala region showing the 9 drainage and catchment areas, drainage channels and the spatial location of Lake Victoria[1]



1 All maps are based on data from the Uganda National Forestry Authority; Makerere University Department of Geography, Geoinformatics and Climatic Sciences; KCCA and the Department of Surveys and Mapping, Ministry of Lands, Housing and Urban Development.

Map 2. Topography of Kampala showing the main drainage systems and outline of Lake Victoria

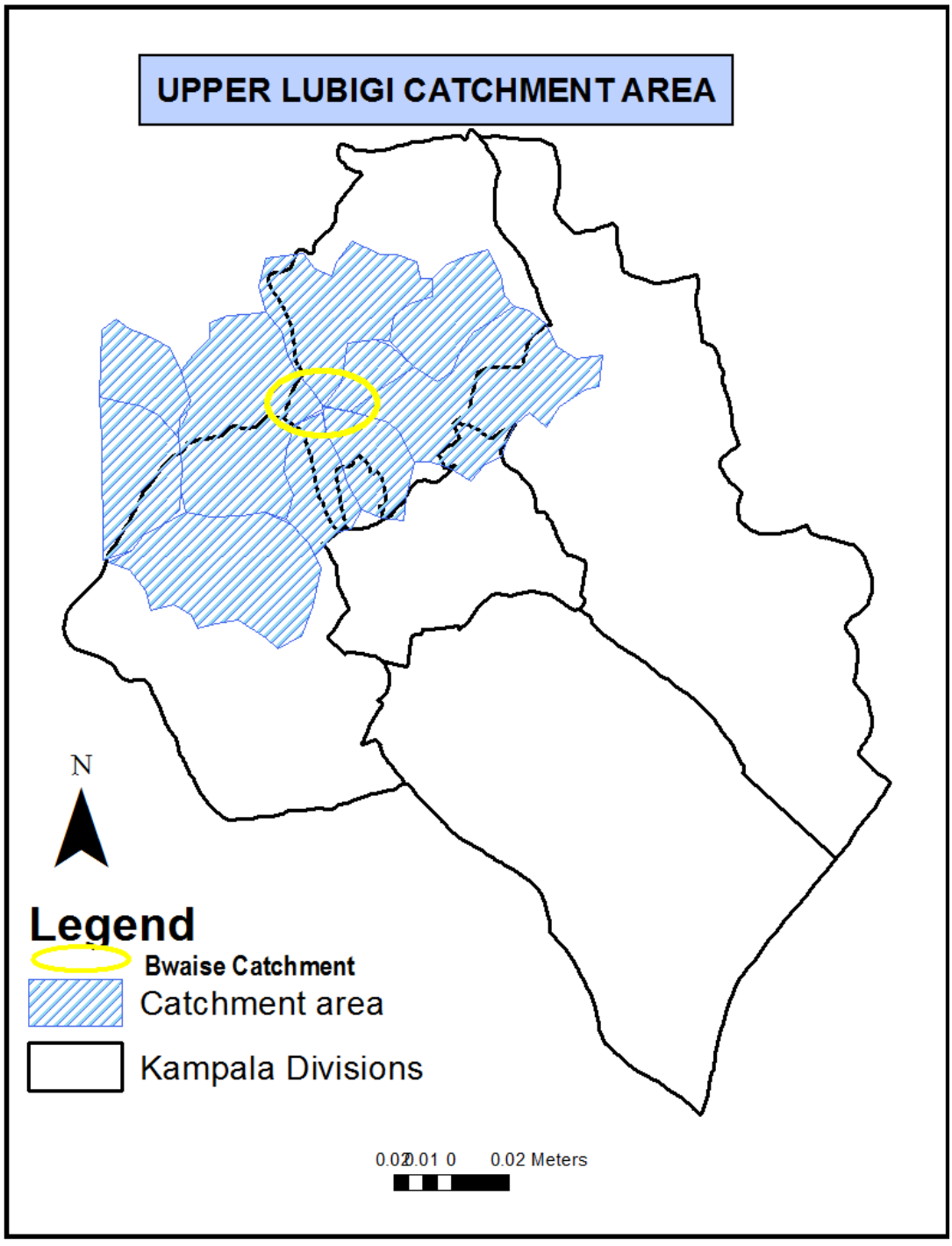


Lubigi wetland

Lubigi is one of the largest wetlands in the Kampala District, running along its western and northern borders. It is permanently waterlogged, traversed by the Nsooba River and Nabisisasiro River. The wetland is a very important water catchment area serving the city and its surroundings of Wakiso District. Lubigi forms an irregular semi-circle around the city of Kampala, starting from around Kisaasi to the north, stretching westwards through Bwaise and Kawaala and then southwards through Busega. It drains into and forms part of the Lake Mayanja contributory river.

The swamp has feeder arms stretching along Kampala Mityana road towards Buloba, along Kampala Masaka road toward Kyengera, along Kampala Hoima road towards Nasana and along Sentema road stretching from Mengo to Sentema. To the north around Kisaasi and Ntinda the wetland connects with the tributaries

Map 3. Upper Lubigi catchment area



of Nakivubo channel. Lubigi wetland is thus critical as a flood control valley and pollution control wetland for the water that flows through it.

Settlement in the wetland started from Bwaise in the 1970s and since then it has been a race between government institutions and people trying to house themselves or establish commercial structures (Nature-Uganda 2014). The Kampala Northern Bypass highway is built in this wetland, compounding the flooding problem. In 2011, KCCA under the Kampala Institutional and Infrastructure Development Project embarked on the construction of the Lubigi channel to reduce flooding in Kawempe division (Mugerwa 2012). Lubigi drainage channel was constructed with the aim to reduce flooding in the area. The drainage channel stretches from Nsooba near Mulago hospital to Busega.

Nalukolongo wetland

The Nalukolongo wetland is located in Lubaga and generally runs along and south of Masaka Road. It comprises both permanent and seasonal wetland stretching along the Nalukolongo and Mayanja rivers. Most of the original vegetation has been modified through agricultural activity and settlements but there are still some papyrus and sedges to be seen. The area floods excessively during peak rains, affecting many homes and industries. The existing channel does not accommodate the storm water discharge from surrounding hills (NWSC 2008).

Recent history of resettlement and relocation

The changes outlined above increase the need for adaptation and risk mitigation strategies that can address both slow onset trends and disaster occurrences. A key task of successful strategies will be to reduce flood risk through reducing storm water runoff and improving urban drainage systems; improving wetland protection; and protecting the people that are most at risk from flooding.

Laws and policies exist to protect wetlands and other sensitive areas, including through relocation of informal settlements. In 1995, Uganda's Constitution was amended to reduce development on government-owned wetlands. However, the amendment has not been consistently observed, with titles granted after this date, often to industrial developers. A process to de-register titles granted after the amendment is being considered by government, but the issue is further complicated by Uganda's complex and overlapping land tenure system (explained in more detail in the following section), as well as the requirement to compensate those being resettled.

About 60% of Kampala residents live in informal settlements (Garcia & Markandya 2014, p. vi), often located in wetland areas, which are highly prone to flooding. In 2013, a workshop was held in Kampala in partnership with UNISDR and the Norwegian Refugee Council, to inform stakeholders from government, academia, civil society and NGOs on the consultation process towards the Post-2015 Framework for Disaster Risk Reduction and its impacts for people displaced by climate-induced disasters. Recommendations to government for disaster reduction included planned relocation and the acquisition of land to accommodate this (NRC & UNISDR 2013).

Recent studies have been conducted by UN-HABITAT and others to assess the feasibility of resettlement measures. It has been indicated that flood zone protection measures, including resettlement, more stringent enforcement of encroachment deterrents and 'greening' measures such as planting more groundcover are likely to reduce structural flood damage, particularly in a high growth-rate scenario. In one model, 2,500 structures require removal, with a further 3,000 likely to appear by 2020, under current enforcement practices (UN-HABITAT 2013). However, the effectiveness and desirability of resettlement are contested, and alternative measures are also necessary for climate change adaptation strategies, for example soft buy-back schemes enabling government to purchase land from willing sellers (UN-HABITAT 2013).

A review of policy documents shows that there are regional or development programme specific resettlement strategies implemented for particular projects. The Government of Uganda, with support from the World Bank, approved the development of a national Resettlement Policy Framework (RPF), with the first draft released in 2014. However, the policy has yet to be implemented and as such this mandate lies under no single government agency or unit. Various ministries develop strategies for resettlement depending on the development projects at hand. The Office of the Prime Minister (OPM) is tasked with responding to different types of disasters spanning conflict, natural hazards and evictions. Each of these has different requirements beyond the generalities of "resettlement."

Therefore, a comprehensive, rigorous set of guidelines for resettlement implementation does not exist. As mentioned, resettlement planning often exists on a project-by-project basis, for example for national infrastructure. Many of these attempts at resettlement have been ineffective. Identified barriers to effective resettlement include a lack of suitable relocation sites, lack of sufficient forewarning for evictees and lack of compensation for the resettled communities; as well as resistance from the communities subject to resettlement, which may result from attachment to the land or a sense of place and community, livelihood and infrastructure accessibility, affordability, conflict with the host community and a range of other reasons. For example, in 1996 a government slum upgrading project, undertaken to provide low-cost housing to informal settlers near Namongo, resulted in tenants informally selling their government-built units and building additional, illegal housing, located nearer to the sensitive swampland (SSA, personal interview, January 2016).

Land rights in Uganda

It would be useful at this point to clarify the various land tenure systems in Uganda, which add to the complexity of developing resettlement policy at the

national scale. In Uganda, bundles of land rights are defined in the constitution under the tenure systems that have evolved through history. In the pre-colonial period, land rights were defined according to the customary, traditional systems in which, as in the case of Buganda, land was held by the King in trust for the citizens. In other parts of Uganda, land was owned customarily and vested in chiefs/traditional leaders based on clan systems. Individuals had a communal right to use the land as long as they were members of the clan or group. The rights so possessed were held in ***usufruct*** (based on use) which were allocated by the chiefs and political agents.

One of the landmark events that maintains a long-standing influence on land rights is the Buganda Agreement of 1900, which introduced formalized individual ownership rights throughout Buganda as **mailo** (a form of freehold to individuals). The rights conferred under the Agreement created a fundamental shift from the traditional system. This bundle of rights is still recognized as stipulated in the constitution of Uganda and among its features is separation of rights to land and the developments on it, transferability and control by the Act through registration.

The other bundled land rights exist by **leasehold** with interests specified over a period of time. Usually specified in the lease document are rights of exchange based on agreements (usually time-based) and specifications on renewal or non-renewal of the lease.

Land rights also exist in the **customary land** tenure system which is largely functional but not applicable in parts of Uganda other than Buganda. Under this system, the bundle of rights is dependent on one's membership to a customary group and possession would be guaranteed by the traditional-communal systems. The traditions here determine possession of the rights and the constitution reinforced by the Land Act 1998, protecting access to and by women, children and/or persons with disabilities.

For institutions, on the other hand, rights over land are defined under the **freehold** tenure system and these rights are held in perpetuity. This was distinguished from mailo – despite both classifications being based on the principle of 'fee simple absolute' – because land was also allocated to faith-based institutions in 1900. Rights under this system can be exchanged or leased at will to anybody as long as these transactions are ideally conducted according to law and regulation.

An important issue to mention is that the complexity of land rights in Uganda lies with the overlap of these rights. For example, customary (based on bequeathing to heirs) is a widely practiced form of transfer of usufruct rights on mailo, freehold and leasehold land. This phenomenon, explained by many factors (which are not the focus of this study), has been very significant in fueling land related problems in Uganda. But Article 237 of the Constitution of Uganda vested the land in the citizens of Uganda, owned in accordance with four main forms of bundled rights of customary, freehold, mailo and leasehold as described above. The Article also laid emphasis on the Land Act passed in 1998. To protect individuals who had settled on land for a long period, the Act introduced a new dimension of rights and ownership, that of **bona fide** occupant and introduction of certificates of customary ownership. Land Boards were provided to oversee land matters. This was intended to improve security of individuals' rights over land occupied for a long time.

Methodology

Conceptual framework

The research draws on an abductive research design that seeks to generate data on the meanings and experiences of relocation and resettlement risk from the respondents themselves. The meanings and significance that the respondents attribute to a conception of relocation and resettlement risk are the best way of generating a sense of the practical application and outcomes of these concepts. We are assuming that we can 'discover' a sense of relocation and resettlement risk in what people say about how they live. The research draws on a rich set of literature on flooding in Kampala, urban development dynamics and land tenure issues.

The study focuses on Kampala and works across two different sites of Bwaise (to the north of central Kampala) and Natete (to the west of central Kampala). Both areas fall under the jurisdiction of the KCCA. Based on the work conducted under the diagnostic phase of this project (WP 1), we observed three kinds of processes in action in Kampala that have to do with relocation and flooding risks:

1. The first, we are calling "voluntary relocation[2]," that is, people (individuals, families) decide to move from flooding areas on their own accord, and do so without assistance from the government.

2. The second are evictions from the widening of the drainage channel that have been undertaken or forecast as part of the Kampala Drainage Master Plan. The reason this is of particular interest here is because the widening of the drainage channels is essentially a flood mitigation project, so in a way this is a government-led resettlement scheme that is ultimately driven by disaster risks.

3. We also witnessed a third process of development-driven evictions, which is widespread across Kampala. These evictions range in scale from a handful of families (tenants and structure [Kibanja] owners) to large-scale (for example in Nakuru and Nakawa affecting thousands of people) and are forcing people out of their homes and into often very bad housing conditions, putting them at risk of being affected by flooding and other urban risks.

However, for the purposes of this project, we have decided to focus on the first two processes. This is because we are interested in flooding risk as a *driver* of relocation and resettlement. The third process is important because it acts an important backdrop and precedent for the first two and especially, the second type of process.

In the situation of *voluntary relocation*, the ultimate reasons for the decision to relocate may vary (for example, the threat of loss of life, things getting "unbearable," the economic ability to move somewhere better), and therefore issues of "tolerable levels of risk" and "land markets" and the relations between these two are key themes that we can examine more closely in this project. The land market and people's ability to access land, either as renter or (structure) owner, may ultimately drive many of these decisions.

The land markets and property rights and claims around which transactions occur are therefore important for understanding how people make decisions about moving. The land markets in Kampala are incredibly complex being cross-cut by three different types of tenure (Mailo, customary, freehold), different historical trajectories of different parts of the city that have cultural importance, and a range of

2 However, you could argue whether or not this is actually voluntary if they are in conditions where they are structurally poor. In other words, can it still be considered voluntary if households are forced to sell their property and move because they cannot afford to mitigate the risks?

different "occupancy categories and informal access mechanisms that include land borrowing, squatting, illegal subdivisions and purchase and sale of informal use rights" (Giddings 2009, p. 12). It would appear that transacting within similar registers within this complexity is relatively easy and could facilitate moving but transacting across is much more difficult. For example, a tenant in an area where the landowner has a leasehold from the *Kabaka* could move relatively easily to another tenancy in the same area but would struggle to purchase a leasehold in another system. Land markets could either facilitate or dampen the ability to act on a decision to relocate.

People relocate at different spatial and temporal scales; i.e. they may relocate nearby (could be in the same neighbourhood) or sometimes across the city; relocation may also be temporary or permanent. Thus our objective here is to understand the "process of relocation" or maybe more generally "why people live where they do, and how and why they move in the city." This includes understanding how gender and age affects people's actions and decision-making about relocation and what are "tolerable" levels of risks for different people and what are the "tipping points" that may push them to relocate. For people who relocate, they sometimes if not often get exposure to new risks. We will try to understand the kinds of new risk and the drivers for new risk in relocated areas. To understand this, we examine the motives of residents (individuals and families) and businesses, as well as organized communities (i.e. National Slum Dwellers Federation of Uganda).

As mentioned in the above section, flooding in Kampala usually happens when there is intensive rainfall, and the floods may last a few hours to a few days. Mostly flooding is short-term (i.e. a few hours), and comes on very quickly. The impacts of flooding include loss of lives (this is especially common for children), frequent illnesses, loss and damage of belongings and damage to infrastructure.

Figure 1: Responses to risks differ according to a range of decision-making drivers that differ between individual/family/community groups and state actors.

Even though people live in areas that flood regularly, many feel the neighbourhood to be a good place to live, and consider it "home," (strong identity) and therefore would not consider relocating, given the available resources that they have. Thus, we look at the elements of "identity" – why and how people identify with a certain neighbourhood or part of the city. We also want to understand something about the choices to upgrade or invest in flood-mitigating infrastructure (both for households and community).

One issue that we are interested to understand is the institutional concerns and processes around flood risk mitigation and wetland ecosystem preservation in Kampala and how these impact on relocation and evictions. This is witnessed both in the implementation of the Kampala Drainage Master Plan and the subsequent World Bank funded infrastructure projects, as well as various regulations and actions towards conservation of the wetland areas of Kampala.

A second issue is what happens in practice when there is a resettlement plan enacted in the drainage channel widening projects. What are the existing practices for compensation and how is this calculated? What are the existing practices for "due process" (i.e. amount of warning people get, transparency of how land is evaluated, humane treatment during evictions)? What is the process for compensation in reality for people: what do landlords and tenants end up receiving, and what do they decide to do? Ultimately, we want to understand the social and economic impacts of this on people, however in this phase of the research we are interested in the decision-making and implementation process.

Figure 1 depicts the conceptual framework on which we have based our work. It shows that there are different kinds of responses to the flooding problems in Kampala, and that we are interested in understanding the drivers of decision-making for 1)

Bwaise - Target	Number
Household heads living in the area (including a mix of tenants and owners and male and female-headed households).	15
Household heads who have moved within Bwaise to reduce the risk of flooding (including a mix of tenants and owners).	5
Small and medium businesses (a variety of different kinds and sizes of businesses which are located in the flooding areas or which have moved due to flooding).	10
Evictees (household heads that have been evicted due to the construction of the drainage channel).	5
TOTAL	35

Natete - Target	Number
Household heads living in the area (including a mix of tenants and owners and male and female-headed households).	10
Household heads who have moved within Natete to reduce the risk of flooding (including a mix of tenants and owners).	5
Small and medium businesses (a variety of different kinds and sizes of businesses which are located in the flooding areas or which have moved due to flooding).	6
Potential evictees (household heads that are facing eviction due to the construction of the drainage channel).	14
TOTAL	35

those who live in areas of flood risk and tolerate the problem; 2) those who move primarily because of flooding and 3) those who are evicted by the drainage channel projects. In this phase of the research, we are interested in the drivers of decision making and implementation both from the perspectives of households and businesses, the state and non-governmental organizations.

Research questions

Based on the above conceptual framework, our research asks the following questions:

1. What are the drivers, the tipping points and limits of tolerable risks, which push or enable people to move out of the flooding areas?
This question includes addressing both decision-making of residents and of KCCA (i.e. at what point does KCCA take action on flooding issues). For residents, this question also addresses gender issues, as well as land markets.

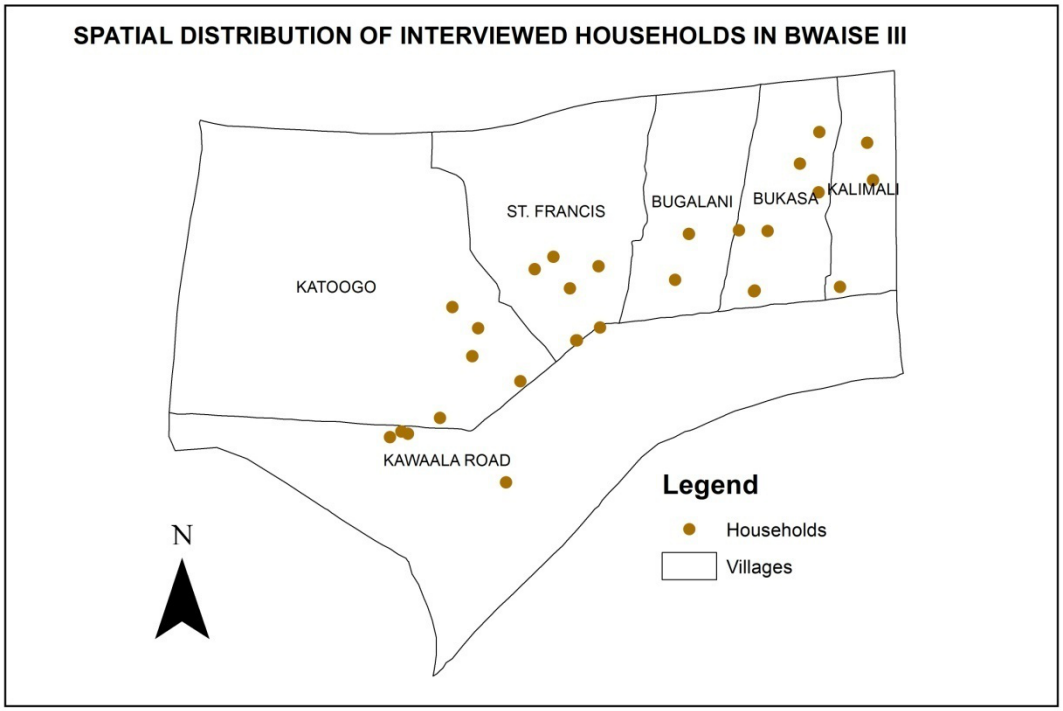
2. If people are forcefully moved, what is the process of implementation?
This question looks at both the view of people who have been evicted and KCCA implementation processes. We investigate what have been the processes in Bwaise, and what is the ongoing process in Natete, our chosen study areas within Kampala

3. How do district/city-level strategies to mitigate flooding impact on relocation? What are the future plans?
This question looks at short and medium strategies, based on the drainage programme and the KCCA Master Plan. What are the city level strategies? What are the future plans? From an institutional view of the process of relocation, what counts as effective?

Site identification

Within Kampala, we have identified 2 sites – Bwaise and Natete – from which to commence the research. The sites were identified after a scoping trip in June 2015 and follow-up trip in August 2015. Both sites are located within low-lying/wetland areas of Kampala. However, there are differences between Bwaise and Natete with regard to evictions in relation to drainage infrastructure expansion. Whereas in Bwaise, evictions have occurred, in Natete, the evictions are yet to occur. Within each site, different types of households were identified and due to the potential evictions in Natete, slightly different samples of households were selected (see Map 4 and Map 5).

A team of 4 field researchers was trained in early November 2015 by the Research Team. The training included the refinement of the questions with the field researchers, piloting of the thematic interview schedules and subsequent adjustments to the instruments before actual research commenced. In addition to the thematic interviews, basic demographic data was generated on each respondent. The demographic questionnaire was a structured questionnaire that drew directly on the wording of questions used by



Map 4. Spatial distribution of interviewed households in Bwaise III

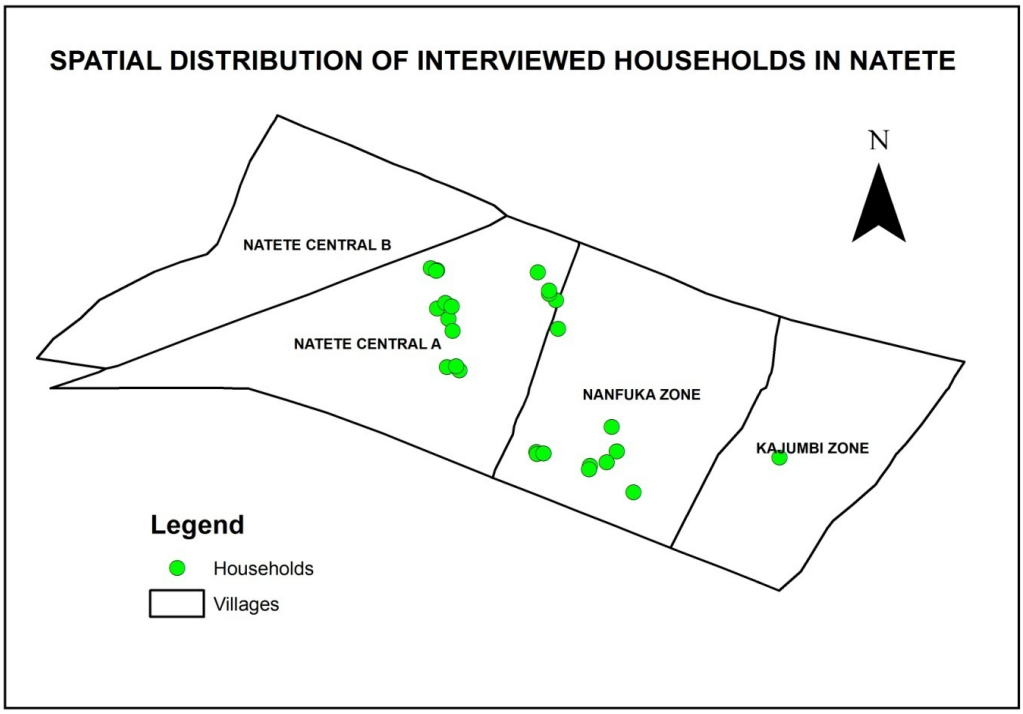
the Uganda Bureau of Statistics. The purpose of the demographic information is not to create any sense of representativeness of the sample, but to be able to identify the respondents within broad socio-demographic characteristics. Field research commenced in Bwaise in early December 2015 and was then conducted sequentially in Natete in late December 2015.
A total of 35 + 35 respondents were interviewed in Bwaise and Natete:
Because evictions have only been carried out in one of the sites, it was decided that the distribution of the sample should slightly differ under the categories of targeted respondents. The stratified sample of respondents who were living in the area (in both Bwaise and Natete) were randomly selected along a transect through the settlements. The transect deliberately crossed areas that were known to be susceptible to flooding. Where possible, field researchers recorded photographs of the local environs of respondents. Quality control was maintained through daily debriefing by Dr Lwasa to identify any emerging issues, select transects and recap the main issues under investigation for probing purposes.

Contextual summary of Bwaise

Bwaise III is a parish in Kawempe division location 5 kilometres from the city centre. The neighbourhood is a busy commercial centre traversed by the Kampala-Gulu highway linking the north of the country to the capital. Another major branch of the Kampala Northern Bypass highway intersects with the Kampala Gulu highway to the south of Bwaise passing through the Lubigi wetland. The parish has five villages or zones of St Francis, Kalimali, Bukasa, Katoogo, and Bugalani with most of the area in the swamp making it significantly vulnerable to flooding. Bwaise III is a densely populated area with approximately 35,000 people and an estimated 7,000 households with average size of each household being 5 people (ACTogether Uganda & NSDFU 2014).

Due to the exposure to flooding, residents cope with flood hazards that often trigger health disasters. The infrastructure developments of expanded drainage and roads have compounded the flood hazards and raised the threat of evictions to pave way for development (ACTogether Uganda & NSDFU 2014).

Bwaise is both a residential and a commercial area with people operating small retail businesses in transport involving motorcycles (*boda boda*) and selling of vegetables. The area also has small to medium sized industrial firms that provide employment for some of the residents. The majority of the residents are low-income earners, involved in small scale activities within the area. By nature of urban development, Bwaise is largely unplanned and highly built up with a mixture of housing, shops, schools, religious buildings, markets and health centres concentrated in the same area (Ajambo 2013). The most common type of housing structure for the people living in this settlement is the one or two room tenement. The housing structures cover different



Map 5. Spatial distribution of interviewed households in Natete

purposes ranging from residential, commercial or both (mixed commercial and residential). Due to lack of proper urban planning, it has grown into a commercial, industrial and residential township with a deficit of infrastructure. The lack of developed infrastructure and poor service provision has exposed the town dwellings and residents to several challenges including flooding and water borne diseases.

Bwaise is identified as one of the major flooding hotspots in Kampala, as exemplified by the oft-heard statement: "water is life except if you live in Bwaise." Severe flooding in many areas along the primary channel (Lubigi drainage channel) is caused by the insufficiently dimensioned culverts underneath the Northern Bypass and a relatively narrow and shallow primary drain (Sliuzas & Flacke 2013).

Contextual summary of Natete

Natete is located in Lubaga division, on the south-western edge of the city of Kampala. It is bordered by Busega to the north, Lungujja to the northeast, Lubaga to the northeast, Ndeeba to the southeast, Mutundwe to the south and Buloba to the west. It is 8 kilometres away from Kampala's city centre. Natete lies on the main highway between Kampala and Masaka. There is a major intersection in Natete, where the highway to Mityana, Mubende and Fort Portal splits off the highway to Masaka, Mbarara, Kabale and on to Kigali in Rwanda. At the same location is the interchange for the Kampala Northern Bypass bypassing downtown Kampala to the east in Kira. The Entebbe-Kampala Expressway is also under construction nearby.

The settlement of Natete has an estimated population of about 45,000 people living in 9,000 households with an average household size of 5 (ACTogether Uganda & NSDFU 2014). Natete Parish is a high-density settlement comprising residential areas and light industry. Despite inadequate infrastructure, it is an economically vibrant area, steadily increasing its contribution to Kampala's economy, with 70% of its residents being economically active. Most of these are relatively young and are employed in the informal sector, with jobs ranging from home-based activities to trading, services and market vending. The 16% who are employed in the formal sector include workers in education, telecommunication services and industry. New employment opportunities have emerged in small- to medium-scale industries specialising in metal works, furniture production, oil and petroleum products, and most prominently food processing particularly milling grain for flour (Dodman & Soltesova 2015).

Like Bwaise, Natete is located in a swampy, flood-prone area combined with low income housing and light industry. Increasingly, private developers looking to invest within the growing industrial zone have found land within Natete's flood-prone areas inexpensive and therefore highly attractive for further industrial development. Owners and investors in small-scale industries possess sufficient resources to reclaim low-lying land. Yet, by in-filling land, they transfer flood risk onto low-income residents who occupy adjacent and surrounding residential parcels. Local road networks used by residents are highly affected by redirected flooding. Local economic development is thus coupled with increased pressure on local residents. For some, their vulnerability further increases with rising costs of individual anti-flood interventions. For others, the choice to relocate from the area engenders additional costs and loss of social networks (Dodman & Soltesova 2015).

Data collection

Data on each selected respondent was collected through recorded in-depth interviews. Each interview was then transcribed and translated from Luganda to English.

Interviews were also conducted with selected government officials and civil society organisations in Kampala. These interviews were conducted in English and transcribed.

Data analysis

The transcript data of all interviews were coded by the Research Team in terms of actors and themes that emerged in relation to decision-making and implementation.

Findings

Synthesis of stakeholder interviews

Interviews were carried out during a fieldwork trip in October/November 2015, with a further interview in December by the Kampala-based project team. They were approximately one hour each, and attempted to assess understanding of risk, implementation processes, costs and benefits, strategies and future plans relating to resettlement and relocation in Kampala. Appendix A contains the interview schedule.

National Environment Management Authority (NEMA)

Interview with Mr Herbert Nabaasa, Senior Districts Support Officer

Conducted 5th November 2015 by Drs Cassidy Johnson and Colin Marx

The National Environment Management Authority (NEMA) is the national agency for natural resource management to enable sustainable national development. The activities at national level in regard to DRR have been focused mainly on response mechanisms. The turnaround for pre-disaster preparedness has only started recently, apparently due to the recurrence of disasters. The nature of disasters that have led to this combined effort towards response mechanisms and pre-disaster preparedness include mudslides, landslides, floods and droughts. These at national level couple with the long civil war that led to creation of Internally Displaced Persons Camps and although resettlement from these camps is almost complete, some people have not gone back to their original settlements. Further, this resettlement comes with several challenges like forest degradation for industries such as charcoal production and agriculture.

Local government and districts in particular are meant to integrate socio-economic issues in environment management. In this regard, disaster risk management is supposed to be integrated as well. Information on these topics is also integrated in schools and institutions to create awareness across the spectrum of stakeholders. As new districts are created, the unit in NEMA builds their capacities to bring in the planning and development of disaster risk and natural resource management. NEMA trains local government officials including foresters, physical planners, fisheries officers, social development officers and politicians. In particular, NEMA now works with KCCA and the governance structure supports environmental officers with whom NEMA coordinates environmental protection issues.

In regard to reduction of floods in Kampala, NEMA works with KCCA in the process of approving buildings to ensure that they are not built in wetlands or if there is excavation to be done, tests are completed before the plan is approved. Mitigation strategies are then discussed with the developer but there is a big challenge about poor planning in the city, that of enforcement and uncontrolled development which contributes to increasing floods. The enforcement by NEMA is realized with development applications that go through the formal process of building approval but the majority of the developments in Kampala are not following the formal process. Sometimes the different mandates block this process of intervening to not approve developments in environmentally sensitive areas. The other challenge is that NEMA is thin on the ground so surveillance and follow up is difficult. A few institutions are involved in checking this process of developments in the city, including land registration by the Ministry of Lands, Housing and Urban Development (MoLHUD), KCCA examining the building

plans and NEMA examining the environmental impacts of the development.

Without a clear definition of sustainable development, the interview dwelled on wetland encroachment as the biggest challenge for NEMA. Industries have historically been located in wetlands but also new industries are establishing in wetlands around the city and this development blocks drainage and creates floods. The public is aware and concerned with the wetland degradation but the actors who degrade are few compared to the majority of people. In fact, for surveillance, it is the public that inform the authorities whenever there is a problem because there is a technical, financial and human resource deficiency for NEMA to undertake these activities at the given scale. But there is also the KCCA enforcement team, integration here would have seemed seamless but the NEMA officer did not mention this.

However, this seemed to be a narrow view of the issue of who is degrading the wetlands, as there are equally more people settling and developing houses in wetlands than just industries and back fillers. Civil society organizations and other actors are helping to voice the importance of wetland protection and these organisations are regulated by a national board. For example, there was one which was banned in Uganda because it sued the government. Disincentives can also be used to enforce environmental protection with an example of big shopping centres in UK that were recently banned from giving free plastic bags. But the importance of integration in wetland protection requires engineers, planners, environmental mangers, policy actors, communities and civil society organizations.

NEMA is supposed to act on a Cabinet decision to inventory the wetlands targeting the Lake Victoria catchment and de-register land titles of owners who acquired the titles after the passing of the National Environmental Management Act 1995. However, there is no comprehensive resettlement strategy, with the law indicating instead that people be compensated and relocate themselves. But the challenge is the huge costs of compensation of all landowners in wetlands. This has delayed the implementation of de-registration and eviction from wetlands. But for the settlers who came into the wetlands after the law, there will not be compensation as ignorance of the law is considered no defence legally.

The complexity of this process is where KCCA is again approving buildings in wetlands and some new establishments also that have received approval from NEMA by offering a certificate based on an environmental impact statement. Industrial development and residential buildings are the leading encroachers on wetlands in Kampala. NEMA works with KCCA's Directorate of Public Health and Environment to inspect wetlands and encroachers but also developers to ensure that the common good of ecosystems are managed sustainably since their ownership is in trust by government. There are ecosystem management regulations, for example a buffer zone of 200 meters is supposed to be developed around Lake Victoria, and for rivers there is a 100 meter buffer covering both sides of the river banks. These regulations are implemented by the local governments that develop locally-embedded policies for management of the sensitive ecosystems.

There are several other regulations for hilly areas and mountainous areas, all of which are implemented by local governments. NEMA provides oversight and guidance in the implementation process. For example, a case study of floods in Kasese in western Uganda illustrates the equal importance of managing flood risk in upstream and downstream areas. Flooding in Kasese was linked to developments on hillsides leading to increased runoff affecting houses, bridges, transportation, livelihoods and people in lower areas of the catchment. The critique for NEMA perhaps is that by categorizing ecosystems and bounding them through mapping as well as regulations, the interconnectedness of disasters or cascading of the events that lead to flooding remain less understood.

There is a project that looks at redesigning and construction of drainage channels. The existing drainage channels have been narrowed by developments along the drains. But the technical solutions can also accentuate risk. The environmental impact of the drains is not known, but studies are needed to establish the impacts, such as contamination of the lake. In terms of adapting the drainage system to climate change, Uganda can request CDKN for support on this issue. For example, regarding the role wetland protection plays in reducing floods as compared to technical solutions of constructing drainage channels.

Kampala Capital City Authority (KCCA)

Interview with Mr Moses Atwine Kanuniira, Directorate of Physical Planning

Conducted 6th November 2015 by Cassidy Johnson and Colin Marx

At the city level, and indeed, at the level of the much larger functional region that has strong interdependencies with Kampala, there are important development dynamics and processes at play. Importantly though, while KCCA astutely recognise the finer points of many of these, they are also

acutely aware of which they have some power to do something about and which are beyond their control.

In relation to flooding, Kampala has a drainage plan and the KCCA wants to develop a new one to reflect the realities on the ground. While the process of getting resources to initiate the new plan is underway, the planners have identified a number of activities to attempt to alleviate flooding in the city. First, there is the importance of protecting the integrity of existing drainage systems in the city. Since many of the roads have not been paved, the drainage channels are liable to silt up and Atwine notes "that alone has caused unnecessary flooding because otherwise the water should be running underground in the provided channels". Second, KCCA is seeking to "scale up" the greening of the city to reduce the runoff.[3] Third, it wants to embed a new mind-set amongst developers in terms of on-site water harvesting and the reuse of water.

The majority of the city relies on on-site sanitation systems. Only 30% of the properties are connected to the sewerage system. This has particular consequences, particularly for developments in low-lying and wetland areas. KCCA offers advice to developers on how to provide safe sanitation systems in such areas.

While a city-wide view is useful for thinking about the "orderliness" of the city, Atwine notes that KCCA does not necessarily control all developments within the city. For one, property rights to land located in the wetlands appear to override both planning concerns of KCCA and the 1995 Constitution.[4] For example, "much of this land where the drainage channels are, some of it is private land, or land that KCCA as a government institution doesn't have full control…[]…much as it's designated maybe as a wetland or drainage channel, when it comes to land rights, it becomes challenging to immediately enforce, or limit the kind of usage that is taking place". As a dimension of this issue, Atwine is aware that many people living and working in the wetlands have not bought into recommendations to reduce the flooding and its impacts. For example, he notes that "the challenge is that the people who would otherwise implement some of the recommendations, they don't consider them as the first priority". Notably, as Atwine observes, this is probably because they would have to give up some of their land.

Another issue is that gaining the political authority to engage in relocating and/or resettling activities from the wetlands is complicated and bound up with dynamics in higher levels of politics. "[National] Government is discussing the area …[and] … we hope that they will expedite the process so that we can deregister the ownership [in the wetlands]". That is, "we need to be endorsed politically and then, where there is the need for compensation for some of the properties, then we have to engage from that". Relocations and resettlement are highly political and thus likely to be approached carefully by higher levels. While one part of the sensitivity derives from people losing attachment to their land, another is clearly the difficult financial consequences of reaching levels of compensation that are considered fair.

In a Cabinet meeting on 16 April 2014, the "cancellation of land titles in wetlands on public land acquired unlawfully after 1995" was approved in order to address problems related to wetland degradation (Cabinet Minute 114 [CT2014]). The following specific actions were approved in this decision: 1) as a matter of principle, policy and law, all titles in wetlands on public land acquired unlawfully (after 1995) should be cancelled; 2) Use of land in critical ecosystems especially those on the 200m lake shore protection zone should be regulated and the proprietors should apply for and obtain permits to undertake activities as provided for in the law. In terms of how this translates into action on the ground for KCCA, the logic of cancellation revolves around the appropriateness rather than illegality of development (unless the development was clearly illegal). Atwine states that "we are saying this development is not appropriate anymore. Not that it was illegal". However, the debates are complex and involve issues that are difficult to get agreement on, such as defining what is legal and illegal; understanding what benefits the wetlands provide and to whom and forecasting the future needs of the city.

Another consideration is that people operate illegally and there are different forms of illegality that undermine what the Planning Department is seeking to achieve. One form is that developers engage in development without coming to gain approval from

3 Notably, Atwine is aware that while this is a sensible and relatively inexpensive option, its success is likely to be limited because open, green spaces are limited and the value of land means that owners will seek to increase the densities of development, reducing open spaces even further. This is exacerbated by a shortage of land for industrial activities in the city which means that industrial activities are squeezing into the existing urban fabric.

4 Article 237 (2)(b) states that "the Government or local government as determined by Parliament by law, shall hold in trust for the people and protect, natural lakes, rivers, wetlands, forest reserves, game reserves, national parks and any land to be reserved for ecological and touristic purposes for the common good of all citizens".

KCCA. In some cases, this is "because they know that ultimately they will not get permission". Another form of informal development is that people will illegally "backfeed" (fill-in) the wetlands – often at night – either to proceed with development or to reduce the costs of transporting waste to designated dumping sites further out of the city. Irrespective of the motivation, the consequence of this is that the wetlands are degraded. In Atwine's words, "…some of them, because they know that they will not get approved, they have gone ahead to abuse those areas by illegal dumping – you find that over time the wetland is choked by the illegal activity. So you prosecute them, but the functionality of the system is already degraded. Then what? But, if it were in the hands of government or KCCA, then we would have the responsibility to go and reinstate it, use it for that purpose. Which is not happening."

A key conundrum is that the industrial areas are located in the floodplains and are a major cause of the wetland degradation. Over 20 years ago wetland areas were "actually designated as industrial areas. But, they were in the wetlands. A big chunk of those industrial plots were also designated in the wetlands". The environmental cost/benefits confronts the economic cost/benefit: "Now we have had some issues where people have presented documents saying, yes, it was the government which gave me the title in the wetland …[] … they say, yes, it's a wetland physically, but I have this documentation, I have invested my money so are you going to compensate me? You understand the confrontation?"

While Atwine's analysis that flooding is a cost to the entire city and its economic activities is reflected in the Planning Department's approach to development, it appears that individuals are not taking account of the externalities of their actions and a collective consciousness of the "costs" of industrial and economic activity in the wetlands has not developed in relation to the benefit to the city as a whole.

The KCCA Directorate of Public Health and the Environment

Interview with Dr Daniel Ayen Okello, Deputy Director

Conducted 6th November 2015 by Cassidy Johnson and Colin Marx

The KCCA Directorate of Public Health and the Environment has the delegated authority from NEMA to implement the provisions of the National Environment Management Act. The primary activity in this delegation relates to reviewing environmental impact assessments for development. KCCA's function includes keeping an inventory of wetland areas and using the EIA mechanism to protect them. Reviews of EIAs are sent to NEMA but KCCA's comments are not binding on NEMA.

A set of health and environment responsibilities provides a useful perspective from which to see how different factors interact within and beyond Kampala.

In terms of sanitation, Okello states that 7% are connected to the main sewage system and 92% use on-site sanitation.[5] Okello notes that 90-95% of the springs in Kampala are contaminated. A very high water table and poor faecal management is related to this contamination.

In terms of flood responses, the KCCA has a roving team under Public Health that monitors water runoff and flooding. Due to past experience, the team knows that flooding can be caused by solid waste blocking drains. The roving team activates resources to unblock drains during rains to alleviate these problems. However, this support is not provided to Bwaise because of its structural nature: "Bwaise is a low-lying area… traditionally a wetland area…[but] … people have encroached onto the wetland area. So the response is that ideally you'd want to relocate people".

The cost of compensation relating to the installation of drainage channels is a major financing issue for KCCA. The "cost of building a channel is UGX21 billion and the people who are there want UGX23 billion [in compensation]". However, while the funds for compensation need to come from KCCA, the funds for the construction of the channel need to be borrowed. "So the question is, why do I borrow money for something that I'm going to compensate people for? For the same cost?"

Okello repeatedly flags the land tenure system as an obstacle to protecting the wetlands. When the wetlands are owned by private individuals and "ownership" includes the power to use land "for development" KCCA finds it difficult to provide effective answers to the question: "why are you stifling development?" In short, "the policies of environment that are very good are being pushed by the urge for economic development". Later on, he repeats the necessity of having to be "very firm and get support to stand against economic forces". KCCA still has the possibility to legislate on developments that are on government owned portions of the wetlands. "An educated guess" puts the amount of wetlands owned by government at 30% and developments on this 30% as having the most impact. The reason for this development being that "it was easier to get proof of

5 Note that this is a different figure than that provided by Atwine where he said 30% are connected.

ownership – to lease and get proof of ownership. Now, once you have proof of ownership you can use it to either get a mortgage or to get or to sell and transact on it. On Kabaka (customary authority) land…[] … you would be a tenant".

The only way to control land use on designated wetland areas is to regulate the activities on the land. Wetland regulations do not "override your rights to the land, but they will regulate what kind of activities you can do in that land".

The question of what kinds of development to permit in the wetlands is complicated by the fact that different parts of the government are themselves using the wetlands for unsuitable purposes. While technologies exist to build in wetlands – by for example suspending roads – these are expensive and have not been implemented. Indeed, neither more expensive (environmentally friendly designs) have been used nor avoidance of the wetlands ensured. The primary reason for this is that "you don't have to compensate very many people there, so it tends to be cheaper".

Interestingly, Okello points to an effect of wetland degradation as being that the "costs of drinking water in Kampala are rising. And, I think that for the last – from 10 years ago – the costs have risen 6 times. Why? Because we are polluting the lake …[and]… at [National Water and Sewerage Corporation] they are telling you that they are getting to a point where the chemicals they are using – like when they are mixing, they are using the maximum permissible."

KCCA Engineering and Technical Services

Interview with Michael Kizza, Deputy Director

Conducted 16th December 2015 at KCCA offices by Dr Shuaib Lwasa[6].

The meeting and interview was conducted in Michael Kizza's office starting 11 am. He welcomed Shuaib and immediately connected the interview to the previous work on flood assessment when he mentioned that the interview is connected to the Integrated Flood Management strategy project. Michael participated in all three workshops of the project and together with Andrew Kitaka, Director of Works & Engineering, contributed to the formulation of the Sustainable Urban Drainage Systems concept that he acknowledges as having been integrated into KIIDP and the Kampala Drainage Master Plan, which is underway. The interviewer clarified that this interview is related but focused on relocation of communities or households and/or resettlement due to floods and/or drainage infrastructure projects. The topics of discussion during this interview were as follows:

Risk Reduction Strategy: The interviewer (henceforth referred to as Shuaib) asked whether there is an institution-wide risk reduction strategy, particularly regarding the flood risk. Michael explained that there is no institution-wide risk reduction strategy, although there is someone in the Directorate for Administration, Consolate, who is in charge of risk and who works closely with the Office of the Prime Minister to develop the strategy. As an entry point, KCCA is implementing the OPM strategy around Disaster Preparedness Committees and training has been received from OPM focused on disaster preparedness. This training revolves around flood risk in Kampala as flooding has been observed to have increased of late due to land use changes; yet the capacity of the drainage channels is low for the amount of storm runoff. Michael also clarified that as KCCA, they are doing whatever they can to reduce flooding in the city but the biggest problem is illegal developments. This is when he chimed in the urban planning department whose procedure has been streamlined to allow the developers to submit their plans so that all new buildings conform to the standards. However, he acknowledges that this streamlined planning and development control would not reduce floods because people pave courtyards, don't harvest water and leave small or no green areas on the plots. Enforcing plot coverage is one issue but also possibility of charging people on how much storm water comes off their plots and roofs. Shuaib asked about SUDS and Michael explained that the discussions of the IFM project have supported redefining the ToR's of the master drainage plan for the city. A consultant has been contracted and a committee is established to oversee the implementation of the drainage master plan. He asked Shuaib whether he knew that Professor Kansiime is the chair of the steering committee and that he would talk to him in order to establish whether Shuaib can also be co-opted on the committee. They are also looking at the implementation of the de-registering of land titles in wetlands but that has hit a snag due to political issues.

Shuaib asked about the KIIDP project under which the drainage master plan is being developed. Michael explained that the KIIDP is comprehensive with a project management unit and all directorates that have a role are coordinated by the implementation unit. Although KIIDP is developing a plan for the entire city, the upgrading of Natete-Lubigi channel is one of the sub-projects. This upgrading will resettle some people who have houses and live in the zone that is

6 This is based on memory, the original recorded file having been overwritten. Rather than document this as a transcript, the ideas, as remembered by the interviewer, have been fleshed out in narrative form.

to be used for widening the channel. People in Natete have been profiled and the Directorate of Gender and Community Services involved in mobilizing the people to understand the project. The challenge is that several commercial buildings, particularly milling factories, have also been built in the flood plains and close to the drainage channel. KIIDP will relocate these people after compensation of their land and houses. It is also expected that the contractor will design the channel with retentions and integration of the SUDS principles. KCCA is interested in using the SUDS principles because at interchanges of the upcoming flyovers, they expect to collect the surface runoff and use it for different purposes including watering flowers and green areas within the city. KIIDP is implemented with other directorates; as mentioned, the gender directorate mobilizes people, the planning directorate has started on planning these areas so that the designed drains align with a spatial plan, the communication department is very active in enabling the public to be aware of the project and activities of KCCA while the engineering directorate is guiding the designs. There will be a number of activities including levelling to determine the flow gradient of the channel, areas for retention of water and how these will be integrated with SUDS.

Another issue covered in the interview on that very point and in view of the relocation or resettlement of people was whether KCCA has a resettlement strategy for this project. Michael started with clarifying that KCCA would never resettle people, all they do is value their land and houses and then compensate them for that. The people then find the areas to resettle themselves. But KCCA is working with OPM to develop a resettlement strategy in the future. Some members of KCCA regularly meet with OPM as part of the national disaster risk and response team to discuss ways of addressing floods in Kampala. Floods are increasing by the day and central government wants to come in to offer help.

KCCA has also created a team for drainage maintenance. Michael stated that he was the team lead of the drainage maintenance group until he was moved to the directorate. He said they have contractors that are charged with de-silting, dredging and cleaning the drains all over the city. They also monitor the hotspots in the city, Industrial area, Mukwano, Bwaise and Clock Tower all of which flood when there is a heavy downpour in the city. Floods are destroying roads and increasing the cost of road maintenance, so the team was created to ensure that these costs can be reduced.

Michael thanked Shuaib for the project and hoped that it will inform KCCA on what to do about resettlement and relocation as these are likely to be increasingly employed in the future.

Office of the Prime Minister, Department of Disaster Preparedness and Management (OPM DPM)

Interview with Hon. Menhya Gerald Simon, Assistant Commissioner Disaster Preparedness

Conducted 3rd November 2015 by Cassidy Johnson

Based on an interview conducted in January 2016, there is a clear focus on the co-ordination role that the Office of the Prime Minister, Department of Disaster Preparedness and Management (OPM DPM) is established to perform. According to the interviewee, "…this office was established to coordinate DPM activities in this country. Coordination…[] That is our major principle which we use…" There is also a clear sense that the OPM wants to be more prepared and to try and anticipate and prevent disasters from occurring.

In order to do this, there is a three-pronged strategy. First, it seeks to build and mainstream an institutionally robust DPM system that is nationally comprehensive, multi-sectoral and multi-level. As part of this process, a "national atlas for disasters" which profiles and maps potential disasters is being prepared. It appears that, inevitably, the technicalities are a key feature of the profile mapping which is "coming up with a method of how it [rivers] can be managed or controlled". Furthermore, "…DPM is a new topic, a new subject. Not many people understand it. And yet, it is very, very, very important. And technical in a way". Second, the strategy seeks to create a common legislative framework for these multi-sectoral and multi-level actors to operate within. Third, over the long term, it seeks to develop a different consciousness in the general population about DPM by embedding disaster prevention and response into the primary school curricula.

The emphasis here is "lessening the effect of disasters on the people of this country" and relates to a calculation that, apart from lives lost or general morbidity, prevention is more cost effective than response over the long term.

The OPM recognises that "urban" disasters are likely to become increasingly important and within this, flooding is a key issue. Flooding is likely to increase because of "resettlement (sic) taking up wetlands, fragile lands, hills, mountains… and too much garbage… where resettlements have been constructed along the natural flow of rivers and streams".

Resettlement is executed on the basis of providing

resources at the new location and removing people from disaster risk. It does not include compensation for loss of the current resources.[7] However, there are many reasons why it is apparent that a singular focus on co-ordination is more difficult to achieve in practice than it is to state in policy and is an unenviable responsibility. For example, simply achieving a co-ordination function is very difficult when disasters and responses to disasters have such multifaceted complexities that exceed institutional, administrative, jurisdictional boundaries and have little relationship to the temporalities of budget allocations. As Gerald Menah notes, the OPM is also tasked with responding to different types of disasters spanning conflict, natural hazards and evictions, each of which have different requirements.

The difficulties with co-ordination extend because, in practice, it is very difficult to distinguish between "co-ordination" and actually getting involved in a disaster plan or response. For example, "by doing the co-ordination, this office is also there to actively participate in the planning, the preparation, the mitigation, the recovery and also the response". These efforts are clearly constrained by budget limitations and the strength of the weakest institutional element in the co-ordination response. It would appear that effective co-ordination will require stepping in to a more active role to compensate for a lack of effective activities from weaker institutional elements.[8]

Interestingly, it is not immediately clear who should be responding to disasters. That is, following a discussion about the need for households to have a role in responding and for the need for "networking" with members of the UN family, when it comes to being charged with implementation "we cannot do all this". The "we" refers to government and so the army is being trained on basic principles of DPM because "we know the army has the population, the numbers".

Three examples of resettlement are given: the people resettled from Mbale because of landslides; Ugandan nationals expelled from Tanzania and settled once and then again.[9] There is evidence that resettlement initiatives will increase. For example, "… this resettlement programme is here to stay. We have not done it once and for all. It will come and we need also to change our focus, our attitude, our plans, our programmes, our organisations".

The difficulties of co-ordinating responses (specifically resettlement) include "dealing with the psychology of the people". "Psychology" refers to people's way of life, their attachment and sense of belonging to place and livelihood. The interviewee was clearly aware of the intricacies of daily life which are so taken for granted, yet fundamental for life. And, the "psychology" is not the only issue to think about because all of the people associated with the essential services – police, teachers, nurses, etc. – also have to be resettled to service the new population. And, disturbingly, sometimes it is necessary to create a "security zone" around recently resettled people to protect them from autochthons.

Menah points to a potentially important theme to pick up in the analysis: namely that there is a "gap" between when a decision is made and when it is implemented.[10] This gap is represented by the notion of a "roadmap". The roadmap has two elements: that of getting parliamentary approval for the budget and relocation and the processes associated with actually moving people and resettling them. One noteworthy analogy during the interview referred to the idea that the futility of having good legislation without adequate budget support means that they are effectively "writing on water".

Resettlement also involves the need for some kind of registration system to prevent people from circumventing the system. This is also evidence of the reconfiguration of the relationship of people to the state and state services.

Shelter and Settlements Alternatives: Uganda Human Settlements Network (SSA)

Conducted 6th November 2015 by Colin Marx and Teddy Kisembo

SSA is a civil society network organisation that brings together different stakeholders, including NGOs, community based organisations and other institutions

7 However, Article 50 of the 1995 Constitution makes clear that if any rights are infringed the person has the right of redress through the courts and this may include compensation.

8 There is clearly something about the national profile and institutional proximity to the President that the OPM has a heavy mantle to carry and must be seen to succeed under very difficult circumstances.

9 It would be interesting to note how meteorological change-induced resettlements compare in proportion to development-induced, conflict induced or other hazard-induced resettlements. If there is mistrust about resettlements in general, then experiences from other types of resettlement will influence peoples' perceptions about meteorological change-induced resettlements. It would also be interesting to clarify when the "UN family" step in to help.

10 Or perhaps that a "decision" is actually made up of a series of decisions that must be assembled and configured to represent a single decision.

to look at improving human settlements in Uganda. They are active in capacity building, helping people to understand their rights and to define strategies, advocacy, lobbying, networking, documentation of best practices. As they are a network organisation, if there is a network member in the area, they work with them, or if not they may work directly with communities. They have a wide portfolio, including working with communities that have been evicted, and resettled in Kampala (for example, recently in Namugongo).

From the perspective of SSA, the reasons why people are resistant to resettling, or moving away from their local area, even though they may live in places that are frequently flooding, is related to livelihoods and lifestyle. In their words:

The reason people don't want to move is because their livelihoods are right there. Their factories where they have been working, their businesses where they have been working, so moving that person from Namwongo say to Kawempe or Natete or Bwaise, becomes a challenge because now they have to incur more costs. Well, the cost of living becomes higher, because they have been moved away from easy access to where they have been working. When you live somewhere, you build a lifestyle, you build your home, you build everything you use, need – you find a way to situate it in the different areas surrounding your home. When you are moved from there, everything about you changes. Your access to each and every thing that you have been accessing is disorganised. So you start to try to re-adjust. It's normally harder, especially if you were moved before you were ready, or you were moved involuntarily, you will definitely suffer. Because you have to change not only the transport, but also the access to facilities like health, water, sanitation, education for your children…you have to look at all the foundations for your home again.

Informal settlements are built up in Kampala through people accessing land by settling in open areas; most of these open areas are low-lying flood-prone areas. After one person settles there by putting up a shack, another comes, and then another comes. "Then here comes this local council leader, the local authorities, and they say if you settle here you have to pay us this much. And so that informal agreement is where it all starts". Thus people feel they have the right to stay there because they have been paying, however in many cases the land does not belong to the person they have been paying, rather they have been exploited by land mafia. So when it comes to resettlement, the resident feels they have rights to the land, when in fact they may not have the correct information. For example, SSA states:

We had a case where we were working with ACTogether in their municipal development forums… These people had been paying for their land over a period of 5 years, and the local council just evicted them, told them someone has bought the land, you don't have enough money to buy back from the landowner, so you have to be evicted. The next thing they knew, a high-rise building goes up on the property that they had been paying for over 5 years.

SSA explains that Uganda does not have specific eviction and resettlement guidelines, rather the different institutions apply different practices depending on their own guidelines. For example, "NEMA will wake up one day and decide, hmm you're settled in a swamp, get off! They'll not give you notice, they'll not give you anything – compensation, or any resettlement, or anything. You're just gone. Same way KCCA will wake up one day and say that land is marked for an industrial purpose. So, do we have a company – yes, we do. So move those 200 people. And under their policies, they can justify it. But it's wrong!"

Specific projects, such as major national investments in infrastructure, will have their own resettlement plan. SSA outlines three major problems with these project-based resettlement plans. Firstly, the resettlement plan is not openly discussed with the people who are to be affected. Secondly, the valuation is done by the government and in most cases the amount given ends up short-changing the people. SSA criticises this approach, saying that the valuation needs to be done in dialogue with the people. Thirdly, they do not give people enough time to re-adjust or resettle. The highest they have seen for KCCA eviction, for example is 30 days of notice. "Who uproots their life in 30 days and actually survives?"

SSA has been working with MoLHUD to develop national guidelines for eviction and for resettlement. They have submitted a white paper to the Cabinet, for which (as of November 2015) they are awaiting approval. They have proposed that there should be a due process taking into account notice periods, considering the vulnerability of the people, acknowledging their ability to find another place to live, and providing for where they should go. For the eviction policy, they are suggesting that each person that is evicted should have a tailored resettlement plan, which is done in participation with the person that is to be evicted. SSA has pushed for a 90 day notice period, however after negotiation, they have settled on a 60 day notice period – saying that even 60 days is better than the usual 30 days.

SSA explains that there have been countless situations of people being evicted, yet nothing is built on the land

for months or in many cases, years; such is the case in Nakuru (see presentation of this case in the diagnostic report). Thus they have put forth in the guidelines that an eviction can only occur when something is to be built on the land immediately, with work commencing within one week of the eviction. All the plans and approvals for the project must be in place, with a schedule of construction work. If the work is not going to commence within one week, then another court eviction order and 60 day period would commence.

With regards to valuation of the land, SSA has proposed that the value of the land should be done in a participatory manner, in partnership with the people who are settled there, giving the lesser person a voice through dialogue.

They do not know how many evictions have happened in Kampala as they do not monitor these. However, they have discussed setting up a monitoring system using focal points across the city within their network. They said that usually an eviction is reported in the news, so it would be possible to analyse the newspapers to determine the numbers of evictions.

Private land owners do not need to have a resettlement plan. It is within their right to evict people who have been squatting on their land (with a court order).

"Resettlement is a polite way of saying evictions. You are actually being evicted."

The issue of tenants is something that also requires attention. While leaseholders, structure owners or other formal tenancies may receive compensation, there is little in the way of information or compensation for tenants. SSA gives an example:

We have a scenario where a landowner decided to sell his land. But on his land, he had people who had leasehold. And the people had structures on it where they were renting out to people. What happened was, the landowners were given money, they gave the leaseholders some money, and the leaseholders did not give the tenants any money. So what happened was, the tenants find themselves without a home, without notice, without any compensation whatsoever. And this was private sector. So we are saying, how do we address that? And you find that there are gaps in communication. So one of the things that the guidelines are supposed to also do is to dialogue from the person on ground to the buyer. To have them all in one room, to be able to discuss – well, they may not necessarily discuss the value, or the payment, but they need to be informed, so they know that they are being resettled. Which is, in actual sense, evicted. But you find that because the tenants did not have actual documentation, they did not have rights. They could not take their case any further

This is something that needs to be included in a national housing policy and potentially a landlord and tenants act.

SSA identifies four issues regarding land markets that are most important for Kampala. Firstly, that the land is unaffordable, especially for the poor people. Secondly, there is insecurity about the ownership rights because there has been a high level of fraud in regards to land titles and land ownership. Thirdly, the land market is highly competitive because developers, government and the public all compete for a small amount of land. Fourthly, the regulation and servicing of land is very weak, almost non-existent. This leads to real estate developers getting to decide what they put on the land. Furthermore, the government does not service land, rather it is private developers that put in the water, road and energy infrastructure – which is a very expensive way to service the land and then they charge very high prices for it. For these reasons, poor people really are left out of the land market. The following statement exemplifies these issues:

The government has land, but – where is it? One of the meetings we had on access to land, the commissioner from one of the land ministry departments said government has land but they don't know where it is. So how does government have land but they don't know where it is? What are they supposed to do? It only comes up when for example an investor has come and they want to put up a factory or something. That is when government finds their land.

They call for a system where the government works with service providers to find a system that works. With regards to the issues raised above about government provision of infrastructure on land, SSA states "I love to partner with government, but I call them out on these small issues – that they think are small issues, but are causing a much bigger ripple effect, that is affecting our country."

Synthesis of demographic information on interview respondents

The "Household" interviews (including business owners) took place between October and November 2015. The data was gathered from 29 respondents based in Natete, and 24 based in Bwaise. The demographic survey instrument can be found in Appendix B.

Demographics

Over three quarters (76%) of respondents across both

sites were female. Around half (46% of females and 58% of males) of both female and male respondents were classified as “head” or “acting head” of the household (combined here into one category). The next largest group (37% of females and 33% of males) of both females and males classified as “husband, wife or partner” of the head of household.

Respondent’s relationship to the head of household by sex	Female	Male	No data	Grand Total
Brother/sister/stepbrother/stepsister	1	1		2
Head	19	7		26
Husband/wife/partner	15	4	1	20
No data	2			2
Non-related	1			1
Son/daughter/stepchild/adopted child	3			3
Grand Total	41	12	1	54

Table 1. Relationship to the head of household, cross tabulated with sex of respondent

Tenure status

A smaller number (20%) of respondents from Bwaise had been evicted or were facing eviction compared to nearly half (48%) in Natete. More Bwaise respondents (60%) had been living in the area for a significant amount of time (>20 years) than in Natete (35%).

Nearly half (44%) of households responded that they would theoretically leave their occupancy structure “as it is” if they were to move away. The next largest group (20%) said they would sell the structure.

26% of the respondents who had either been evicted or were facing eviction said they would theoretically demolish their occupancy structure in this scenario, while no respondents who were not involved in evictions made this response. Further, all 5 of the respondents stating they would demolish were based in the same site (Natete). 4 out of 5 (74%) of these respondents owned the structure they occupied, while one (2%) had a “free – public” leasehold.

Tenure status	Bwaise	Natete	Grand Total
Eviction	5	14	19
Living	15	10	25
Moved	5	5	10
Grand Total	25	29	54

Table 2. Tenure status, cross tabulated with respondent’s location

Expected outcome for structure if household should move away by tenure status	Eviction	Living	Moved	Grand Total
A family member would stay here		1		1
A friend would stay here	1			1
I would demolish this place	5			5
I would leave the place as is	4	15	5	24
I would rent this place out	3	3	3	9
I would sell this place	4	5	2	11
No data	1	1		2
Other	1			1
Grand Total	19	25	10	54

Table 3. Expected outcome for structure if household moves away, cross tabulated with respondent's tenure status

Expected outcome for structure if household should move away by occupancy status	Free - private	Free - public	No data	Other	Owner occupied	Rented - private	Grand Total
A family member would stay here					1		1
A friend would stay here						1	1
I would demolish this place		1			4		5
I would leave the place as is	1		1		5	17	24
I would rent this place out		2			7		9
I would sell this place		1			10		11
No data				1	1		2
Other						1	1
Grand Total	1	4	1	1	28	19	54

Table 4. Expected outcome for structure if household moves away, cross tabulated with respondent's occupancy status

Occupancy status

"Occupancy status" here refers to the type of rental or ownership arrangement for the household dwelling unit.

In both Bwaise and Natete, around half (56% and 48% respectively) of respondents owned the dwelling unit they occupied. A smaller number (24%) of respondents in Bwaise rented privately, compared to nearly half (45%) in Natete. No respondents selected the options "rented – public", "subsidized – private" or "subsidized – public". In both sites, over half of privately rented houses were classified as "tenement (muzigo)"; the proportion in Natete was significantly higher (67% in Bwaise and 92% in Natete).

Occupancy status by site	Bwaise	Natete	Grand Total
Free - private	1		1
Free - public	2	2	4
No data	1		1
Other	1		1
Owner occupied	14	14	28
Rented - private	6	13	19
Grand Total	25	29	54

Table 5. Occupancy status cross tabulated with respondent's location

Occupancy status by type of housing unit - Bwaise	Detached house	No data	Semi-detached house	Tenement (muzigo)	Grand Total
Free - private	1				1
Free - public	1		1		2
No data				1	1
Other			1		1
Owner occupied	10	1	1	2	14
Rented - private	1		1	4	6
Grand Total	13	1	4	7	25

Table 6. Occupancy status cross tabulated with type of housing unit, for respondents based in Bwaise

Occupancy status by type of housing unit - Natete	Detached house	Flat	Semi-detached house	Tenement (muzigo)	Grand Total
Free - public	1	1			2
Owner occupied	9		3	2	14
Rented - private	1			12	13
Grand Total	11	1	3	14	29

Table 7. Occupancy status cross tabulated with type of housing unit, for respondents based in Natete

Household amenities

The majority (89%) of households used charcoal as their main cooking fuel (89%). The majority (83%) of households used tap or piped water as their main source of drinking water. Nearly half (43%) of the households used a private, covered pit latrine as the main household toilet. Shared, covered pit latrines were also a significant occurrence (20%) as were shared “VIP” latrines (19%).

Occupancy status by main cooking fuel	Charcoal	Electricity	Firewood	Paraffin	Grand Total
Free - private		1			1
Free - public	3		1		4
No data	1				1
Other				1	1
Owner occupied	26		1	1	28
Rented - private	18	1			19
Grand Total	48	2	2	2	54

Table 8. Occupancy status cross tabulated with the type of cooking fuel primarily used by the respondent’s household

Occupancy status by main source of household drinking water	Borehole	Protected well/ spring	Rainwater	Tap/piped water	Grand Total
Free - private				1	1
Free - public	1			3	4
No data				1	1
Other				1	1
Owner occupied		3		25	28
Rented - private		3	2	14	19
Grand Total	1	6	2	45	54

Table 9. Occupancy status cross tabulated with the source of drinking water primarily used by the respondent's household

Occupancy status by main household toilet	Covered pit latrine-shared	Covered pit latrine-private	Flush toilet-private	Flush toilet-shared	No data	Un-covered pit latrine	VIP latrine-private	VIP latrine-shared	Grand Total
Free - private		1							1
Free - public	1	1						2	4
No data	1								1
Other	1								1
Owner occupied	3	12	1		1		6	5	28
Rented - private	5	9		1		1		3	19
Grand Total	11	23	1	1	1	1	6	10	54

Table 10. Occupancy status cross tabulated with the type of toilet primarily used by the respondent's household

Waste disposal

The most common method (43%) of waste disposal across both sites was by skip bin, followed by burning (32%). A smaller number (17%) used a "heap". These trends were also common across each site. Of the two respondents who selected "other", one (2%) indicated their primary method of waste disposal was "open dumping", while the second indicated that a "drainage channel takes it". Another respondent, who indicated their primary method of disposal was by skip bin, elaborated that they "recycle for charcoal".

Most common method of waste disposal by site	Bwaise	Natete	Grand Total
Burning	9	8	17
Heap	3	6	9
No data	1		1
Other		2	2
Pit	2		2
Skip bin	10	13	23
Grand Total	25	29	54

Table 11. Most common method of waste disposal used by the household, cross tabulated with respondent's location

Transport

Over half (57%) of households did not own any of the types of transport included in the survey (motor vehicle, motor cycle, bicycle, canoe/boat, donkey). The highest proportion of respondents across all identified occupancy statuses did not own any type of transport.

The most frequently owned (24%) type of transport was a bicycle. Slightly more privately renting respondents had a bicycle (26%) than in owner occupied households (18%). Slightly more owner occupied households had a motor vehicle (11%) than privately rented (5%).

Occupancy status by type of transport owned by household	Bicycle	Motor cycle	Motor vehicle	No data	None	Grand Total
Free - private					1	1
Free - public	1	1			2	4
No data	1					1
Other	1					1
Owner occupied	5	2	3	1	17	28
Rented - private	5	2	1		11	19
Grand Total	13	5	4	1	31	54

Table 12. Occupancy status cross tabulated with types of transport owned by the respondent's household

Type of housing unit

The highest occurrence (52% in Bwaise and 38% in Natete) of housing unit across both sites was “detached house”. The next highest occurrence (16%) in Bwaise was “semi-detached house”, while the next highest occurrence (48%) in Natete was “tenement (muzigo)”.

In detached houses (44% of housing units), 46% responded their tenure status was “customary” and an equal number (46%) responded “mailo” land. In tenement (“muzigo”) housing units (39% of units), 43% were customary, while a smaller portion (19%) responded “mailo” land than in detached houses. Conversely, in semi-detached houses (13%) more people responded “mailo” (57%) than “customary” (29%).

Type of housing unit by site	Bwaise	Natete	Grand Total
Detached house	13	11	24
Flat		1	1
No data	1		1
Semi-detached house	4	3	7
Tenement (muzigo)	7	14	21
Grand Total	25	29	54

Table 13. Type of housing unit, cross tabulated with respondent’s location

Type of housing unit by tenure status of plot	Customary	Don't know	Free hold	Leasehold	Mailo land	Grand Total
Detached house	11	1		1	11	24
Flat	1					1
No data					1	1
Semi-detached house	2		1		4	7
Tenement (muzigo)	9	8			4	21
Grand Total	23	9	1	1	20	54

Table 14. Type of housing unit, cross tabulated with the tenure status of the plot on which was built

Construction materials

The most used (65%) material for construction of walls was “burnt/stabilised bricks”, followed by cement blocks (24%). The most used (50%) material used for flooring was cement screed, followed by concrete (33%).

Type of housing unit by type of material used for construction of walls	Burnt/ stabilised bricks	Cement blocks	Concrete	Stones	Grand Total
Detached house	17	7			24
Flat			1		1
No data	1				1
Semi-detached house	3	2	2		7
Tenement (muzigo)	14	4	2	1	21
Grand Total	35	13	5	1	54

Table 15. Type of housing unit, cross tabulated with the primary type of material used for construction of the house’s walls

Type of housing unit by type of flooring material	Brick	Cement screed	Concrete	Rammed earth	Stone	Grand Total
Detached house		7	9	3	2	24
Flat			1			1
No data						1
Semi-detached house	1	2	1	1	1	7
Tenement (muzigo)	1	4	7			21
Grand Total	2	13	18	4	3	54

Table 16. Type of housing unit, cross tabulated with the primary type of material used for construction of the house’s flooring

Synthesis of findings from the household interviews

There were eight groups of household interviewees, as listed below. An analysis of the interview transcripts has been completed and can be found in the corresponding appendices:

1. Bwaise, Living in Settlement (Appendix C)
2. Bwaise, Moved from Flooding Areas (Appendix D)
3. Bwaise, Businesses (Appendix E)
4. Bwaise, Evicted from Drainage Project Area (Appendix F)
5. Natete, Living in Settlement (Appendix G)
6. Natete, Moved from Flooding Areas (Appendix H)
7. Natete, Businesses (Appendix I)
8. Natete, to be Evicted from Drainage Project Area (Appendix J)

The synthesized findings for inclusion in the main body of this report were selected across the range of categories to show a diversity of experiences.

Findings from Bwaise

Bwaise is Kabaka land and people hold usufruct rights that have been registered with the Buganda Land Board or which are held informally. Thus, the process of moving within Bwaise remains within a familiar register of authorities, procedures and the rights that can be bought, sold and used. The majority of the respondents had moved to the neighbourhood a few years ago (with a full range of between 6 and 25 years). The possibilities for moving within Bwaise are likely to have been easier in 1991, from a sheer density of development point of view, than they are in 2016. The possibilities of moving within Bwaise in 2016 are now much more constrained in terms of the space available and higher prices of land.

The reason that emerges most clearly for having selected Bwaise as an area to relocate within is undoubtedly in relation to the lower cost of land which enables people to purchase, rather than rent, usufruct rights. The lower cost has to be understood in relation to the proximity to economic and urban opportunities that the area offers.

Both issues of affordability and proximity to urban opportunities can be read into the types of household composition. With households incorporating children (across generations) taking advantage of proximity to schooling and widowed households continuing to afford to live in the area.

What is notable about the process of relocating in Bwaise is that the timing and duration of moving is based on the speed of construction of a habitable dwelling on the new site. Households are unable to afford to rent and construct simultaneously at the speed they desire and therefore the duration of construction of the new dwelling is prolonged. For some, the construction of a new dwelling took a year, for others it took three years. This raises interesting questions about the timing between making a decision and actually relocating.

It appears that there were different tipping points. For some, it was a realisation that their children were at risk, while others ran out of ways of trying to manage the floods or faced depleting savings as the costs of responding to the floods increased. A clear benefit of having moved is that their lives are less stressful (Respondent 14).

From the description of the livelihoods it is evident that not having to pay very much for well-located housing is fundamental to the viability of the households. Lowly remunerated activities such as selling clothes, washing clothes, and tailoring cannot support a good urban location if shelter costs are high.

Interestingly, a respondent that moved away from the low lying areas that experienced regular flooding, still faces problems with flooding that is caused by contributory channels higher up the slope becoming blocked with rubbish. This has meant that she had to “raise the house using concrete” (Respondent 17).

The exposure to flooding in the places in Bwaise that the respondents moved from was significant. Respondents described how: “the whole house would be affected” (Respondents 14 and 16); flooding would be a gradual phenomenon of filling each room; “they used to live within floods” (Respondent 16); and how the flash flooding and ground water were difficult to deal with and meant that the water could remain for a week (Respondent 15). In attempts to reduce this exposure, respondents purchased soil to raise the level of the surrounding compound (16) and raised their property (Respondent 14) usually to no avail. As a consequence, it is not surprising that respondents reported ill health and developing “footrot” (Respondent 17). When attempts to manage the flooding failed, some respondents temporarily relocated to Kawempe (Respondent 15).

The reason that the businesses interviewed were located in Bwaise is because it is an inexpensive place to do business, rent is affordable and also food and accommodation are cheap. It is also a busy place thus a good market in the area and lots of potential customers and therefore a good place to do business. Most of the respondents do not have licenses for their business and this also reduces costs. They feel that in Bwaise you can dodge the license costs or pay bribes. Predominantly, the business owners operating in Bwaise lived in the area already or had land there from their family.

The kinds of businesses interviewed included: shoe making and repairing, clothing boutique, charcoal and matooke (starchy banana) selling, dealers in second-hand electronic selling and repairing (as well as power generation and water pump), bag selling and repairing, carpentry, waste crushing, dealing in used products/ scraps and hair salon.

There are a variety of different reasons that the owners have decided to open that particular business type including a market in Bwaise for the type of good they are selling, and the opportunity for a monopoly on that market. Some of the business owners had trained for that type of work, for example, carpentry. The waste crushing business is located in Bwaise because it can collect a lot of waste locally. It then sells on to Chinese factories.

Most of the businesses (4 out of 9) rely on a local customer base within Bwaise. Some have a customer base that extends beyond Bwaise to the people coming from the city centre. One business said its customers come from as far away as Jinja (approximately 50 miles).

Access to land is predominantly through family or other social connections within Bwaise. Two businesses found an empty piece of land and then negotiated with the landlord to use the site. The vast majority are renting the business site. In one, it was clear that the person also lived on the site. None of them got any loans but used only personal capital.

Out of the nine businesses interviewed, six had been in operation for three years or less. Thus most are relatively new businesses and usually the people have been doing something else before, so there is quite a bit of flexibility.

Only one business belongs to any civil society organisation: a young person belonging to a youth organisation.

When the rains come and there is potential for flooding, five out of nine of the businesses raise up or cover their stock or equipment to protect them from the waters. Two of the businesses do nothing to prepare for the flooding as evidenced by the question and response: “When you hear that lots of rains are coming what do you do?” “Nothing much we are used to floods since I was born in Bwaise.” A couple of the businesses have been able to move or raise their structure/yard in order to prevent the floods from affecting them. Three out of nine have aspirations to have better structure/work with the landlord to raise the floor level so that flooding will not affect them in future.

The most cited impact of flooding is that there are no customers while the flood-waters are there (5 respondents) and two of them cannot open the business until the waters recede. Four of the businesses have destroyed stocks or damaged machinery. When asked about the costs of the flooding on their business, four of the respondents said the flooding costs the business a lot of money. Three of the respondents said that the flooding does not cost much money.

Around the questions of tolerable risks and tipping points, it is clear that the businesses in Bwaise are able to tolerate the frequent flooding. Their businesses are affected when it floods – either they lose customers, stock or machinery. However, the benefits of doing business there seem to outweigh the inconveniences of the flooding problems. A couple of the businesses have taken over premises from other businesses, and two respondents did mention that those businesses had folded due to the flooding problem. However, we have not been able to interview those business owners, so we can only assume that some businesses are able to tolerate the flooding, while others may not be able to. The other interesting aspect is the aspirations to improve the structure or to raise the plot so that the property is not affected. People seem to see this as an option, rather than relocating their business.

It is worthwhile noting here the nature of flooding in Bwaise. In Bwaise, soils are clay and easily saturated. Several run-off systems feed into the Bwaise basin, so can it can flood in 10-15 minutes and is difficult to predict. There can be rain elsewhere in Kampala and then the water table rises in Bwaise. Mostly the floods are short in duration, lasting at times only a few hours that the water stays. When water stays for a long time, it is extreme precipitation. In 2011, the water stayed for longer than two days.

Findings from Natete

All the land in Natete belongs to the Kabaka and therefore participants can hold usufruct leaseholds

that have been registered with the Buganda Land Board or which are held informally. Tenants are therefore renting from those holding registered or unregistered leaseholds. Those holding a leasehold had been in the area for considerable periods. Most owners had been in the area for between 16 and 22 years. Notably, some respondents had held tenancies for five or six years.

The type of property right that participants in the study hold have some implications for how quickly they can transact and thus, implement a decision to move. While financial circumstances might be important, tenants would be able to move more quickly than owners. This was confirmed by the land brokers who stated that tenants are generally free to terminate tenancies as long as accounts have been settled (interview with land brokers 4th November 2015).

The process of moving to the current place of residence appears to have been facilitated by social networks. This can be inferred from respondents having moved from within Natete or having had relatives already living in Natete. The attractiveness of Natete emerges from these social relationships, its affordability, proximity to jobs and opportunities, and good transport links which reduce costs.

All of the respondents have a livelihood, assuming that a pension counts as a livelihood. These livelihoods range from ad hoc work such as washing clothes and selling snacks to consistent employment such as mechanics or driving taxis. The location of the livelihood will have implications for decisions and their implementation. Livelihood activities that are located outside the area could have different implications compared with those in the flooding areas. For example, a respondent running a snack-bar suffers from lack of customers when the area floods and they cannot reach the bar.

In terms of household composition, it appears that the area is home to a diverse range of households. For example, the sample included inter-generational households of grandparents and grandchildren, nuclear households, and single woman headed households. The small sample suggests no pattern between type of household and tenure so that nuclear households could be either owners or tenants.

There is a clear sense of resignation and submission to the consequences of living in an area that floods regularly. For the respondents, regular flooding is an issue that has been incorporated into their regular activities. As a minimum, this involves moving anything of value above the anticipated waterline. Beyond this, people "do nothing about it" (Respondent 28) and do not temporarily relocate. For others, "if the water gets too high for us to sleep in the house at night, we go to the main roads and spend the night there" (Respondent 29). Some try to raise the floor of the house or surrounding yard in order to prevent inundation but have been "…overwhelmed because the floods had no control" (Respondent 30). In sum, the view that "we just let the water find its way and when it recedes we clean up" (Respondent 32) or that when the rains come "I don't do anything, I just look on and wait for it to come" (Respondent 37) appears as a general sentiment. Many of the respondents noted that they tried to keep drains clear of silt and rubbish, but that this was a "losing battle" (Respondent 35, 29). This suggests that, for the most part, the respondents are tolerating the flooding risks in Natete. Any decision to relocate themselves does not therefore appear to be primarily determined by flood risk and indicates that there are other more fundamental factors at play that influence decisions about when to move.

What respondents are living with is damage to soft furnishing such as chairs and mattresses and electronic equipment when they fail to elevate it in time (Respondents 32, 33, 34, 35). They are living with the water and the need to clean up after it recedes because the water is dirty and brings rubbish (Respondent 34). Others have to relocate: "we have to run along the road where there is no water and wait for it to go away" (Respondent 36).

The effect of the floods – both flash and rising water tables – is that water can remain an issue for anything from a few hours to a few days.

There has been little support to the households, although respondents did note that the "councillor helps by cooking porridge for those with nothing to eat, he buys them eatables at the place up there [referring to the main road] where they go seek refuge, especially those with children" (Respondent 34). Other forms of support include the women's savings groups that lend money when children get sick and need medication.

Perhaps their decision-making is influenced by perceptions of what causes the floods. For most of the respondents, most of the causes of the floods are beyond the settlement and hence, their immediate control. For example, "water comes from outside the city" (Respondent 29) and factories being located in the wetlands that cause the floods by displacing and channelling run-off (Respondent 31). Even issues that do appear within the collective control of people in the area appear uncontrollable. For example, rubbish that blocks the drainage channels could be cleared but also flows in from settlements higher up in the catchment area.

Most of the respondents had entertained the thought of moving away from the area. Issues preventing them from moving included not finding another suitable place, not finding a buyer for the current place or not having enough money to buy a place in another location.

Analysis and discussion

The following discussion is based around the research questions defined in the beginning of this report, which were:

- How do district/city-level strategies to mitigate flooding impact on relocation? What are the future plans?

- If people are forcefully moved, what is the process of implementation?

- What are the drivers, the tipping points and limits of tolerable risks, which push or enable people to move out of the flooding areas?

Admittedly, the themes and issues emerging during the research process extend the range of analysis beyond just these research questions.

1. Relationship between encroachment, degradation of the wetlands and floods and the implications of these interacting factors for Kampala

To answer the research question posed above, "how do district/city-level strategies to mitigate flooding impact on relocation? What are the future plans?" we first need to unpack this question by examining the relationship between floods and encroachment of wetland areas in Kampala.

Judging by the answers of KCCA and NEMA staff, there appears to be a strong relationship between encroachment of wetland areas and the seemingly worsening flooding problems in the city. Anthropogenic contributions to flooding are not only attributed to wetland encroachment; the problem is also attributed to the increasing development of impermeable surfaces on hill areas that are increasing run-off as well as silting/clogging of existing drains. The city aims to tackle all of these underlying causes, and ultimately this research is interested in all of these strategies of flood risk mitigation as options must be weighed one against the other. However, the situation of encroachment on wetlands is of particular interest in this research because ultimately the way this is understood has important implications for both resettlements as a risk reduction strategy and other future flood risk mitigation strategies for Kampala.

Despite there being laws and policies that protect wetlands, major urban developments, including those sanctioned or built by the government as well as informal development, are being built in wetlands. As evidenced in earlier sections of the report, wetland areas in Uganda, including Kampala's wetlands, are protected through national laws and policies, including the 1995 Constitution and the National Environment Act. However, this research has shown that the inability to protect wetlands is partly due to government actions as different parts of the government are themselves using the wetlands for unsuitable land uses. For example, the major industrial zones in the city are located on wetland areas: "Over 20 years ago wetland areas were actually designated as industrial areas. But, they were in the wetlands" (from the interview with Moses Atwine, Directorate of Physical Planning). Industrial areas are seen as one of the major contributors to wetland degradation. As well, new roads and highways are commonly built on wetland areas, partially because it is open and available; as such "you don't have to compensate very many people there, so it tends to be cheaper." Furthermore, many residents have settled and developed houses in wetlands, for example both of our case study sites (Bwaise and Natete) are informal settlements located in the wetland areas. As we know from the research most of the settlers have come to live there because it is an affordable place to reside or do business (more on that in the following section).

Building in the wetlands causes economic losses from increased flooding, as well as affecting ecosystems, which degrades water quality in the region. The encroachments are degrading the ability of the wetland to circulate water through its natural processes. The impacts of this are increased amounts of water needing to go into drains. The increase of water in the drainage causes flooding and pollutes the important water bodies where drinking water is derived from and natural ecosystems, especially Lake Victoria.

Two quotes from the stakeholder interviews, as mentioned previously, exemplify these issues: Moses Atwine, Director of Physical Planning in KCCA, is instructive in reflecting on the relationship between encroachment, degradation of the wetlands, and floods and the implications of these interacting factors for Kampala. In his words, "when you look at doing away with the wetlands, it's quite expensive for the city. In a simple downpour, you have floods. Business becomes paralyzed. Those that have warehouses and other businesses that operate on the ground floor get flooded. So, either way, it is expensive". Daniel Okello, from the KCCA Directorate of Public Health and Environment highlighted one of the effects of wetland degradation as being that the "costs of drinking water

in Kampala are rising. And, I think that for the last – from 10 years ago – the costs have risen 6 times. Why? Because we are polluting the lake …[and]… at national water they are telling you that they are getting to a point where the chemicals they are using – like when they are mixing, they are using the maximum permissible."

It seems that the trade-offs about whether to invest in drainage systems or to prioritise wetland protection and management are complex. In managing the flooding problem there are different choices available. On the one hand increasing the capacity of drains (such as what the KIIDP I & II projects aim to do) will help to move floodwaters out of the built-up areas of the city and reduce the flooding problem. However, this kind of technical solution can also accentuate the risks; the larger environmental/ecosystem impacts of the drains are not well understood. Studies are needed to establish the impacts of these drains, for example on contamination of Lake Victoria. KCCA has adopted an approach of Sustainable Urban Drainage Systems (SUDS) which aims to reduce the amount of run-off into drains through soft land cover and on-site water retention and harvesting. There is a general understanding of the role wetland protection plays in reducing floods as compared to technical solutions of constructing drainage channels, but there seems to be a lack of evidence to enable following through on these ideas. This same point is echoed in a recent report published by the World Bank (2015): "The city lacks the tools to evaluate the trade-offs of large-scaled infrastructure projects, which are conceived to solve drainage and flooding but have resulted in significant negative impacts on the overall quality of the city's wetland system".

Certainly, the importance of integration in wetland protection requires engineers, planners, environmental mangers, policy actors, communities and civil society organizations. An interesting point the issue of wetland protection brings up is that individuals are not taking account of the externalities of their actions and a collective consciousness of the "costs" of industrial and economic activity in the wetlands seems not, as yet, to have developed in relation to the benefit of the wetland to the city as a whole. However, perhaps this movement is gaining momentum, as illustrated by the involvement of civil society organizations and other actors, as well as the public who are increasingly voicing the importance of wetland protection. For example, using NEMA's hashtag #Lubigiencroachment on which they ask people to report those who are violating the wetlands, one Tweeter is questioning: "But what action have you taken on this? This is not a good sight at Busega," with a corresponding photo of the cleared portion of the wetland (see Figure 2 below). During our interview with NEMA, they mentioned that they find surveillance and follow-up is a challenge as they are thin on the ground.

Figure 2 Photo posted on Twitter about wetland encroaching in Kampala, "Thanks @neumag. But what action have you taken on this? This is not a good sight at Busega[1]"

In the absence of a very strong civil society movement in protecting the wetlands, it is left to the government to try to limit development in wetlands. There seem to be due processes in place for controlling development that comes through formal application, including land registration checking by MoLHUD, KCCA examining the building plans and NEMA examining the environmental impacts of the development.

However, the big challenge is that the majority of developments do not appear to be following the formal development control processes; much of it is illegal development and by far KCCA does not have control over the majority of building. Developers often engage in development without first gaining approval from KCCA. As mentioned previously, this might be because "know that ultimately they will not get permission". Illegal backfilling of the wetlands (frequently occurring at night) also adds to wetland degradation. Atwine indicated that if government had more control over the wetlands, they would be responsible for and have the ability to "go and reinstate it, use it for that purpose". However, this is currently not the case.

One of the reasons for illegal developments seems to be that property rights to land located in the wetlands appear to override planning concerns. Atwine notes that "much of this land where the drainage channels are, some of it is private land, or land that KCCA as a government institution doesn't have full control… []…much as it's designated maybe as a wetland or drainage channel, when it comes to land rights, it

1 Source: twitter post @wakaija, 27 February 2016 https://twitter.com/wakaija

becomes challenging to immediately enforce, or limit the kind of usage that is taking place." Okello's sense that the land tenure system prevents protection of the wetlands relates to KCCA's inability to effectively prevent degradation when it seems to support economic development drivers. He recognises that the strength of the government wetland protection policies is not enough to enable KCCA to "stand against economic forces."

Part of the problem of lack of development control, brought up in the interview with SSA, is that private developers, who are building on private land, do not seek inputs from the government in terms of providing services on the land (e.g. water, sewerage, roads). This is often resulting in a situation where developers can then by-pass the government (and its controls) altogether. This also makes land even less affordable for the poor in Kampala.

Thus, without a clear and comprehensive strategy for managing future encroachment, flood reduction is likely to be an on-going challenge. However, some measures are being evaluated or are at various stages of implementation.

Deregistration of titles on the wetlands

The current moves regarding the cancellation of titles on the wetlands is part of the battle for wetland protection being pushed through by the government. Watching this process is of particular interest for this research project, because it offers a lens through which to understand the politics around relocation and resettlement as a disaster risk management activity. The rationale behind the cancellation of titles is not for "flood risk reduction" directly, but rather for the protection of ecologically important areas of the city through stopping the degradation of wetlands. Nevertheless, as noted above the maintenance of wetlands performs a number of ecological functions, one of which is reducing flooding.

In other words, this example shows some of the political and economic difficulties that relocation/ resettlement for the sake of risk reduction (or ecological conservation) brings up, for instance, the political clout or will that is needed from all levels of government in order to undertake such a program. Even though wetland protection is an important issue locally and understood as something that benefits all of Kampala's residents, the political authority to engage in relocating and/or resettling activities from the wetlands is complicated and bound up with dynamics in higher levels of politics. "[National] government is discussing the area …[and] … we hope that they will expedite the process so that we can deregister the ownership [in the wetlands]." That is, "we need to be endorsed politically and then, when there is the need for compensation for some of the properties, then we have to engage from that".[2] The current mapping of plots in wetlands shows that there are over 17,450 plots in greater Kampala that would be affected by the cancellation of titles. The cost of the program is estimated at UGX 3.74 billion (approximately £800,000) although funds have not yet been allocated towards this. From where will the funds for this be found? Would that account for compensation for property lost, and restoration of wetland areas? The issues raised from our interview respondents suggested that compensation might be required for some of the encroachments. For example, Atwine from the Directorate of Planning states, "we are saying this development is not appropriate anymore. Not that it was illegal…Now we have had some issues where people have presented documents saying, yes, it was the government which gave me the title in the wetland …[] … they say, yes, it's a wetland physically, but I have this documentation, I have invested my money so are you going to compensate me? You understand the confrontation?"

However, the Cabinet decision also includes the possibility to declare areas as "vanquished wetlands." Vanquished wetlands would be those where it is not possible to reinstate the minimum ecological functions of the wetland and it is economically not viable to do so. In these areas the titles will not be cancelled. We were told that Bwaise, for example, is one such area. Since it is densely built up it would not be feasible to reinstate that part of the wetland and rather it would be considered as a "vanquished wetland." Thus there seems to be a way to actually reduce the amount of resettlement that would be necessary under the cancelation of titles. This leads us to imagine that actually the cancellation of titles and eviction of encroachers in the wetlands is not really the point of this activity, but rather it is a kind of political posturing that aims to strengthen the authority of the government over wetland development through communicating that wetland development is no longer permissible with the aim to reduce future encroachments.

2. They call it resettlement, we call it eviction

Our second research question was: What is the process of implementation, if people are forcefully moved? Our stakeholder interviews and pilot studies also uncovered some useful answers to the question of resettlement implementation.

As has been previously touched on in this report, a national resettlement policy does not currently exist

2 Interview with Moses Atwine, KCCA Directorate of Physical Planning

in Uganda; current practice consists of project-by-project resettlement schemes, the activities of which can vary considerably from ministry to ministry or project to project. All major infrastructure projects in Uganda have a Resettlement Policy Framework (RPF), which lays out the terms and conditions of resettlement.

What does become clear across a number of projects looked at in this research, is that the term "resettlement" as it is used in Uganda does not match with the meaning used most often in international policy, and which we have adopted in this project. Accordingly, resettlement is "a major integrated, comprehensive movement of people and families which normally involves significant distance between the origin and new location. Resettlement involves not only new housing and services but also new social and economic relations, and new challenges such as access to work and social cohesion." In fact, the situation in Uganda is quite different from this, as only a very small number of cases actually result in new housing or new services being built. What appears to be common practice is that leaseholders, structure owners or other formal tenancies will receive a small amount of compensation and tenants typically receive nothing.

Disappointment with the compensation is a consistent theme amongst people evicted. Here we cite two examples:

"…the city authority informed us about the drainage project but we were never involved in any of the process. We were told that we were going to be evicted although they never told us a particular month they were going to evict us. They used to tell us that they are going to evict us let's say this month and date so you leave work and say but they never show up and they end up coming unannounced. At first when they came they gave us an eviction notice of about 3 months. By then I had tenants so I also had to give them time for them to find where to go. We were given compensation although it was not enough. That is why some of us remained. For instance, for my case, part of the plot that was taken included the tenants' houses and one of the rooms from my house so I still have some part of the plot left. They only compensated the only part that they took" (Respondent 69).

"…compensation was done around 2002. There I don't remember very well. Compensation was done by the government. We were paid at the sub-county level where we would go to the bank and present our papers. They used to measure the drainage channel against the road. After construction of the channel there was no access road since the available access road was all taken up by the channel. So they decided to also evict the people next to the newly constructed channel in order to create a road. I had a house of six rooms, I used to rent it out, during the measuring process four rooms were demolished and the rest were left although the remaining parts were again demolished in trying to have an access road. I was only compensated for the first two rooms they demolished and half of my land that was taken up. But I was never compensated for the other rooms and the other part of the land. They promised to come back for revaluation and even find out that when we were under-compensated they will repay us. Although they have never come back. Little money was given for compensation in that I failed to get any plot of land with the money that was given to me" (Respondent 67).

According to SSA, "Resettlement is a polite way of saying evictions. You are actually being evicted." According to the Committee on Economic, Social and Cultural Rights, forced eviction is "the permanent or temporary removal against their will of individuals, families and/or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection."[3] The drivers of forced eviction are varied, but urban development projects, urban infrastructure projects and ecological zoning are common drivers of evictions, amongst others.[4]

These conflicts of interest and double standards, including government involvement in wetland encroachment (flagged up in the Directorate of Physical Planning interview) pose the risk of eroding citizens' trust in government planning and policy. The move to de-register titles has implications for citizens' perceptions about governance structures and the equitability and justice of resettlement decisions. Similarly, while the zoning option of "vanquished wetland" provides leeway to government actors seeking to limit future encroachment whilst minimising the present need for intervention and resettlement, without clear and publically-communicable systems for designating areas as such, any zoning declaration of this nature will be open to questioning and dispute

3 General comment No. 7 (1997) on the right to adequate housing: forced evictions.

4 Various elements, separately or combined, define a forced eviction: A permanent or temporary removal from housing, land or both; The removal is carried out against the will of the occupants, with or without the use of force; It can be carried out without the provision of proper alternative housing and relocation, adequate compensation and/or access to productive land, when appropriate; It is carried out without the possibility of challenging either the decision or the process of eviction, without due process and disregarding the State's national and international obligations (UN-Habitat & UNHCR 2014, p.3).

if resettlement proceeds in other areas.

SSA is calling for a more inclusive process of determining compensation as well as a national resettlement policy, which would enable a better way forward than the current evictions that are happening. "One of the things that the guidelines are supposed to also do is to dialogue from the person on ground to the buyer. To have them all in one room, to be able to discuss – well, they may not necessarily discuss the value, or the payment, but they need to be informed, so they know that they are being resettled. Which is, in actual sense, evicted. But you find that because the tenants did not have actual documentation, they did not have rights. They could not take their case any further" (SSA interview).

Thoughts on the relationship between encroachment, wetlands and flooding

The case study in Kampala, Uganda interestingly shows that "resettlement projects" from disaster risk areas are not occurring on a large scale like we see in Latin America and India. On one hand, this may be because of the nature of disasters; most events are small-scale, frequent, but localised flooding (despite a few large flooding events such as 2011 in Kampala). In this scenario of extensive risks, perhaps the impetus from the state (or its people) to make massive changes, such as resettle whole communities is not so pressing and the costs of doing resettlement in a dense urban area seem insurmountable or unwarranted. Even evictions caused by the installation of drainage infrastructure are extremely expensive for the state in terms of compensation, and still far less than adequate for the residents who are evicted.

3. Why do people tolerate flooding risks in Bwaise and Natete? If people do move, what is the tipping point that enables or drives them to move?

As mentioned in previous sections, voluntary relocation is an important aspect of Kampala's citizen-led flood adaptation. This report illustrates the importance of understanding why people accept living with the associated challenges of low-lying areas. We have tried to understand why people stay in the flooding zones, despite the challenges. Why do they tolerate the risks? When people do move what enables or drives them to relocate?

There are several reasons why people tolerate flood risk in the study sites of Kampala. These reasons are related to historical factors, livelihoods, and social identity and are often economic in nature.

From key stakeholder and household interviews, several reasons converge to influence the level and length of tolerance of flood risk by people living and working in Bwaise and Natete. One of the reasons that people tolerate flood risk in Bwaise and Natete is historical. Several households interviewed indicated that they have lived in the area for more than 20 years. According to the interviewed household, they never experienced flooding previously but that notwithstanding, their life revolves and evolves around these neighbourhoods with livelihoods, investments (largely in housing) all in Natete or Bwaise. Due to this personal history and grounding in the area, they have tolerated flood risk by coping with the impacts.

Social identity and relation to the neighbourhoods is another reason that people in Bwaise and Natete tolerate flood risk. Having resided in the areas for long, the social relations and connections built in the neighbourhood seem very strong such that consideration of relocation would imply breaking the social ties. For example, in Natete, the process of moving to the current place of residence appears to have been facilitated by social networks. This can be inferred from respondents having moved from within Natete or having had relatives already living in Natete. The attractiveness of Natete emerges from these social relationships, its affordability, proximity to jobs and opportunities, and good transport links, which reduce costs. It was interesting to note the various responses to the question "What do you think would happen to the structure [that you currently live in] if you were to move away?" Among other factors, connections to community can foster a sense of belonging and "place attachment" that incorporates emotional bonds and is a powerful driver in decision making of whether or not to relocate.

Conversely, in the absence of "resettlement projects" we have looked at decision-making of individuals who live in areas of Bwaise and Natete that are frequently flooded.

The social identity and relations couples with livelihood bases, which according to the interviews are considered to be within the settlements. Housing, trading, services (including laundry, phone charging, vehicle garages) and medium sized factories, which form the livelihood base are in the settlements. This is where they have been working; their businesses are located such that relocating is only considered during the rainy season but fades out as soon as rains recede. Connected to livelihoods are the issues of relocation costs that include costs for land, building houses and costs of travel to working locations if such relocation is to places distant from the city. Some of the relocated households that were interviewed indicated that the cost of living becomes higher, because they have been moved away from easy access to their jobs and livelihoods. In addition,

when you live in the settlement for long, one builds a lifestyle, a home, so that it becomes uncertain to situate such a lifestyle in the different areas after relocating. A few of the people who relocated and were subsequently interviewed indicated that there are new risk exposures in the new areas of relocation. Risks associated with livelihood uncertainties, building new social ties, personal health deterioration makes it difficult to re-adjust. Even if this relocation is involuntary and comes with compensation, one has to adjust in respect to commuting, access to facilities like health, water, sanitation, and education for your children so that some have actually moved back into the flood risk areas.

One of the other reasons for settlement in Bwaise and Natete is the cost of land and the ease of access to land through informal means. Access to land is predominantly through family or other social connections within Bwaise. From the interviews most respondents indicated that land in the two settlements is affordable compared to other locations. Coupled with economic reasons, land becomes a key factor in determining the tolerance to flood risk in the two settlements. Most people selected Bwaise as an area to relocate because of the lower cost of land, which enables people to purchase, rather than rent, usufruct rights. The lower cost has to be understood in relation to the proximity to economic and urban opportunities that the areas offer. Both issues of affordability and proximity to urban opportunities can be read into the types of household composition. From the description of the livelihoods it is evident that not having to pay very much for well-located housing is fundamental to the viability of the households. Lowly remunerated activities such as selling clothes, washing clothes, and tailoring cannot support a good urban location if shelter costs are high.

As regards businesses, most interviewed business people located in Bwaise and Natete because it is an inexpensive place to do business, rent is affordable and also food and accommodation are cheap. It is also a busy place thus a good market in the area and lots of potential customers around and therefore a good place to do business. Most of the respondents do not have licenses for their business and this also reduces costs. They feel that in Bwaise and Natete you can dodge the license costs or pay bribes. Predominantly, the business owners operating in Bwaise lived in the area already or had land there from their family.

In Natete the emergence of small to medium sized factories underscores the factor of cheap land but also implies the importance of costs of operation and tolerance of flood risk. The factories are able to offset some costs of flooding by constructing barriers and infilling to raise the land above the flood line. These measures are thought of as risk reduction measures though they don't entirely reduce exposure for the businesses. Disruption and destruction was also mentioned and identified on several of the buildings in Natete and Bwaise. Thus businesses tolerate flood risk in the two settlements largely through the ad-hoc risk reduction measures and ability to offset some of the impacts.

Tipping points for relocation

Despite the arguably high degree of tolerance of flood risk in the settlements, there are some households that moved from the settlements due to flood risk. Unlike businesses, households don't seem to have the buffer for recovery from the frequent but apparently high impact of small flash floods to housing, livelihood and health. Whereas businesses are able to tolerate the frequent flooding, they are affected either by loss of customers, stock or machinery. However, the benefit of doing business there seem to outweigh the inconveniences of the flooding problems. The other interesting aspect is the aspirations to improve the structure or to raise the plot so that the property is not affected. People seem to see this as an option, rather than relocating their business. In regard to households, the impacts have been so high on some that they reach tipping points and consider to relocate from Bwaise and Natete, either temporarily or permanently.

For example, in Natete for the households that relocated, the tipping point is when flood waters inundate the houses consistently for long periods during the rainy seasons. This way loss of property, health risks, destruction of livelihoods have formed the tipping points beyond which households have relocated. Some have relocated temporarily as in the case of Bwaise either seasonally only to return during the dry season, or moved back after temporary settlement in other locations. For households who have moved back, such as in the case of Bwaise, the social ties, livelihoods and new risk exposures were identified as the tipping points for moving back. While for households in Natete that moved permanently, the tipping points were destruction of houses and property due to persistent flood inundation. Health risks have also played a role in making households consider relocating in both settlements. From the interviews, there were reported outbreaks of cholera that households considered continued exposure too risky to stay in the neighbourhoods. However, these could be the relatively well-off (by standards in the neighbourhoods) households that had the capacity to relocate taking into account the costs of relocation.

An interesting dynamic regarding tipping points is in

relation to the small and medium sized factories that have established in Natete more rapidly in recent years. This process, propelled by the informal land market, has provided some source of relocation costs for households that have considered relocating. By selling off their land rights, some households have found themselves with money that could enable them to buffer the relocation costs. Factories are buying off land rights and constructing measures to reduce flood impacts on their structures while giving an opportunity for households to relocate.

Decisions about moving

Households seem to make decisions based on various factors. As mentioned in previous sections, health, economics, livelihoods and social ties influence the decisions made by households. For example, in the interview group referred to as "Bwaise moved", it appears that there were different tipping points on the basis of which decisions are made. For some, it was a realization that their children were at risk, while others ran out of ways of trying to manage the floods or faced depleting savings as the costs of responding to the floods increased. In Natete, those holding leaseholds had been in the area for considerable periods. Most owners had been in the area for between 16 and 22 years. The type of property right that participants hold have some implications for how quickly they can transact and thus implement a decision to move. While financial circumstances might be important, tenants would be able to move more quickly than owners. This was confirmed by the land brokers who stated that tenants are generally free to terminate tenancies as long as accounts have been settled.

On the other hand, in both settlements, there is a clear sense of resignation and submission to the consequences of living in an area that floods regularly. This suggests that, for the most part, the respondents are tolerating the flooding risks. Any decision to relocate themselves does not therefore appear to be primarily determined by flood risk and indicates that there are other more fundamental factors at play that influence decisions about when to move. Perhaps their decision-making is influenced by perceptions of what causes the floods. For most of the respondents, most of the causes of the floods are beyond the settlement and hence, beyond their immediate control. For example, "water comes from outside the city") and factories being located in the wetlands that cause the floods by displacing and channelling run-off. Even issues that do appear within the collective control of people in the area seem to be uncontrollable. For example, rubbish that blocks the drainage channels could be cleared but also flows in from settlements higher up in the catchment area. Most of the respondents had entertained the thought of moving from the neighbourhoods. Issues preventing them from moving included not finding another suitable place, not finding a buyer for the current place or not having enough money to buy a place in another location. Thus the issues of access to land, affordability, relocation costs, social ties seem more influential on decisions around relocation than just flood risk.

Experiences of relocating from flood prone areas

Households that moved from the settlements were interviewed and give differing experiences. Households are unable to afford rent and construct simultaneously at the speed they desire and therefore the duration of construction of the new dwelling is prolonged. For some, the construction of a new dwelling took a year, for others it took three years. This raises interesting questions about the timing between making a decision and actually relocating. But the issues of rebuilding lifestyles and livelihoods in new locations was also mentioned by several of the households. Access to facilities, education for children, health services and public transport are some of the issues that present difficulty to the people who moved. These issues couple with uncertainties around livelihoods, to form new risk or exposures to the moved households. High public transport costs, distances to education facilities were reported as high for the households that relocated. Health impacts and exposure to new flood experiences were also reported by some respondents, as was the case for the family that relocated from Bwaise and then moved back.

Conclusions: Is resettlement an option for risk reduction in Kampala?

In addressing this question, it is useful to reflect on the three conceptions of risk that emerge in the research and how they relate to resettlement. This section examines these three conceptions to sketch out the start of answers to this question. We begin by examining the two dominant conceptions revealed in the research and how these are built on an understanding of risk fundamentally being a feature of individual entities. Reviewing these conceptions helps explain some of the current scope for action and also the various forms of intractability faced by authorities, businesses and households in Kampala in relation to flood risk. The first two – by far dominant – conceptions provide the basis for examining the third conception that introduces a different relationship between resettlement and risk reduction.

The research reveals that risk can be defined in different ways. Firstly, it can be defined as a "cost" to the city, neighbourhoods, the environment, the

conduct of business and/or livelihoods.

In such terms, the "costs" and who should bear these costs are complicated equations which can begin very simply but quickly become entangled in histories, legalities, institutional responsibilities, the resources of institutions, plural and overlapping land and property regimes, and party politics at both local and national levels (given the presence of national government institutions in Kampala and national government's direct control of KCCA). For example, it is relatively easy to work out the costs of resettling a household on any given land parcel considered to be an encroachment in a wetland area. There are well-established procedures for calculating the value of land and buildings based on size, quality of construction, location, and access to services. However, conceptions of what to do about the calculations quickly founder on the division of the compensation between historically overlapping interests in the land, how laws should be interpreted, which institution should make the payment and on what basis, and party political interests that line up on opposing sides of the process in order to advance other political agendas.

In this conception of risk, the current stasis and difficulties that authorities and businesses and households find themselves in are likely to continue. Resettlement will not be a viable option unless there is consistently a strong political will that is unlikely to be swayed by demands for economic growth. Resettlement processes are likely to continue to be unpredictable, costly and, in the larger scheme of the city's development, largely ineffectual.

The second way risk is defined in the research is as an "opportunity". In this sense, risk-as-opportunity corresponds to a classic economic formula of "the higher the risk, the greater the opportunity for profit". In this understanding, risk is an indicator of the potential for achieving greater gains than would otherwise be achievable and is to be embraced and actively engaged with. In the case of industrial development in Natete, for example, the risk of flooding has historically lowered the value of land. Consequently, entrepreneurs willing to see the risk as an opportunity can establish enterprises that are either able to generate more returns than similar enterprises elsewhere or the lower value of the land makes the investment possible in the first place. In the case of poor women and men operating enterprises or locating close to economic opportunities, the flood risk provides an opportunity to establish or maintain an income flow that would otherwise not be possible. This analysis appears to operate in a similar way for livelihoods of households. For example, in Bwaise and Natete, the risk-as-opportunity of flooding makes it possible to take advantage of urban amenities such as schooling and health, that they would otherwise not be able to. Here risk-as-opportunity is configured within larger, longer-term (inter-generational) livelihood strategies to improve the situation for subsequent generations.

Without strong economic growth and with the high rates of urbanization, it is difficult to see the risk-as-opportunity mechanism becoming less of a force. From a poor household or small enterprise perspective, flood risks on encroached land are likely to increasingly play an important role in making livelihoods possible or sustaining them. That is, the "risk" will create an opportunity to start something – however meagre or slim the margins. Or in the case of households, however long the household accumulation strategy takes to materialize to push subsequent generations into better circumstances. Similarly, without significant improvements in Uganda's economy and its terms of trade, industrial and more substantial economic investments will require the lower (financially) valued wetlands to make investment possible or returns reasonable.

With this conception of risk, resettlement is antithetical to the opportunities that flood risks present. Resettlement will be unpopular, expensive to authorities and mired in resistance. Any opportunities for resettlement are likely to be ad hoc, perhaps symbolic and on a small scale where they relate to very high profile projects such as the KIIDP. Instead, encroachment will continue as the economic circumstances of businesses and households dictate and are likely to outweigh the capacity and ability of authorities to enforce their role as guardians and promoters of the "public good".

However, "risk-as-cost" and "risk-as-opportunity" are two sides of the same coin. The higher the potential for risk and costs associated with the probability of the risks being realized, the higher the potential for return and potentially the ability to mitigate any costs. It is therefore not surprising that neither inspires much confidence in resettlement being a viable solution for a more just Kampala in its future development. The "coin" that "risk-as-cost" and "risk-as-opportunity" represents is the individual. That is, the individual entrepreneur, landholder, informal enterprise or individual household. "Risk-as-cost" and "risk-as-opportunity" tend to be conceived as relating to individual entities because the different conceptions have to be attributable to a bounded, identifiable entity. This is reinforced by social mechanisms that work to attribute costs or benefits to particular entities. In these views, costs and/or opportunities can be pooled or aggregated but they are still fundamentally attributable to specific entities. It is

useful then, to turn to the third conception of risk that emerges through the research.

In the third conception of risk, the “coin” is the “collective” and the two sides of “risk-as-cost” and “risk-as-opportunity” relate to the collective cost and opportunity. In this framing, calculations about “individual” resettlement are based on the interests of the collective. Why does this shift in emphasis make a difference? On the one hand, individual actions can be calculated in terms of their collective costs and benefits. On the other, collective costs and benefits will frame and contextualize individual decisions. In this context, the actions of industrial developers can be weighed against collective costs.

This third conception emerges fleetingly, haltingly and is relatively less developed than the first two. Nevertheless, we believe it deserves encouragement and exploration. Here we provide some examples. One example comes from Daniel Okello, KCCA Head of Environment in noting that the city is facing a collective threat to its water supply as the wetlands become so degraded that they are no longer able to adequately perform their filtering functions. Another is the KCCA Head of Planning, Moses Atwine, noting that floods in particular parts of the city are cumulative and affect both other parts of the city and activities, that are fundamental to the city’s viability, but which are not immediately located in flooded areas. Another comes from the KCCA Head of Environment, Daniel Okello, in also noting the advantage that the city has in only having six major landlords. Clearly, the potential for achieving consensus amongst six landlords is easier than amongst thousands. A final example is the community-based attempts to deal with solid waste removal in Bwaise. This initiative is a collective attempt to reduce the risk of solid waste blocking water channels.

We should be clear that we do not hold any naïve belief in a “collective” magically appearing nor its constitution resolving all disputes about flood risks in Kampala. The “collective” will continually be challenged and will continually have to be instantiated, but these challenges and instantiation do offer the possibility to have conversations in different registers to the current ones.

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Appendix A Interview Schedules for In-depth Interviews

Form 1: Living in the Area

Questions	Themes to explore	Why asking this?	What data do we want to generate?
How did your family come to live in this house?	Who did you talk to?	If most transactions are informal, it is useful to know who facilitates R getting access to land, what their institutional location is.	Identification of who is important and in which social networks these people are in
	How long did it take?	An indication of the length of time could give insights to how easy/ difficult it is to move in/ out	Length of time
	Where did you come from?	To track whether people have moved into a more or less risk-prone environment	Spatial location and movement history
	Why did your family choose this place?	Understanding locational decisions as collective decisions, we want to shed light on how families calculate trade-offs between expenses, locations, transport, education, quality of life	Textual data on decision-making process
	How long have you lived here?	Length of time indicates desirability of place, difficulty of moving	Length of time and reason
	Who do you live here with?	To be clear about who is exposed to risk	Number and position in family that is exposed to risk
On what basis do you stay in this house?	Rental or ownership	Understand nature of tenure	Tenure categorisation
	Type of rights	Clarify nature of tenure	Data on level of security (perceived and real)
	Did you build the house/ structure?	To ascertain the level of investment in the place	Yes/no
	What have you invested in this house in terms of buildings and improvements, themselves?	To obtain greater detail on investments	Psychological, financial investments

Questions	Themes to explore	Why asking this?	What data do we want to generate?
What do you do to get by?	Is this the only thing you do?	To build a profile of economic activities	List of economic activities engaged in by R
	How often do you do it?	To be able to calculate frequency with housing location	Frequency
	Where do you go to do it?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Why do you do this?	R's justification for their activities	Qualitative self-assessment by R
What do others in your house do to get by?	How often do they do it?	To calculate frequency of activity with relative housing location	Frequency of activities
	Where do they do it?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Why do they do this?	R's justification for other people in the household's activities	Qualitative self-assessment
Which groups or organisations do you belong to in this part of the city	How long have you been part of these?	To understand which social networks R belongs to and how long	Lists of networks and length of membership
	How often do you meet?	Regularity of meeting	Frequency
	Why do you belong to these?	To understand importance	Justification/rationale for membership
	Which groups or organisations do you belong to?		
What does this place offer you and your family?	Why does your family stay here?	To understand the value of the place for the family	Explanation of value/s

Form 2: Moved from a flood prone area

Questions	Themes to explore	Why asking this	What data do we want to generate
Tell me about moving to this new place?	How long have your lived here?	Length of time indicates desirability of place, difficulty of moving	Length of time and reason
	Why did you choose this place? What does this place offer you and your family?	Understanding locational decisions as collective decisions, we want to shed light on how families calculate trade-offs between expenses, locations, transport, education, quality of life	Textual data on decision-making process
	Who did you talk to?	If most transactions are informal, it is useful to know who facilitates R getting access to land, what their institutional location is.	Identification of who is important and in which social networks these people are in
	How long did it take you to move?	To understand how long the actual process of moving took once a decision to move had been made	Time
	How did your family take the decision to move?	To understand who was involved and which factors were taken into account	Account of process
	What did you have to do before moving?	To understand if people had to fulfil any obligations or extricate themselves from any agreements before moving	Account of process and what obligations existed
	How much did it cost/ time did it take?	Within the period of moving how much actual time/cost was involved	Time and cost
	What kind of payments did you have to make (e.g. deposits, fees, etc.)	To understand what was need to gain access to a new place	Types of payments and how much to who
	Who helped you find this place?	To understand the process /or get a description of social networks	Account of networks
	Who helped you move?	To understand who people rely on and what the nature of that reliance is and why needed	Account of support
	How far have you moved?	To understand what role distance plays in resettling?	Distance
	Who was not able to move to this new place with you?	To understand whether people move and fragment family	Account of any social/ familial costs incurred
	Who do you live here with?	To be clear about who is exposed to risk	Number and position in family that is exposed to risk

Questions	Themes to explore	Why asking this	What data do we want to generate
What has changed in terms of your occupancy status of the house?	Tenant to owner or owner of freehold to owner of leasehold	Understand nature of tenure before and after the move	Tenure categorisation
	Did you build the new house?	To ascertain the level of investment in the place before after the move	Yes/no
	What have you invested in terms of buildings and improvements?	To obtain greater detail on investments before and after the move	Psychological, financial investments
What has changed in terms of your land tenure?	Customary to/from freehold to from Mailo land to/from leasehold?	Understand nature of rights to land before and after the move	Tenure categorisation
	What have the consequences for your family been?	To understand what implications have been	Account of consequences?
What has changed in terms of what you do to get by?	Is this the only thing you do? Has the range of things you do changed?	To build a profile of economic activities	List of economic activities engaged in by R
	How often do you do it? More or less than before?	To be able to calculate frequency with housing location	Frequency
	Has where you go to do it changed?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Why do you do this? Have the motivations for doing this changed?	R's justification for their activities	Qualitative self-assessment by R
What has changed in terms of what others in your house do to get by?	How has the frequency of what they do changed?	To calculate frequency of activity with relative housing location	Frequency of activities
	Has where do they do it changed?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Have the motivations to do this changed?	R's justification for other people in the household's activities	Qualitative self-assessment
What has changed in terms of which groups or organisations do you belong to in this part of the city	Which new groups or organisations do you belong to	What has changed in terms of social networks	List of new groups
	How long have you been part of these?	Compare with how long lived in new place to get some sense of integration	time
	How often do you meet?	Regularity of meeting	Frequency
	Why do you belong to these?	Reasons for joining these social networks	Motivations for joining

Questions	Themes to explore	Why asking this	What data do we want to generate
What has changed in terms of the services you use?	What has changed in relation to water? Quantity/Quality/source/ cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in relation to sanitation? Type? Better/worse? Cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in terms of energy you use for cooking? Quantity/quality/ type/ cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in terms of access to schools? Better/worse? Cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in terms of access to health care? Better/worse? Cost?	Are they better or worse off	Descriptions of how they are better or worse off
What were the problems with flooding in the place you lived before moving here?	What would you do before, during and after the flood?	Level of activity required to sustain acceptable quality of life in previous place	
	What did it cost? What were the other impacts of the flooding?	Quantification of problems	Financial and other opportunity costs
	How much time did it take?	Quantification of time consumed dealing with floods	Time
	Why did it cost/take this much time?	Explanation of costs	Description
	How did the flooding problem impact on your decision to move?	To understand how important the flooding was on the decision to move	List of factors that informed decision and relative importance of flooding in this list
What are the drawbacks of having moved?	What are the difficulties you have faced?	To capture any issues not already covered	Account of process of settling in new place
What are the benefits of having moved?	Are there things that are better about this place?	To capture any issues not already covered	Account of benefits of resettlement
	Do you consider to move again soon?	To understand whether movement is part of a trajectory	

Form 3: Resettled from drainage project areas [Bwaise]

Questions	Themes to explore	Why asking this	What data do we want to generate
Tell me about moving to this new place?	How long have your lived here?	Length of time indicates desirability of place, difficulty of moving	Length of time and reason
	Why did you choose this place? What does this place offer you and your family?	Understanding locational decisions as collective decisions, we want to shed light on how families calculate trade-offs between expenses, locations, transport, education, quality of life	Textual data on decision-making process
	Who did you talk to?	If most transactions are informal, it is useful to know who facilitates R getting access to land, what their institutional location is.	Identification of who is important and in which social networks these people are in
	How long did it take you to move?	To understand how long the actual process of moving took once a decision to move had been made	Time
	How did your family take the decision to move?	To understand who was involved and which factors were taken into account	Account of process
	What did you have to do before moving?	To understand if people had to fulfil any obligations or extricate themselves from any agreements before moving	Account of process and what obligations existed
	How much did it cost/ time did it take?	Within the period of moving how much actual time/cost was involved	Time and cost
	What kind of payments did you have to make (e.g. deposits, fees, etc.)	To understand what was need to gain access to a new place	Types of payments and how much to who
	Who helped you find this place?	To understand the process /or get a description of social networks	Account of networks
	Who helped you move?	To understand who people rely on and what the nature of that reliance is and why needed	Account of support
	How far have you moved?	To understand what role distance plays in resettling?	Distance
	Who was not able to move to this new place with you?	To understand whether people move and fragment family	Account of any social/ familial costs incurred
	Who do you live here with?	To be clear about who is exposed to risk	Number and position in family that is exposed to risk

Questions	Themes to explore	Why asking this	What data do we want to generate
Tell us about the process of the resettlement/ eviction from the drainage-widening project in Bwaise III?	How much notice were you given?	To evaluate in relation to government laws and regulations	Time
	Who gave you the notice to move?	To understand who implements eviction on the ground	Types of people and their role in the eviction process
	What happened on the day of the eviction?	To understand the process of eviction, document any brutalities or abusive treatments	Personal story of the day of eviction
	From whom did you receive compensation? If any?	To understand implementation of compensation process	Types of relationships to compensators
	How much did you receive?	To understand whether related to policy prescriptions	Financial amount
	To what extent did the compensation cover your costs?	To understand how evictees calculate the costs of evictions	Account of calculations
Since you have moved, what has changed in terms of your occupancy status of the house?	Tenant to owner or owner of freehold to owner of leasehold	Understand nature of tenure before and after the move	Tenure categorisation
	Did you build the new house?	To ascertain the level of investment in the place before after the move	Yes/no
	What have you invested in terms of buildings and improvements?	To obtain greater detail on investments before and after the move	Psychological, financial investments
Since you have moved, what has changed in terms of your land tenure?	Customary to/from freehold to from Mailo land to/from leasehold?	Understand nature of rights to land before and after the move	Tenure categorisation
	What have the consequences for your family been?	To understand what implications have been	Account of consequences?
What has changed in terms of what you do to get by?	Is this the only thing you do? Has the range of things you do changed?	To build a profile of economic activities	List of economic activities engaged in by R
	How often do you do it? More or less than before?	To be able to calculate frequency with housing location	Frequency
	Has where you go to do it changed?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Why do you do this? Have the motivations for doing this changed?	R's justification for their activities	Qualitative self-assessment by R

Questions	Themes to explore	Why asking this	What data do we want to generate
What has changed in terms of what others in your house do to get by?	How has the frequency of what they do changed?	To calculate frequency of activity with relative housing location	Frequency of activities
	Has where do they do it changed?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Have the motivations to do this changed?	R's justification for other people in the household's activities	Qualitative self-assessment
What has changed in terms of which groups or organisations do you belong to in this part of the city	Which new groups or organisations do you belong to	What has changed in terms of social networks	List of new groups
	How long have you been part of these?	Compare with how long lived in new place to get some sense of integration	time
	How often do you meet?	Regularity of meeting	Frequency
	Why do you belong to these?	Reasons for joining these social networks	Motivations for joining
What has changed in terms of the services you use?	What has changed in relation to water? Quantity/Quality/source/ cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in relation to sanitation? Type? Better/worse? Cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in terms of energy you use for cooking? Quantity/quality/ type/ cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in terms of access to schools? Better/worse? Cost?	Are they better or worse off	Descriptions of how they are better or worse off
	What has changed in terms of access to health care? Better/worse? Cost?	Are they better or worse off	Descriptions of how they are better or worse off
What were the problems with flooding in the place you lived before moving here?	What would you do before, during and after the flood?	Level of activity required to sustain acceptable quality of life in previous place	
	What did it cost? What were the other impacts of the flooding?	Quantification of problems	Financial and other opportunity costs
	How much time did it take?	Quantification of time consumed dealing with floods	Time
	Why did it cost/take this much time?	Explanation of costs	Description
	How did the flooding problem impact on your decision to move?	To understand how important the flooding was on the decision to move	List of factors that informed decision and relative importance of flooding in this list

Questions	Themes to explore	Why asking this	What data do we want to generate
What are the drawbacks of having moved?	What are the difficulties you have faced?	To capture any issues not already covered	Account of process of settling in new place
What are the benefits of having moved?	Are there things that are better about this place?	To capture any issues not already covered	Account of benefits of resettlement
	Do you consider to move again soon?	To understand whether movement is part of a trajectory	

Form 4: to be resettled from drainage project areas [Natete]

Questions	Themes to explore	Why asking this?	What data do we want to generate?
How did your family come to live in this house?	Who did you talk to?	If most transactions are informal, it is useful to know who facilitates R getting access to land, what their institutional location is.	Identification of who is important and in which social networks these people are in
	How long did it take?	An indication of the length of time could give insights to how easy/ difficult it is to move in/ out	Length of time
	Where did you come from?	To track whether people have moved into a more or less risk-prone environment	Spatial location and movement history
	Why did your family choose this place?	Understanding locational decisions as collective decisions, we want to shed light on how families calculate trade-offs between expenses, locations, transport, education, quality of life	Textual data on decision-making process
	How long have you lived here?	Length of time indicates desirability of place, difficulty of moving	Length of time and reason
	Who do you live here with?	To be clear about who is exposed to risk	Number and position in family that is exposed to risk
On what basis do you stay in this house?	Rental or ownership	Understand nature of tenure	Tenure categorisation
	Type of rights	Clarify nature of tenure	Data on level of security (perceived and real)
	Did you build the house/ structure?	To ascertain the level of investment in the place	Yes/no
	What have you invested in this house in terms of buildings and improvements, themselves?	To obtain greater detail on investments	Psychological, financial investments

Questions	Themes to explore	Why asking this?	What data do we want to generate?
What do you do to get by?	Is this the only thing you do?	To build a profile of economic activities	List of economic activities engaged in by R
	How often do you do it?	To be able to calculate frequency with housing location	Frequency
	Where do you go to do it?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Why do you do this?	R's justification for their activities	Qualitative self-assessment by R
What do others in your house do to get by?	How often do they do it?	To calculate frequency of activity with relative housing location	Frequency of activities
	Where do they do it?	To be able to calculate importance of housing location with economic activity	Spatial patterns
	Why do they do this?	R's justification for other people in the household's activities	Qualitative self-assessment
Which groups or organisations do you belong to in this part of the city?	How long have you been part of these?	To understand which social networks R belongs to and how long	Lists of networks and length of membership
	How often do you meet?	Regularity of meeting	Frequency
	Why do you belong to these?	To understand importance	Justification/rationale for membership
	Which groups or organisations do you belong to?		
What does this place offer you and your family?	Why does your family stay here?	To understand the value of the place for the family	Explanation of value/s
What are the problems with flooding in this place?	What do you do before, during and after the flood?	To understand the response to flooding	Explanation of activities
	What does it cost? What are the other impacts of the flooding?	To understand the burden the flooding causes	Explanation of costs and other impacts
	How much time does it take?	To understand the burden the flooding causes	Explanation of costs and other impacts
	Why does it cost/take this much time?	To understand the burden the flooding causes	Explanation of costs and other impacts

Questions	Themes to explore	Why asking this?	What data do we want to generate?
Have you considered leaving this place before?	If yes, why did you consider moving from here?	To understand willingness or desire to move	Explanation of motivations
	Why haven't you moved?	To understand the reasons that keep them in the place, despite the flooding problems	Explanation of reasons with detailed information about why
	Is it because of financial reasons? (Probe more about particular financial reasons)		
	Is it because you are emotionally attached to this place? (probe why)		
	Is it because you are not able to sell this property (probe why – i.e. owned by larger family so it is not my decision or not able to find buyer, etc.)		
	Is it because of other reasons?		
	What would you need to have happen enable you to move to another place?	To understand obstacles to moving	R's accounts of obstacles and barriers
What do you know about the drainage widening project?	What do you think about this project?	To know if they are happy about the project or unhappy about it	Feeling about the project, whether it will be good for them or good for the community
	How will it affect you?	To understand if they are impacted by the project	If they are going to be evicted/resettled or not
	Have you been given any notification that you need to move? If so, when were you given notification? By whom?	To understand the resettlement process that is being followed	Dates/name of who has promised (KCCA, landlord, or other)
	Do you know when you will have to move?	To understand the resettlement process that is being followed	Date, if known
	Have you been promised compensation? By whom? (can we ask how much it is?)	To understand the resettlement process that is being followed	Amount of compensation (if applicable). Name of who has promised the compensation (KCCA, landlord, or other)
	What will the compensation enable you to do? What kinds of needs will not be met by the compensation?	To understand to what extent the compensation would be adequate to allow them to resettle.	Explanation of what their needs are for resettlement and thoughts about the potential inadequacies of the compensation
	Have you been promised anything else? I.e. resettlement or a new place to live?	To know if they might receive anything beyond monetary compensation	List of anything else they may have been promised
	How do you feel about having to move?	To understand whether this is positive or negative for them	Feelings or thoughts about the resettlement

Questions	Themes to explore	Why asking this?	What data do we want to generate?
If you are to be resettled, where are you planning to move to?	How far is that from here?	To understand the distance from current location	Distance
	Why are you planning to move there?	To understand the reasons behind the decision of where to move. What they need to maintain in their life (i.e. livelihood, close to particular school, close to family, somewhere affordable to live)	Reasons for decision
	What do you expect will change when you move?	To understand the potential social and economic impacts of the move	List of expected changes
	What will you have to leave behind when you move?	To understand the potential social and economic impacts of the move	List of expected drawbacks of moving
Who do you know from this area that has moved from a place that was flooding to a place that is less affected by floods?	Do you know anyone who has already resettled from the drainage project area?	To find people who have already moved so that we can talk to them	Names/phone numbers
	Can you help us contact them?		

Form 5: Small, Medium and Microenterprises

Questions	Themes to explore	Why asking this?	What data do we want to generate?
What type of enterprise do you engage in?	What activities? What sector? Is this the only activity?	To be able to understand the responses below and locate this activity in the city's economy	Categorisation of activities
	What is your position in the business?	To know in from what perspective they are speaking	Owner/employee
	How many employees are there?	To understand size of business	Number
How long have you been engaged in this enterprise?	Duration? Why have you continued with this enterprise?	To be able to understand the longevity of the enterprise and its resilience	What has sustained the enterprise
Why did you locate your enterprise in this place?	Is this the only place you engage in this activity?	To understand the possibilities of relocating enterprise activities	Locational / distributional data
	Where are your suppliers located?	To understand location in supplier chain	Location data and value of location
	Where are your customers located?	To understand location in producer chain	Location data and value of location

Questions	Themes to explore	Why asking this?	What data do we want to generate?
What is the status of your occupancy of this structure?	Tenant or owner or owner of freehold or owner of leasehold	Understand nature of tenure	Tenure categorisation
	Did you build/modify this structure?	To ascertain the level of investment	Yes/no
	What have you invested in terms of buildings and improvements?	To obtain greater detail on investments	Psychological, financial investments
What is your land tenure?	Customary or freehold or Mailo land or leasehold?	Understand nature of rights to land	Tenure categorisation
If you hear that there are lots of rain coming, what do you do?	Who do you usually hear from?		
	In relation to physical infrastructure around the structure (e.g. drainage, barriers, etc.)	To understand enterprise level responses when there is a risk of flooding	R accounts of activities engaged in to mitigate floods
	In relation to other aspects of the enterprise?	To understand the perceptions of risk to the enterprise	R accounts of activities engaged in to keep enterprise going
If your property or area is flooded, what do you do?	Who do you do it with?	To understand what people do when their structure is flooded (will need definition of 'flooded')	R accounts of what people do
	What do other members of the household do?	To understand how responses are distributed amongst the family	R accounts of what other family responsibilities are
	How many days does this usually take?	Cost in terms of time	Time
	How much does it cost to do this?	Cost in terms of money	Money
	What help do you get from others? Municipality, organisations, etc?	Perceptions or reality of access to, or availability of support	R accounts of support/ lack of
	Which family and friends do you turn to?	Perceptions or reality of support from kin and friends	R accounts of reliability of this support
	Where do you move to? Who moves with you? Why do you move there?	To understand whether the enterprise temporarily relocates	Spatial patterns and distribution of enterprise

Questions	Themes to explore	Why asking this?	What data do we want to generate?
When the floods go away, what do you do?	Who do you do it with?	To understand who R relies on when floods subside and what they do	R accounts of what people do
	What happens? Do you get support from anybody (e.g. KCCA, landlord)	Perceptions or reality of access to, or availability of support	R accounts of support/ lack of
	How much does it cost to do this?	Cost in terms of money	Money
	How much time does it take?	Cost in terms of time	Time
	Why does it cost this much/take this time?	To understand in detail what the costs are and why they accumulate	R explanation of accumulated costs
	What do you lose in the floods?	To understand broader losses from flooding	R accounts beyond finance and time of what is lost
How have the floods affected your enterprise?	In terms of stock, customers, suppliers, productivity?	How do floods effect the enterprise rather than the environment of the enterprise	Description
What do you think is causing the floods?	What are the reasons for the flooding? (probe more about why they say this)	To understand what they think causes the floods	A reason, or list of reasons behind the flooding
	Is there anyone responsible for making the flooding worse? (probe why they say this)		
	Do you think the flooding could be less in the future? What would need to happen	Understand if they feel that the situation will get better in future	Description
	What is being planned to manage the floods from happening at household level and government level? What have you heard?	To understand level of engagement, access to information and possible initiatives	Lists of types of information, their sources and reliability
	What suggestions/ ideas have you given the KCCA	User-based responses	Evidence of community-driven responses feeding into policy/processes
What has been done to mitigate the effects of the floods on the premises and in surrounding areas?	By enterprise owner?	What have they done? Why? What have the effects been?	Description of what done
	By authorities such as KCCA?	What have other agencies done? Why? What have the effects been?	Description of what done

Questions	Themes to explore	Why asking this?	What data do we want to generate?
Have you considered leaving this place before?	If yes, why did you consider moving from here?	To understand willingness or desire to move	Explanation of motivations
	Why haven't you moved?	To understand the reasons that keep them in the place, despite the flooding problems	Explanation of reasons with detailed information about why
	Is it because of financial reasons? (Probe more about particular financial reasons)	To establish the relative importance of this factor	Explanation of reasons with detailed information about why
	Is it because you are emotionally attached to this place? (probe why)	To establish the relative importance of this factor	Explanation of reasons with detailed information about why
	Is it because you are not able to sell this property (probe why – i.e. owned by larger family so it is not my decision or not able to find buyer, etc.)	To establish the relative importance of this factor	Explanation of reasons with detailed information about why
	Is it because of other reasons?	To establish the relative importance of this factor	Explanation of reasons with detailed information about why
	What would you need to have happen enable you to move to another place?	To understand obstacles to moving	R's accounts of obstacles and barriers
Do you know of any other enterprises that moved because of the flooding?	What kind of enterprises were they? Do you know where they moved?	To understand if other enterprises have been effected?	Memories of other enterprise responses

1	What is respondent's relationship to the head of the household? 1 = The head/acting head 2 = Husband/wife/partner 3 = Son/daughter/stepchild/adopted child 4 = Brother/sister/step brother/step sister 5 = Father/mother/step father/step mother 6 = Grandparent/great grandparent 7 = Grandchild/great grandchild 8 = Other relative (e.g. in-laws or aunt/uncle) 9 = Non-related persons	1 2 3 4 5 6 7 8 9
2	Number of people in the household (household defined as living for at least 4 nights per week in the last 4 weeks)	
3	Sex of respondent 1 = Male 2 = Female	1 2
4	Age of respondent	

5	Marital status 1 = Married 2 = Living together like husband and wife 3 = Widow/Widower 4 = Divorced or Separated 5 = Never married	 1 2 3 4 5
6	How many children do you have in the household?	
7	Number of children living elsewhere	
	Dwelling Unit	
8	What is the status of your occupancy of the dwelling unit? 1 = Owner occupied 2 = Free – public 3 = Free – private 4 = Subsidized – public ..... 5 = Subsidized – private 6 = Subsidized – public ..... 7 = Subsidized – private 8 = Rented – public 9 = Rented – private 10 = Others (specify)	 1 2 3 4 5 6 7 8 9 10
9	Type of dwelling unit 1 = Main 1 6 = Room or rooms 2 7 = Store/basement 8 = Garage 9 = Servant quarters 10 = Others (specify)	 1 2 3 4 5 6
10	How many rooms does your house have?	
11	No. of rooms used for sleeping 1 = One 2 = Two 3 = Three 4 = Four 5 = Five 6 = Six or more	 1 2 3 4 5 6
12	Type of housing unit 1 = Detached house 2 = Semi-detached house 3 = Flat 4 = Tenement (muzigo) 5 = Other (specify)	 1 2 3 4 5

13	What is the tenure status of your plot? 1 = Customary 2 = Free hold 3 = Mailo land 4 = Leasehold 5 = Don't know	 1 2 3 4 5
	Construction Materials Used (Observation)	
14	Type of material used for construction of the roof 1 = Iron sheets 2 = Tiles 3 = Asbestos 4 = Concrete 5 = Tins 6 = Thatch 7 = Other (specify)	 1 2 3 4 5 6 7
15	Type of material used for construction of the wall 1 = Concrete 2 = Cement blocks 3 = Stones 4 = Burnt/stabilised bricks 5 = Unburnt bricks with cement 6 = Unburnt bricks with mud 7 = Wood 8 = Mud and pole 9 = Other (Specify)	 1 2 3 4 5 6 7 8 9
16	Type of material used for the floor 1 = Concrete 2 = Brick 3 = Stone 4 = Cement screed 5 = Rammed earth 6 = Wood 7 = Other (specify)	 1 2 3 4 5 6 7
	Fuel/ Power	
17	What type of fuel does this household mainly use for cooking? 1 = Electricity 2 = Gas 3 = Paraffin 4 = Charcoal 5 = Firewood 6 = Cow dung or grass (reeds) 7 = Biogas 8 = Other (specify)	 1 2 3 4 5 6 7 8

18	What is the household's main source of water for drinking? 1 = Tap/ piped water 2 = Borehole 3 = Protected well/ spring 4 = Rain water 5 = Gravity flow scheme 6 = Open water sources 7 = Water truck/ water vendor 8 = Other (specify)	1 2 3 4 5 6 7 8
Household Facilities		
19	What type of toilet does this household mainly use? 1 = Covered pit latrine – private 2 = Covered pit latrine – shared 3 = VIP latrine – private 4 = VIP latrine – shared 5 = Uncovered pit latrine 6 = flush toilet – private 7 = Flush toilet – shared 8 = Bush 9 = Other (specify)	1 2 3 4 5 6 7 8 9
20	Solid waste – What is the most common method of waste disposal? 1 = Skip bin 2 = Pit 3 = Heap 4 = Garden 5 = Burning 6 = Other (specify)	1 2 3 4 5 6
21	What type of bathroom does this household mainly use? 11 = Inside 12 = Outside; built 13 = Outside; makeshift 14 = None	1 2 3 4
22	What type of kitchen does this household mainly use? 15 = Inside 16 = Outside; built 17 = Outside; makeshift 18 = None	1 2 3 4
Transportation		

23	Does this household own any of the following? (Yes = 1, No = 2) H19 Motor Vehicle Motor Cycle Bicycle Canoe/ Boat Donkey Other (specify)	
	Communication	
24	Does this household own any of the following? (Yes = 1, No = 2) H20 Television Radio Mobile Phone Fixed Phone Postal Address Email Address Other (specify)	
25	What will happen to this structure if you should move from here? 19 = I WOULD JUST LEAVE THE PLACE AS IT IS 20 = A FAMILY MEMBER WOULD STAY HERE 21 = A FRIEND WOULD STAY HERE 22 = I WOULD SELL THIS PLACE 23 = I WOULD RENT THIS PLACE OUT 24 = I WOULD DEMOLISH THIS PLACE 25 = OTHER (SPECIFY)	 1 2 3 4 5 67

Appendix C
Analysis of Transcripts from Household Interviews
Bwaise, Living in Settlement

Theme	List of what they do	Remarks
Decisions on staying in neighbourhood	Business attraction, interview 1 Friend relative's decision 1, 3 relative gave to care take house, 8 uncle 2 a friend linked her to Kamwokya close to Mulago hospital then Bwiase Cheap rent for housing 2 rent is 30,000/=@ month 3, 4 services in locality also influence stays Came to work in neighbourhood and job was available 4 Recent migrant from rural places, searching for jobs 4 High mobility for housing due to volatile market. Given short notice to vacate 5 Land inherited 6, 7 land bequeathed to grandchildren 9 Born and raised in the neighbourhood 11, Land was cheap so they built a house 13	Friends and relatives play a significant role in influencing individuals to reside in the neighbourhood. Employers provide housing as well
Demand for services	Mobile money 1 Phone charging 1 Pre-paid water meter 1 Income generating activities in neighbourhood	
Social and capital mobilization	Started an Association Mpenkoni 1 Soft loaning. Membership of 15, 1 Belongs to a group called Twekembe Savings Group NSDFU, 7, 9 Kyosibaoliwo Savings Group 10 15 years 10	
Security	Feels secure for family 1	
Flood risk exists	Rain runoff used to enter the house 1 Water enters the house 2 Put property on top of raised stones 1, House repairs of damages from floods Raised the floor of the house 1	Garbage dumping part of the causes of flooding. Poorly constructed on non-existent drains another. Heavy rains cannot be accommodated by the drains
Risk information flow	Electronic media source of information on floods 1, 3, 6, 7, 8, 10 Sharing and training neighbours on guarding their possessions 1, 5	Sometimes caught unaware, rains flood the houses. Sometimes it rains heavily when not in house and impact on property is serious

Theme	List of what they do	Remarks
Risk reducing measures	Cleaning drains of garbage 1, 2 Hopeful floods will end with construction 1 Hopes that government will plan the neighbourhood in future 1 Beds are levelled decker 1&2 Dykes around the house 6, 4, Foundation of the house raised, 9 KIIDP and NSDFU have done mitigation measures on drains 10	Acknowledges shortage of funds to construct drains and collect garbage
Livelihood strategies	Washing clothes for other 2 Searching for jobs 5 Selling groceries on roadside Work when required by company on some days of the week 8 Poultry and chart business 9, businesses in food and groceries 10	Job market entrants find themselves in these flood prone areas due to costs of housing and services. Multiple livelihood strategies poultry and trading carts
Decision to relocate	Thought of relocating back to Jinja from where she came 2 Planning to move out of the area due to flooding 4 Possible if buyer for the land is found 6 Not to relocate 40 years in neighbourhood. Unless if resettlement is planned with housing and all facilities 10 Poverty has failed them from relocating voluntarily 12 Lived in neighbourhood for 20 years 14	
Tipping points	Thought of moving back but conditions in Jinja worse yet she doesn't have the money so, condition of confusion 2 Funds limited move 9 Buyer of land shows up, they can sell and relocate 6 Despite the flooding they will not relocate 7	
Tolerable risk	Occasional flooding and coping methods like raising beds, property 1, 3, 9 Multiple social and employment conditions, 3, 11 Due to existence of other services like education, health, transport, flooding is a problem that we can live with 7, 12 Lived in area for 25 years, moving in considered but not top priority 9 People lose property mattresses, utensils, beds, house damages, working days, stock but still operate or live in the area. 11, 12, 9 Loss and damage tolerable all respondents except 4 Flood waters in house can take 2 -3 days, 11 Cleaning up after floods 13, 12, 11, 7, 9, 6,	IT 3 separated with wife, has no job lives of pension savings, lost land in village and has been victim of land sale frauds. Cannot move but to live with risk. In some situations risk is intolerable but people stay in neighbourhood because of lack of money for rent to relocate

Theme	List of what they do	Remarks
Responsibility for flood reduction	KCCA 4, Government 1 Bwaise is a pathways for storm water thus institutions do not prioritize mitigating the hazards 5 Poor garbage dumping by community members Construction of the primary drain is a problem but once complete, flooding will reduce	
Relief after floods	Mosquitoes nets provided but they don't rid of floods 7 Never given any relief after floods 8 Red Cross distributed mattresses and food sometime, 11, 13	

Appendix D Analysis of Transcripts from Household Interviews Bwaise, Moved from Flooding Areas

Theme	List of what they do	Remarks
Tenure status	Negotiated for 6 months (14) Demarcated boundaries with stones after surveyed by Kabaka (14) Been living on land for 15 years (14) Been living on land for 20 years (15) although not clear if always on current location (15) Tenure status is that "brother gave me a room to stay in" and house belongs to brother (15) Bought land (16) and saved for six years (not clear if in relation to current location) – customary ownership on Kabaka's land Been living in Bwaise for 25 years (16) Bought from someone 'who could give permission to buy the land' (17) Transaction almost immediate (17) Been living in Bwaise for 22 years (17) Been living in Bwaise for 8 years (18) Took 3 months to complete transaction (18)	While (14) widowed now, it seems she might have been better off when her husband was alive and they were able to save and buy.
Selecting location	Could buy at "cheaper rate" (14) No possibility of flooding (14) Had the possibility of buying and not having to pay rent (14) Provides a sense of belonging (14) Got divorced and mother had already bought land there (15) "…it was nearer to the city" (16) Near to markets which enables purchase of food at cheaper prices and good access to roads (16) Reason for initially locating is that there were no water or floods (17) Could buy in a place that matched her income (18)	Were renting within Bwaise before (14) Economic activities of selling clothes at temporary, shifting markets is facilitated by good location – based on comment that 'goes out to work each day' (14)
Family composition	Widow (14) with grandchildren of son and daughter. Grandchildren are at school (14) Woman divorced (15) Initially came with children but now lives alone (15) Respondent lives with wife, children and grandchildren	During time of construction, some (unspecified) household members moved away (14)

Constructed dwelling	Followed purchase (14) Took 1 year to construct before they could move (14) Construction proceeded as and when had surplus Constructed dwelling themselves (16) (18) with household savings and invested in raising house and laying concrete floor Took three years to construct new house before could move (16). Availability of income dictated the size of the new house (16) Self constructed dwelling (17) and this determined when could move	Ability to move appears tied to construction of alternative dwelling, even if the alternative is not complete when they move. That is avoidance of rent to enable savings for construction. What are the implications for 'tolerating risk'?
Motivation for moving	Flooding which was exacerbated during construction of drainage channel (14) Repeatedly having to deal with flooding made them realise that needed to move. Flooding (15) (16) (17)	
Process of moving	Poverty slowed down the process of moving (15) Others constructed the new house and respondent had to keep paying school fees Consulted chairman of the area in order to find land parcel (16) Process of moving slowed down by poverty (16). Moved within 2 weeks, even though new place did not have a door (17) and did not have furniture Took out a loan to speed up the construction of the house (17)	
Tolerable risk	Realised risk to children and little possibility of things improving after having tried to solve the problems within the household with avail (14) Savings were being run down by landlord and respondent had no savings to do anything to reconstruct after floods (15)	
Potable water	Buy water for drinking and cooking (14) (15) (16) (17) (18)	
Energy	Charcoal (14) (15) (16) (17) (18)	
Sanitation	No costs (16)	Question not understood by (15) and (17) (18) interprets as personally clearing the drainage
Refuse removal	Pile it behind the house and burn it when dry to avoid paying KCCA for service (14) (16) (17) (18)	
Health	Prefer clinics to hospital (15) Prefer private hospital to public but can usually only afford public	
livelihoods	Mother and daughter sell clothes at shifting markets (14) Son has a shop (14) Retired (15) after poor health and gets support from son's wife when she washes clothes Respondent does tailoring when can access work (16). (16) children helped save for new dwelling and contributed materials Washes clothes in the settlement (17)	

Current exposure to Flooding	Has to buy soil to raise the level of the compound (even though earlier claimed no longer affected by flooding) (14) Have not, and cannot make improvements to existing dwelling to reduce exposure to flooding (15) In relocated house, had to "raise the house using concrete since people had constructed in drainage channels which blocked the flow of water resulting into flooding" (17)	
Membership of local organisations	Not associated with any (14) (15) (16) (17) No spare savings (16) Associated with ACTogether and Women's Groups (18)	
Previous exposure to flooding	Whole house would be affected and mattresses and chairs would be affected (14) Flooding was the only drawback of the previous location (14) Gradual phenomenon of filling each room Effect of rubbish entering flooded house and having to be removed (14) Two processes: flood water and rising ground water (all together 2.5 days) Had to raise properties onto the tables (15) but still got soaked and spoilt. Would collect flooded water in the morning before work and then finish in the evening (15) Affect of acquifers/ground water difficult to deal with and predict (15) Could last for 1 week. Used to live within floods (16) Had to mop house and force water out of the house and resettle the property Construction of drainage channel took part of his land and was not compensated for this (16) Spend days mopping to no avail "so I used to mop the house for about a month without drying it"	
Costs of dealing with flooding in previous place	Had to purchase soil to raise the level of the compound (16) Costs of replacing mattresses (16) (17) Opportunity cost of raising the level of the compound (16) Decision to construct new house in area not affected by flooding (17) Developed footrot (17)	
Attempts to reduce risk in previous place	Raise household property higher to prevent soaking and floating away (14) Construction of "big and high verandah" Bought soil to raise the level of the compound (but ineffectual) (14) (16) Attempts overwhelmed by amount of water (15) Carried some small items away with them (15) Temporarily relocated with relatives in Kawempe during flooding (15)	
Characteristics of new location	"no problem we are facing in this new place" (14) brings psychological benefits – less anxiety (14)	"…by the time you begin seeing Nimbus clouds, the heart runs straight home…" (14)
Possibility of moving again	Only if "forcefully moved by government" (14) No conception of moving again (14) (15) (16) (17) Inevitability of living in Bwaise (15)	

Investments	In children's health and education (14) (17) Children's growth and education (15) which allowed them to buy their own land, construct houses and "even my girl got married through a wedding" (15)	
Realisation of investments	Due to location, son has got job at a garage (15) because transport costs were minimised and could be used for sustaining son. New house is free from flooding (16) New house is owned and therefore do not pay rent (17) Respondent is alive, children go to school and able to eat (17)	

Theme	**List of what they do/why they do it**	**Remarks**
Decision to locate business in the neighbourhood	There is a good market in the area with lots of people/ potential customers (19, 21, 25, 26, 28) Low costs for rent, transport and living (19, 21, 22, 23, 24, 25, 28) Could dodge licencing so cheaper to run the business (19, 20) Lived in the area (20, 21, 24, 25) People know me (24) Could access customers from across the city (22) Had land there from family (23, 24)	Bwaise is inexpensive to do business because rent and also food and accommodation are cheap.
Reason for having that kind of business	Could have a monopoly in the area (19, 23) Was a street Hawker before and forced by KCCA to get licensed premises (20) People are buying used items (19,20) Had experience in same business as a labourer (21, 22) Trained in that profession (22, 24) Took over business from friend who passed away (26)	
Customer base	Bwaise (19, 20, 21, 24) Surrounding areas (20, 21, 22, 23, 24) Jinja town (19) City centre (19, 22, 23, 24) Luwero (19) Different parts of the country (22)	Most businesses are selling to people both inside and outside of Bwaise.
How plot/ structure was obtained	Knew person who owned place (21, 26) Family connection (20) Found empty structure/land (22, 23) Father owned land (23, 24)	
Tenure	Renting (19, 20, 21, 22, 24, 25, 26, 28) Owning (23)	28 also lives there
Capital used to start business	Personal savings (19,21, 22, 23, 24, 26)	
Licensing	Yes No (19, 21, 24) tries to dodge (20, 22, 23)	
Length of time in business	One year (25) Two-three years (21, 22, 23, 24, 26) Five years (19) Seven years (28) Eight years (20)	

Appendix E
Analysis of Transcripts from Household Interviews Bwaise, Businesses

Livelihoods of others in the household	Nearby (19,20) In settlement (21) Outside Kampala (22, 23)	
Social capital and mobilisation	Savings/loans (19) Belonging in society (19) New ventures (19)	
Flood risk reduction	Shifted location of container to more raised land so flooding no longer affects them (19) Nothing (20, 26) Cover up stocks (21) Raise up stock/equipment to protect them from waters (22, 23, 24, 28) Raise yard to direct the flow of the water (25) Aspiration to build a better structure to protect goods (21, 23) Aspiration to work with landlord to raise the floor level (22)	
Impacts of flooding	No customers (19, 20, 23, 28) Stocks are destroyed (21,22, 24) Machinery is damaged (25) Cannot open business until water goes away (20, 22)	
Perception of cost of flooding	Costs much (20, 21, 22, 25) Doesn't cost much (19, 23, 26)	
Tolerable risks	No customers when it rains (19) Cannot open until water goes away (20, 22) Used to floods in Bwaise (20) Can lose stock in floods and still operate (21) Aspirations to improve the structure so flooding does not affect them (21, 22, 23)	
Tipping points	Person who occupied place before left because of flooding problem (22, 23)	
What do they know about what is being planned?	KCCA to expand main drainage channel and to open some new water channels within the area. (19,20,21,22,23,24,25,26, 28)	
Affected by drainage channel expansion	Interior channel widening will evict them (20). Main drainage channel widening will affect them, they are owner so would be compensated (23, 24)	

Appendix F
Analysis of Transcripts from Household Interviews Bwaise, Evicted from Drainage Project Area

Theme	List of what they do	Remarks
Length of stay at new location	35 years with mailo rights (66) 44 years with mailo rights (67) 20 years with mailo rights (68) 25 years with mailo rights (69) 15 years with leasehold (70)	
Decisions to move or relocate from previous site/ neighbourhood	Evicted or partially loss of land/assets (66-70)	
Decision to relocate at new site	Eviction	For all the respondents, they have hardly moved. Either they are living on a smaller site in the same location or have moved very close by.
Tipping point to move		
Decision to move	Eviction	
Tenure at new location	Similar	
Risk reducing measures at old site	Took valuables to a friend's house during floods. We pack things and put them on a raise surface for example utensil, mattresses and all other these that can get spoilt by water. Our beds are raised that how we designed them. At time we join hands with our neighbours and clean the drainage channels around us so that the rain water can flow easily. After the floods: if the water has entered the house we drain it out and clean the house (68)	

Risk and Impact in new place	Piles up soil to prevent water entering and raises furniture inside (66) Drainage channel has helped although not alleviated completely. This is put down to lack of clearing of the channel. (66) (67) Compensation was not as much as they were expecting (66) (67) Land that was lost to channel was used for agriculture. Lost 2 plots. (68)	
Social groups and associations		
Costs at flooding site	Lost many things to floods (70)	
Costs of moving	Lost land (68) Lost dwellings that were used for rental (69) (67)	
Cost of damage	May be the cost can be seen in terms of time spent to drain out the water from the house in case it entered the house. We spent about 1hour trying to drain the water. Impacts or damages of the floods; we have lost many things to floods like chairs, mattresses, blankets, clothes for kids, food, diseases like cholera dysentery malaria, foot diseases. At time children are not able to go to school. Time spent for water to dry: it takes about one week (68)	
Accessibility to new site		Similar or same
Services and utilities compared		Similar because location same or similar
Benefits of moving to new location		For all, they still experience flooding and are living on smaller or adjacent parcels of land to where they were before
Why not relocated again?	Will move if they have the money (68) Identity bound up with location (66, 67, 69, 70)	

Appendix G
Analysis of Transcripts from Household Interviews
Natete, Living in Settlement

Theme	List of what they do	Remarks
Tenure	Bought plot (29) – customary tenure on Kabaka's land (customary lease?) Lived there for 20 years (29) Living on Kabaka land (presume customary) for 15 years (30) Tenants for 6 years (31) Owner and landlady (32) Bought from former owners the house living in and rental houses that were part of it (32) Lived in area for 19 years (32) Renting before bought (33) when sister-in-law gave it to them (33) and lived in current place for last 5 years Lived in area for 22 years (34) Chairman vouched for her to stay (34) and has been renting all this time Rents for 50,000/ together with in-law (35) for 7 months Rents for 60,000/ for last 3 years (36) Rents for last 5 years (37) Rents for last 1 year (38) for 35,000/=	
Process of buying	Used brokers (29) (38) Transacted directly with former owners because knew them and lived nearby previously (32)	
Process of moving	From searching to completing house took 4 years (29) Moved from within Natete from fathers house (29) Moved from within Natete (30) (31) (36) Sister lived nearby and helped find the place (31) Took one month to build current house (33) Took two months to come to place (35) Were related to those who got us this place (36) Moved from Kisenyi (37) Took 5 days to move from Mutundwe (38) and moved in dry season	

Theme	List of what they do	Remarks
Selection of area	Familiarity with area (29) Likes area (29) Because has a house there he is rooted (29) The area was dry and security was okay (30) Near to main road (30) Remains in area because security is “very ok” (30) Selected current place because cheaper (31) Remains in area because near to the road (31) Lower transport costs to work place enable her to stay there (33) Transport is cheap because near to main roads (34) Food is cheap in the area (as even neighbour sells food) (34) Chose area because of in-law already there (35) Chose area because close to work and don’t spend a lot on transport (35) and can even walk sometimes Has advantages in finding customers who need clothes washed (37) Was cheap to rent (38) Problematic because been burgled 3 times (38)	
Family composition	Respondent lives with grandchildren Respondent lives with other household members who are all students (30) Respondent lives elsewhere (Juba) but comes back periodically to check on children who are at school Respondent lives with husband (32) (36) Female respondent stays alone (34) Respondent with husband and children (37) Respondent lives with wife (38)	
Livelihood	Retired but not receiving pension from civil service (29) Sells snacks (from home) and second hand clothes through others in areas relatively close by (29) Sole income from respondent (29) Rear poultry (30) Runs restaurant in Juba (South Sudan) because couldn’t find work in Kampala (31) Renting out properties is income stream (32) Female respondent has an eatery in Kyengera and sells building stones (33) and husband also businessman (33) Female respondent has a “simple bar” (34) Mechanic (35) in Mengo Washes clothes everyday (36) while husband is a taxi-driver Hairdresser (37) whenever gets customers and works from home Mechanic (38)	
Associational activity	For 10 years, belongs to local production group making paper bags, soap and growing mushrooms (29) Not a member of any group (31) (35) Belongs to a savings group for the last 10 years (33) Belongs to a savings group and uses proceeds to pay university tuition (34) Belongs to a savings group (36) and uses to help pay for children’s education Belongs to savings group for 3 years (37)	

Theme	List of what they do	Remarks
Current exposure to flooding	When floods "I do nothing about it" and does not temporarily relocate to relatives To deal with floods, raised house until that proved ineffectual (29) Tries to move property above the water (29) "If the water gets too high for us to sleep in the house at night, we go to the main roads and spend the night there" (29) Try to clear drainage channels to reduce flooding (29) Has raised the floor of the house so that floods do not enter (30) "…overwhelmed because the floods had no control" Exposed to floods (32) "we just let the water find its way and when it recedes we clean up" (32) "we go through it as we can. I only make sure that I protect the children from going into the water" (33) Water rarely enters house (33) Have to clean house after flooding with the help of children (33) Raised the verandah, put pavements along the entrance and piled soil in the compound but to no avail (34) When hears that floods coming, "I stock a lot of rice, sugar, paraffin and ensure that my stove is okay" (34) "when water comes, I wait it to go then clean up the place" (34) can mean that has to mop for 6 hours after floods recede (34) Clear the drainage to reduce impact of floods (35) Thinks that drainage construction could also help reduce exposure but doesn't have money to do this (35) Raises household property higher (35) (36) Try to clear drainage but this is losing battle because they get filled again (35) Water enters the house (35) (36) Water may stay in house for up to 12 hours (35) which costs because have to pay for barriers on the drainage channels and sand bags to get entrance to the house (35) Water remains for 3 hours (36) When rains come "I don't do anything, I just look on and wait for it to come" (37) Has not done anything to stop water entering (37) Water can stay for 1 day (37) When it rains, find somewhere we can get soil to raise the compound (38) Before going to work, he raises property off the ground (38)	
Information about flooding	Hears on radio (29) (30) (33) (34) (37) (38) Hears on TV (30) (35) (37) (38)	
Support to deal with flooding	In 2007 Ministry of Disaster Preparedness provided blankets, saucepans and mosquito nets (29) During CHOGM received blankets (31) and saucepans (30) (32) Never received support (33) Doesn't do anything about the drainage because "there [are] stipulated days when youths team and clean the channels within the settlements" "Councillor helps by cooking porridge for those with nothing to eat, he buys them eatables at the places up there where they go seek refuge, especially those with children" (34) (34) does not access this support because does not have children no support to deal with floods (35) (38) Womens savings group lends money when the children are sick to get medication (37) Supported by relatives after house burgled (38)	

Theme	List of what they do	Remarks
Consequences of flooding	Customers cannot come to buy snacks so is impoverished during flood periods (29) Lost chairs and mattresses (30) Water spends a few hours in the house (31) Have to clean up house after floods (31) (33) Chairs spoilt (31) (33) Has to raise small items onto bed and tables (32) (33) On one occasion lost cash washed away by floods and chairs spoilt (32) Customers do not come to bar when flooding (34) Hires children to come and help mop (34) Have to clean the house as the water brings dirt (34) Has to pay someone 10,000/ to come and collect the piled dirt left behind by the water (34) Have lost clothes, bed sheets and utensils (34) Move up the road and wait for the waters to reduce (35) and waits for short time and moves back to house while water still there Have to clear the mud after the water recedes (35) and this is costly because sometimes need help Loses utensils, bed sheets, clothes and mattresses (35) “we run along the road where there is no water and wait for it to go away” (36) Don’t have help so have to sort out effect themselves (36) Lose saucepans, electronics (36) (38) When the water recedes they mop the house and re-arrange it (37) When floods come in my absence, all the property on the floor is spoilt (37) Have to mop it to make somewhere to sleep (38) Sometimes the house is completely inundated and finds somewhere else to sleep with friends (38) Have to clean to make presentable to outsiders (38)	
Perceptions of causes of floods	Water comes from outside the city, especially the Nakivubo channel and because our channels are narrow, the water spills over (29) People block drainage channels to put up structures (29) Clear the drainages (30) “I think that the factories that have been established cause the floods. They reclaimed the wetland now the water has nowhere to collect” (31) People have built in the wetlands (32) KCCA makes the system worse because it has not completed the drainage system (32) “poor drainage system and heavy rains” (33) (38) Government does not clear channels (33) Narrow drainage (34) (38) Garbage disposal in existing channels which blocks the flow (34) “no one because even the president came here and vowed to construct the drainage” too much rainfall and only one drain (35) and responsibility of president and mayor to sort it out Narrowness of channel (37) Pouring garbage into the drainage also breaks the flow of water (37)	

Theme	List of what they do	Remarks
Perceptions of making things better	"They have taken too long and now I have lost hope" (29) Situation is worse because Ministry of Works is responsible but has failed to construct the channels, even though they have a loan from the World Bank. (29) If the channels are constructed, the floods will reduce (29) (30) (36) (38) KCCA should widen and construct drainage channels (29) (30) Government not fulfilled its responsibility (30) "everyone is responsible because they have built in wetlands" (31) Not heard of any plans to make things better (31) "they have kept on promising since time immemorial, so I have no hope about their plans" (32) If they clear the drainages floods will reduce (34) Impossible that the floods will be less in the future (34) Widen the drainage at Nakivubo (34) Influence proper housing in the settlements (34) "I don't hear anything, it seems they abandoned us" (35) Let KCCA construct drainage channels because we pay taxes (35) Thinks constructing the drainage will improve things (36) Need the drainage because without money and compensation cannot move away (36) Floods will not reduce in future (37) because the "area is continuously degrading due to settlements in the wetlands area" KCCA should liaise with NEMA and relocate people from wetlands because if that is not done, people won't move out of them and instead more will come and settle there since plots are sold at a cheaper price (37) Temporarily relocate people to improve the infrastructure (38)	
Moving away	Cannot find someone to buy at the price wants of UGS 100 million (29) No desire to move away because "this is my house" and doing okay in business (30) (36) Has thought of moving away but not found anywhere suitable yet (31) Has thought about moving away but is waiting to see if someone can buy this house (32) Has thought of moving away but needs to sell or save up at least 10 million to buy another plot (33) Has considered moving away but unlikely because has to raise money to buy somewhere (34) Yes, if I got income (35) (38) I hear that they want to relocate people from the wetlands (37) Has thought of moving away (37) but has not constructed another house and has family and friends nearby.	
Investments	As tenant not made any investments (31) Has renovated house (32) As tenant has raised verandah and constructed embankments but to no avail (36)	

Theme	List of what they do	Remarks
Length of stay at new location	Has been at new location for 2 years (56) Has been in neighbourhood for 36 years (55) Has spent 3 years at new location (57) Had spent 15 years at previous location (58) Had sent 11 years in neighbourhood (65)	I came as someone renting and got a house near the drainage but there was too much water which forced me to move to where I am today (57) Location is not far from previous, same neighbourhood (58)

Appendix H
Analysis of Transcripts from Household Interviews Natete, Moved from Flooding Areas

Decisions to move or relocate from previous site/ neighbourhood	Relocated site from flood prone area to site with less flooding (55,65) Relocated due to flooding that was frequent (55) Flooding was excessive kids never used to go to school whenever floods occurred (56) Water too much that children were affected by diarrhoea (58) Persistent waterlogging of the house (58)	Our house was enclosed, I told my older son to collect water from the house and when one time I came back to the house, I asked why he didn't clear the water? His response was mummy, I got rid of water. That's when I decided to look for an alternative house. (58)
Decision to relocate at new site	Relocated within Bwaise neighbourhood because relatives live here and have lived in neighbourhood for long 36 years (55) Had to relocate close to work place to reduce on transportation costs (56) New location is in Nanfuka zone (57) Been at new location for 5 years (58) I decided after my experience with son trying hard to get rid of the water (58) Has been at new location for 3 years (65)	
Tipping point to move	House flooded and personal beddings, chairs soaked led me to decide to relocate (55) Loss of household property (55) Flood water would take 3 days before clearing (55) Floods made life difficult despite liking the previous place of residence (56) The previous house was flooded many times (57) Persistent water logging (58) Persistent health problems (58) Flooding was a serious problem (65)	

Decision to move	Decision was reached after a discussion with husband and children and no one objected (55) Though it was easy a decision, it took 3 years before we moved (55) Decision reached jointly with husband after a year of pondering (56) I decided as the mother to move the family (57) Flooding was the major issue (65)	
Tenure at new location	Previous house was owned but now renting (55) Land here is owned by Kabaka, so it is Buganda Land Board (55) Permission has to be given by chairman when relocating in neighbourhood (56) Renting at 50,000/= a month (56) Renting at new site just as we did at old (56) Owning house and land with no title in possession by landlord (65)	
Risk reducing measures at old site	Used to lift up household property whenever it flooded (56) Clean up whenever it flooded the house (56) Current house is not affected by floods (57) Sandbagging of house, lift up property and clean up (57)	
Risk and Impact in new place	Flooding still occurs in new location but not severe. We can live with it (55) Renting at relocation site yet they owned the house from which they moved (55) Flooding still affects the school where our children go and they miss class whenever it rains heavily (55) When it floods food supply are in short because sources are affected (55) Experience no threats from flooding at new site (56) Few people at new site yet operate a restaurant, low customer base (56) New site is not affected by floods that much (58) Some light floods that last on average an hour (58)	Nothing has changed much because I am used to the situation of flooding (57) The good thing in this place is that when it rains, water dries away and we live in a better environment (57)
Social groups and associations	Is a member of an association which helps during times of trouble particularly when you have lost a relative (55) No membership to associations, they may be at site but i don't spend whole day at home (56) A member of a skills development (soap making) group group (57) Been a member for one year (57) A member of Bajjabasaga Women's Group (58) Cant handle the associations (65)	This location is on higher ground than previous so less floods (58)
Costs at flooding site	Incurred costs of moving across flooded waters at 1000/= per trip (56)	I used to pay people 1,000 to lift me to a dry place whenever it was flooded (56)

Costs of moving	A total of 180,000 to relocate three months upfront and transportation (56) Paid 20,000 for labour to move the household property to new house (57) Upfront three months rent of 150,000/= that I had to pay (57) Spent 30,000/= to move (65) Bought land for 1,500,000 shillings where I moved (65) Incurred costs to buy building materials, iron sheets, cement, bricks, sand, paint, timber etc (65)	It was a man called Kiberenge who helped me carry my property but unfortunately he died. He also helped me find the property (57) A builder called Lugolobi helped me to move with my husband and hired car (65)
Cost of damage	Spent 200,000/= to repair household property damaged (65)	
Accessibility to new site	The site is 2 miles from previous residential place (56) It's a half a mile from previous location (57)	
Services and utilities compared	Water access is same as at old site (56) Energy for cooking charcoal is more expensive at new site than old (56) Health services more or less same as at old site (56) Water is accessible from piped source compared to a well previously (57) Sanitation conditions differ greatly between the two places with new site better off (57) Hospital and schools are nearby (57) Garbage truck collects periodically (58) Owns a restaurant at previous location (65) We used to buy water but at new location we have a protected spring (65) Sanitation is much better and improved at new location (65)	
Benefits of moving to new location	Safe, no thieves at new location (56) I see the standard of living in which I was at previous is not the same as in currently (57) Location is good for my business, lots of friends and no constraints (58) Living standards are far much better than previous location (65) I was renting but I own where I moved (65)	It is safe in that no thieves because when water flooded our house and sought refuge near the road, on returning the household property like mattresses, blankets, television sets would be lost to thieves. (56)
Possibility to move back to Nateete	If flooding reduces, they will consider moving back (56) If God has mercy on me because I pray to get out of the place because I am still renting (57) I will be interested in moving (58) Not Nateete but a better place should our incomes improve (65)	
Why not relocated again?	I don't have enough financial resources to rent a 80,000 – 140,000 house (58)	

Appendix I
Analysis of Transcripts from Household Interviews Natete, Businesses

Theme	List of what they do/why they do it	Remarks
Decision to locate business in the neighbourhood	There is a good market in the area with lots of people/potential customers (19, 21, 25, 26, 28) Low costs for rent, transport and living (19, 21, 22, 23, 24, 25, 28, 59,60) Could dodge licencing so cheaper to run the business (19, 20) Lived in the area (20, 21, 24, 25) People know me (24, 59) knew landlord Could access customers from across the city (22) Had land there from family (23, 24) Was in Masaka doing agriculture and thought of doing business ending up in Nateete (59) Owner of the house was a neighbour in Masaka, so he negotiated before coming to the city (59) Moved business of carpentry from Kebisoni in Rukunguri (60) been working in area since 2006 Bought interest in an existing clinic (62) Started as a broker then established own shop (63) Moved from another location after being evicted from there (64)	Bwaise is inexpensive to do business because rent and also food and accommodation are cheap.
Reason for having that kind of business	Could have a monopoly in the area (19, 23) Was a street Hawker before and forced by KCCA to get licensed premises (20) People are buying used items (19,20) Had experience in same business as a labourer (21, 22) Trained in that profession (22, 24) Took over business from friend who passed away (26) It was only venture the little capital could establish (59) Services for the business exist in the area (59) Received training in carpentry so he doing what he trained to do (60) Trained as a nurse (62)	
Customer base	Bwaise (19, 20, 21, 24, 59) Surrounding areas (20, 21, 22, 23, 24) Jinja town (19) City centre (19, 22, 23, 24) Luwero (19) Different parts of the country (22) Nateete good base (62)	Most businesses are selling to people both inside and outside of Bwaise.

How plot/ structure was obtained	Knew person who owned place (21, 26) Family connection (20) Found empty structure/land (22, 23) Father owned land (23, 24)	
Tenure	Renting (19, 20, 21, 22, 24, 25, 26, 28) Owning (23)	28 also lives there
Capital used to start business	Personal savings (19,21, 22, 23, 24, 26,61,63) Uncle bought machines for him to start a workshop (60)	(61) used personal savings from milling business she had in Masaka
Licensing	Yes No (19, 21, 24) tries to dodge (20, 22, 23)	
Length of time in business	One year (25) Two-three years (21, 22, 23, 24, 26,61) Four years (62) Five years (19) Six years (63) Seven years (28) Eight years (20) Nine years (60) Twenty three years (64)	
Livelihoods of others in the household	Nearby (19,20) In settlement (21) Outside Kampala (22, 23) Multiple strategies including farming (59)	
Social capital and mobilisation	Savings/loans (19) Belonging in society (19) New ventures (19)	
Flood risk reduction	Shifted location of container to more raised land so flooding no longer affects them (19) Nothing (20, 26) Cover up stocks (21) Raise up stock/equipment to protect them from waters (22, 23, 24, 28) Raise yard to direct the flow of the water (25) Aspiration to build a better structure to protect goods (21, 23) Aspiration to work with landlord to raise the floor level (22) Raise the floor of the structure (59)	
Impacts of flooding	No customers (19, 20, 23, 28, 59) Stocks are destroyed (21,22, 24) Machinery is damaged (25) Cannot open business until water goes away (20, 22)	
Perception of cost of flooding	Costs much (20, 21, 22, 25) Doesn't cost much (19, 23, 26)	
Tolerable risks	No customers when it rains (19) Cannot open until water goes away (20, 22) Used to floods in Bwaise (20) Can lose stock in floods and still operate (21) Aspirations to improve the structure so flooding does not affect them (21, 22, 23) Raised structure enable to keep water from products (60) I am used to the rains and floods, we raise properties and clean afterwards (62)	
Tipping points	Person who occupied place before left because of flooding problem (22, 23) Plans to relocate in following year which is 2016 (61) It is Nateete where the business has grown and gotten known, moving is hard (64)	

What do they know about what is being planned?	KCCA to expand main drainage channel and to open some new water channels within the area. (19,20,21,22,23,24,25,26, 28,59,60,62,64)	
Affected by drainage channel expansion	Interior channel widening will evict them (20). Main drainage channel widening will affect them, they are owner so would be compensated (23, 24)	

Appendix J
Analysis of Transcripts from Household Interviews Natete, to be Evicted from Drainage Project Area

Flood risk reducing measures	Raise properties and stock (60,61) Move stock indoors and raise (63) Build dykes (64)	

Theme	List of what they do/why they do it	Remarks
Decision about why to locate there	Had family in the area (39, 45) Natete was a wonderful place in the city (39) At that time the area was dry (40) Hospital close by (39) Was in hurry to find a place to stay (41) It was cheap (41, 47, 52) It was the dry season so I didn't know about the problem (41) Husband was living there (42) Born in this area (43, 44, 46, 48, 51)	
Tenure	Owner (39, 43, 45, 46, 48, 49, 51) Owner Mailo land (51) Owner, Kabaka land (40, 42, 44, 52) Rented, now owns (41) Renting (47)	
How long in this location	4 months (41) two years (49) five years (45) nine years (43) ten years (42) 13 years (40) 16 years (52) 20+ years (39, 46, 48, 51)	
Number of people in household	One (41, 48) Two (43) Five (42) Seven (49) Wife and Children (52) Wife, husband, children (39, 40, 44, 45, 46)	
Services	Hospital Mulago or Kitebi (39, 41, 42) Well water is free (39, 40, 41, 49, 52) Buy water (43,44, 48) Own toilet (40) Shared toilet (43) Schools in Natete (40, 42) Door-to-door medicial services (41)	

Livelihoods in household	Business (39) Nurse (39) Clothing seller (39, 45, 52) Selling soap (40) Selling herbs (40) Traditional healer (40) Selling tobacco (41) Selling Maize (52) Selling movies (48) Hair dressing (41) Boda-boda cyclist (42) Maize mill worker (43) Landlord with rental houses on plot (43, 51) Engineer (44, 51) House builder (45) Driver (46) Poultry farmer (49) Chapatti making (52)	Has jobs to pay for school fees
Membership in local organisations	None (39, 41, 43,44, 46, 48) Brac microfinance (40, 42) Its Pride (45) Cash-out group (52)	42 Belong to Brac because interest is not too high. She is a housewife and wants to start working. Belong to group both to save and to be with others in the community.
Problems encountered from flooding	Malaria is worse (39, 44, 45, 52) Footrot (44) Candida (45) Cholera (51) Dysentry (51) Miscarriages doe to water borne diseases (51) Snake bites (52) Skin diseases (52) Sewage spills from toilets (39) Water enters house and ruins things including mattresses (41, 44, 45, 52) None in house, water stops in the compound (43) Loose days of work (45) Cannot leave to work as must stay around to protect children (52) Affects decisions about where to work from (52) Cannot sleep because of water in house (45) It increases cases of school drop outs (52) None (46)	
How long floodwater stays for	1.5 days (44) 2 days (45) 6 hours (49)	52 – It takes 2-3 days to recover from flooding
Risk reducing measures	Have built new house with higher foundation on same plot (39, 44) Raised the compound (46) Raise property (40, 42,44, 48, 49, 51, 52) Stay home from work (44) Because of drainage clearing, the water goes away faster (49) Go to friends and neighbours (52) Close doors (52)	

Costs of risk reducing	Time (40)	
Tolerable risks	Built new house to cope with flooding problem (39) Raised the compound (46) Used to the water because Natete is the area where I grew up/ used to it (43, 48)	Good explanation about why they stay in the area quote from 45, 46, 48
Tipping points about wanting to leave	Flooding has become much worse in last 20 years (39) Owns property so it is not that easy to leave (40) Raising enough money for rent in new house (41) Waiting for compensation (42,44) Wants to leave plot because of flooding, feels this way even without the drainage project (44) Doesn't think about leaving (45, 46, 48) We don't do any improvements to the place because at any time we will be evicted (49).	
Knowledge about drainage expansion	Since 2012 (52) Since January 2015 (39, 49) Have been hearing about it for a while (39, 45, 48) Just recently heard about it (42) Not too much as new in the area (41) Not much (43) Have heard since a long time back (over 20 years) about a project but nothing happens (46)	
Who they heard it from	Local leaders have told them (40) Have seen surveyors from the government (40, 43, 45) From other people (42) Community meeting (48, 49) Radio (48)	
Knowledge about how drainage expansion will affect them	Information up to now is unclear (39) Have been told to get documents ready (39) Know that they will have to move but have not been compensated (40, 45, 48, 49) Do not know when it will start (42, 45, 52) Within 5 years (48) Land has been surveyed and valued and now awaiting compensation but do not know time period (44, 45, 52)	Good explanation of the implementation of the eviction from quote from 44. 52 good quotes on the implementation
Feelings about the eviction	Ready to leave if compensated (39, 42, 43, 45, 46, 52) Sceptical that the project will happen (42, 46) Have been waiting for things to happen but nothing happens (49)	
Benefit of moving	Can get a better place to do farming (39) None (41) Will be relieved (42) Now, cannot go to work because fear something will happen to the children because of the floods (42) Will be free from floods, can buy somewhere better for good and dry for better livelihoods (44) Children can get enough area to play with limited risks (49)	
Drawbacks of moving	None as long as compensation is enough (39, 43) It is costly (41)	
Actions they have done/not done	Have bought another plot (40) Nothing because they are awaiting compensation (42, 44, 45) Cannot do developments on house as do not know when construction will start (42, 52) Thinking about going to the village (43)	40 – seems like plot is in the village? 52 Since we hear of that nothing permanent you can do because we live at fear that anytime our houses might be demolished.