RELOCATION STRATEGY FOR COMMUNITIES SETTLED IN FLOOD-PRONE AREAS - A CASE STUDY IN THE BWAISE NEIGHBOURHOOD, KAMPALA

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March, 2016

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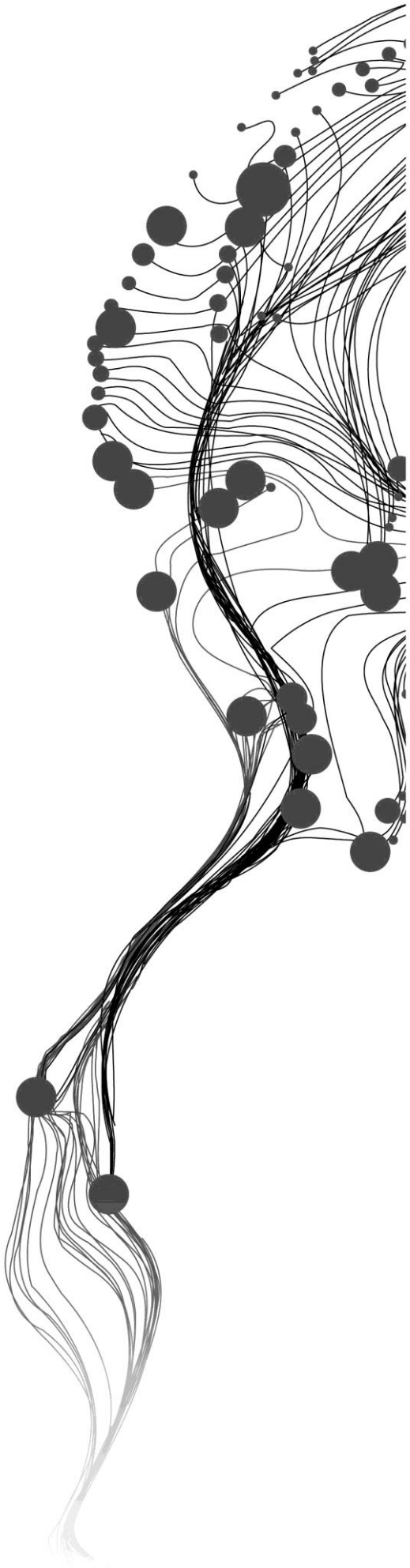

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GLEN OLLI
Enschede, The Netherlands, March, 2016

Thesis submitted to the Faculty of Geo-Information Science and Earth Observation of the University of Twente in partial fulfilment of the requirements for the degree of Master of Science in Geo-information Science and Earth Observation.
Specialization: Urban Planning and Management

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ABSTRACT

Floods as natural hazards are affecting communities causing damage to their life and property. The communities are being located in the lowest lying area as cause of urbanization in many capital cities. The neighbourhood of Bwaise III, suffers a lot of damage from floods, so the need for preventing this damage emerged. To prevent this damage, relocation was introduced as a preventive measure, delivering benefits to communities life and their livelihood. A well-managed relocation is seen as the best long-term strategy. This study develops a relocation strategy, needed to relocate communities located in the neighbourhood of Bwaise III, a flood-prone area. To develop the strategy for relocation, this study developed a methodology as following. The methodology was based on analysis of community characteristics and their livelihood, Bwaise III. Furthermore, the governance responsible for the relocation process was identified. In addition, previous relocation experiences composed the list of the main fields where the relocation strategy is based.

The analysis was done in the neighbourhood of Bwaise III, Kampala, Uganda. For this analysis the methodology is a mixed method consisting in both qualitative and quantitative answers to the analysis. Giving focus to the willingness of communities to relocate, their socio-economic characteristics, livelihood characteristics and perceived impacts on their life and livelihood the strategy is expected to minimize the impacts caused to the communities. In addition, this research analysed governance involved in the relocation process defining the responsible actors. Besides this, the research designs the relocation strategy also based on the identification and inclusion of the previous relocation experiences among the goals of the strategy.

In the end the relocation strategy is developed, which can also work as a stand-alone document and be adapted for further studies. To verify the last statement the research recommends the implementation and application also in other contexts. The developed relocation strategy provides five goals divided into concrete actions, where each action has attached the resources needed the responsible actor to lead and collaborate but also possible constraints. The fulfilment of the concrete actions will minimize the impacts of the communities life in case they are relocated through this strategy.

Keywords:
Relocation strategy; Relocation; Community relocation; Socio-economic characteristics; Governance;

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1. INTRODUCTION

1.1. Background and justification

Development projects such as the construction of dams, roads and other types of infrastructure but also impacts like disasters and climate change effects bring the need for relocation (Shi, 2009). This research is dealing with relocation caused by disasters, resulting from natural hazards. UNHCR (2014) highlighted different causes of relocation arising from windstorms, mudslides, landslides and floods, which is also the focus of this research. Moreover, the report of the IPCC (2014), projected an increase in displacement of people over the 21st century, as a cause of climate change induced disasters. In this case, relocation as a part of displacement category is considered as a shift to another place of residence, temporary or as a long-term strategy (King et al., 2014). Many government agencies have dedicated resources to successful community relocation, which could help in the framework for climate-induced relocations (Julie Koppel Maldonado, Shearer, Bronen, Peterson, & Lazrus, 2013). The process of urbanization in Kampala has led to the occupation of land exposed to floods (Sliuzas, Jetten, & Flacke, 2013). Rapid urbanization is a factor that has shaped the so-called natural disasters (J. K. Maldonado, 2012). Changes in the landscape caused by floods create uncertainty in regarding whether the homes of the people living in the community will be affected. Floods, other than causing damage to the property, have an impact on livelihood and health of communities (Lwasa, 2010). The IFM (Integrated Flood Management) Kampala Project, recommended a vast amount of interventions such as improvement of drains, improvement of infiltration and relocation.

Natural hazards like floods bring the need for a preventive relocation. According to Correa, Ramírez, & Sanahuja (2011), preventive relocation delivers benefits regarding human life, infrastructure and assets. Rather than paying for damages, the funds should focus on relocation and public education of living in flood-prone areas (UN, 2004). Relocation to a flood-free area is considered to be the most immediate implication of reducing flood risk. Correa et al. (2011) argue that relocation is complex process which includes: physical, legal, economic, cultural and social dimensions.

The objective of relocation is to support communities to rebuild their lives, which includes their house, the source of income, their economic activities, social networks, access to public services without forgetting their cultural and social practices. A well-managed relocation is seen as one of the best long-term strategies for reducing risk and recovery costs (Okada, Haynes, Bird, van den Honert, & King, 2014). There are two types of relocation, collective and individual. In collective relocation, all the families and social units are allocated by local authorities, while the individual relocation is seen as a more efficient strategy that meets the needs of the population to be resettled (Correa et al., 2011).

Moreover, communities, groups or individuals that are affected by the risk of floods should be identified. Recent relocation studies suggest that an inventory of all the stakeholder characteristics should be prepared to categorize them based on the position that they have for the relocation phase. Communities include individuals from different types of socio-economic situation alongside individuals who are identified based on their power of influence to the other part of the and authorities. Many institutions and organizations have explored the use of adequate methods and skills that support community involvement and their empowerment. Applying this participatory approach to the most vulnerable groups and threats that they face can identify the community better (Buckle, Mars, & Smale, 2000). By not taking into

consideration people's concerns about their livelihoods, Kabumbuli & Kiwazi (2009) state that the response they got from people had much criticism. To tackle the criticism Okada et al. (2014) state that by holding community consultations, a general consensus is going to be achieved despite physical and emotional hardship.

This study can be justified based on the need to develop innovative approaches and strategies that integrate local knowledge with geo-spatial methods and tools to capture and share information between communities and scientists to have a better collaboration for the relocation process (Peters-Guarin, McCall, & van Westen, 2012). Most relocations so far lack adequate information and the perception of communities, making the process mainly a forced relocation (Moldonado, Colombi, & Pandya, 2014). The use of innovative approaches and participatory methods will be effective when the planning process is inclusive of people's participation for improving their livelihoods (Kabumbuli & Kiwazi, 2009). A participatory approach, in this case, was considered the active intervention and participation of the resettles in the process of decision-making for decisions regarding their livelihoods and life (Chen, 2009). On this basis, relocation should take place in locations which are not exposed to floods to minimize the risk of flood damage (Jha, Bloch, & Lamond, 2012). Eranıl Demirli, Tuna Ultav, & Demirtaş-Milz (2015) mentioned in his study that urban governors have presented relocation projects as solutions to help low-income residents to improve their living conditions. Egan, Lawson, Kearns, Conway, & Neary (2015) state that relocation is poorly evidenced in terms of social determinants and its impacts. Inadequate governance mechanisms and budgets to address and support relocation cause lose of community networks and their culture. Therefore, the aim of this study is to determine a development of a strategy to relocate a settlement, avoiding in this manner a comeback of the communities to the risk areas. Considering the existing floods, the chosen neighbourhood for this research is Bwaise.

1.2. Research problem

The process of relocation out of flood-prone areas gives new opportunities for the reduction of disasters and adaptation to the continuous climate change effects. There is much research done on coastal cities related to the problem of relocation while there is a gap in research on inland cities like Kampala (Lwasa, 2010). Although Kampala suffers consistent flooding, no relocation procedure has not been tried so far. The focus of the projects and interventions by the institutions in charge and foreign donors has been on in-situ adaptation for coping with floods. None of the institutions have developed a strategy for relocation.

Relocation as a choice to reduce risks for people located in flooded areas is insufficiently considered in Kampala by the government authorities, as their focus was on improving the drainage channels. Although there have been different studies related to the floods in Kampala, relocation was seen as a last choice. Because of its sensitivity, slum dwellers were concerned about the impacts caused to their social and economic characteristics and their livelihoods. Communities perceive a relocation process as vulnerable and influencing their life considerably, which consequently results in a need for rebuilding their livelihood. The perception of communities for the relocation has been a gap in previous studies that are mostly related to socio-economic characteristics and their social networks. Based on the literature studied, institutions related to the planning process and development of strategies did not define the responsibilities about relocation.

Strategies for disaster risk reduction have evolved during the last years, but mainly for after the hazard event had occurred (Bowman & Henquinet, 2015). To make the process of relocation less vulnerable for flooded communities, this research focused on developing a strategy for relocation in case of floods. This strategy was developed based on key determinants such as socio-economic characteristics and patterns of

household activities, the appropriate definition of government entities, and previous experiences in the field of relocation. The neighbourhood of Bwaise, part of the city of Kampala, Uganda was selected as the study area. The achievement of the main objective will help the involved governance entities to consider the strategy of relocation to minimize the risks threatening the communities located in flooded areas.

1.3. Research objectives

Main Objective
The main objective of this research is to develop a strategy for community relocation, minimizing the impact affecting the life

Sub-objectives

1. To analyze the socio-economic characteristics and social-network pattern of the communities.
2. To analyze governance involved in the process of relocation.
3. To analyze previous relocation practices and experiences.
4. To develop a strategy for relocation from flood-prone areas

1.4. Research questions

Sub-objective 1

1- What are the socio-economic characteristic of the community members in Bwaise III?
2- What is the willingness to relocate of the community members in Bwaise III?
3- What are the socio-economic activities and social-networks of the community members in Bwaise III?
4- What are the socio-economic and social-network patterns of communities in Bwaise III?

Sub-objective 2

1- What are the institutions involved in the relocation process?
2- How do institutions collaborate with each other for a relocation process?
3- What are the policies for relocation from flood-prone areas in Uganda?

Sub-objective 3

1- What are the best experiences that contribute to the relocation process?
2- What are the practices that should be avoided in a relocation process

Sub-objective 4

1- What are the elements for developing a relocation strategy?
2- What are the steps for preparing a relocation strategy?
3- What should the relocation strategy for Bwaise III contain?

1.5. Conceptual framework

The main concepts of this research have been established in the background section and literature review. The following figure, (Figure 1.) elaborates the conceptual framework of designing a relocation strategy based on the components discussed earlier and those that are widened from the literature.

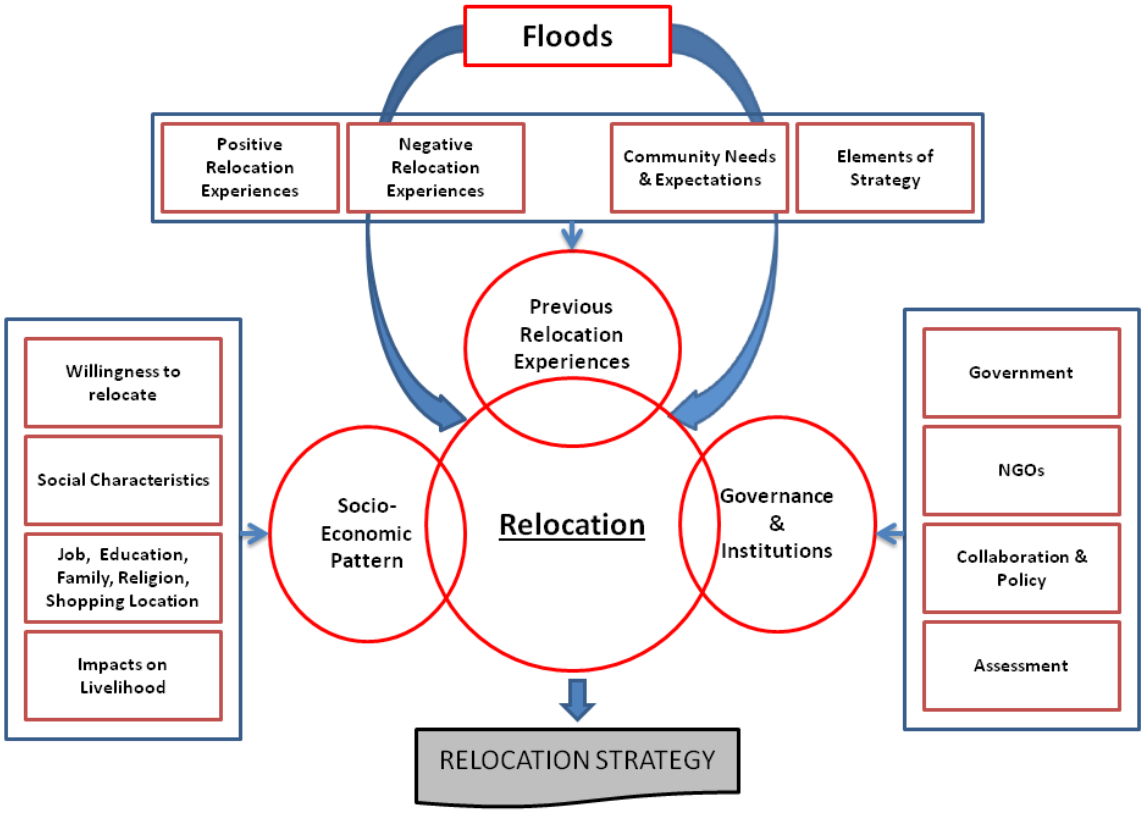


Figure 1. Conceptual framework of the research

1.6. Thesis structure

Chapter 1: Introduction - Gives a brief introduction to the research on relocation explaining also the research problem. Besides, it contains the research objective and its questions concluding in the end with the conceptual framework and the research matrix.

Chapter 2: Literature review - Reviews previous literature and explains what was done in previous studies. Furthermore, it provides practices and experiences on previous relocation experiences.

Chapter 3: Methodology and Study Area - The study area and the methodology of this research are explained in the third chapter, together with sampling strategy and data availability including fieldwork data collection.

Chapter 4: Community and Livelihood characteristics - This chapter presents the first results of the analysis, that inform one of the basis of the strategy and also informs on the community and livelihood characteristics including also the possible impacts threatening the community life.

Chapter 5: Governance and Institutions - This chapter included in the study are analyzed based on the collaboration and policy. Furthermore, the governance was assessed by a framework to provide answers on what should be improved.

Chapter 6: Relocation Strategy - The chapter presents the relocation strategy and the constructing elements of it. Moreover, after designing the strategy, its implementation in the case study is presented.

Chapter 7: Conclusions and Discussion - This final chapter discusses the findings and the results but also the limitations which were discovered during and after the study. To conclude it presents the answers to all research questions in the conclusions part, and it recommends further research and actions to be taken.

1.7. Research matrix

Table 1. Research matrix

Sub Objective	Research Questions	Method of Answering	Anticipated Results
1. To analyze the socio-economic characteristics and social-network pattern of the communities.	1- What are the socio-economic characteristic of the community members in Bwaise III?	Questionnaire	- Household characteristics of the community members.
	2- What is the willingness to relocate of the community members in Bwaise III?	Questionnaire	- Willingness level of community members to relocate.
	3- What are the socio-economic activities and social-networks of the community members in Bwaise III?	Questionnaire Cross tabulation Spatial analysis	- Main socio-economic activities and social-networks of community members plus visualization maps.
	4- What are the socio-economic and social-network patterns of communities in Bwaise III?	Questionnaire	- Patterns of socio- economic activities and their social- networks
2. To analyze governance involved in the process of relocation.	1- What are the institutions involved in the relocation process?	Document Analysis Interviews	- Governance institutions involved in relocation and their role in the process.
	2- How do institutions collaborate with each other for a relocation process?	Interviews	- Collaboration between governance in the process of relocation
	3- What are the policies for relocation from flood-prone areas in Uganda?	Document Analysis	- Policy understanding and its role on relocation as cause of risk
3. To analyze previous relocation practices and experiences.	1- What are the best experiences that contribute to the relocation process?	Literature Review Interviews	- Factors that contributed to previous positive experiences
	2- What are the practices that should be avoided in a relocation process?	Literature Review Interviews	- Factors that contributed negatively to relocation experience
4. To develop a strategy for relocation from flood-prone areas	1- What are the elements for developing a relocation strategy?	Document Analysis Interviews	- Elements to be included in the strategy
	2- What are the steps for preparing a relocation strategy?	Document Analysis	- Steps to be followed to prepare the relocation strategy
	3- What should the relocation strategy for Bwaise III contain?	Document Analysis	- The relocation strategy

2. LITERATURE REVIEW

2.1. Introduction

This chapter examined the existing literature over the main concepts of the conceptual framework of this research. As a cause of missing the experiences from practices related to the context of Kampala and Uganda, the literature review was focused on bringing together experiences from all around the world, to give an overview of what were the expected problems, issues, and mistakes that were committed during relocation. Moreover, best experiences from the past, contribute towards the implementation of those elements in the strategy. This part of the research gives a clear picture on elements to be included in the strategy and also mistakes that were made by other studies in the past to avoid them.

2.2. Floods

Globally, floods are occurring more frequently in the last 20 years, and their number is further increasing (Jha et al., 2012). The risk from floods and the likelihood of its impact is higher in urban areas as a result of a dense population and urbanization, which according to Liao (2012) explains that although the development of the infrastructure for defence against floods, sometimes the defence capacity is not enough. Annual floods devastate communities and their livelihoods, and this has created a requirement of relocation from vulnerable slum location to safer area (Cronin & Guthrie, 2011). Furthermore, flood damage has significant consequences in socio-economic terms, on people's assets and increasing their overall vulnerability (Birkholz, Muro, Jeffrey, & Smith, 2014); (Rufat, Tate, Burton, & Maroof, 2015). In the following sections, relocation aspects and the cause of floods will be assessed.

2.3. Impacts of relocation

2.3.1. Socio-economic and social-network impacts

Relocation had implications in social networks between families and their relatives such as grandparents, cousins, parents and siblings (Taylor, 2013). The process of relocation is a strategy which itself influences the patterns of humans to reduce their vulnerability (Perry & Lindell, 1997). According to this, Xu, Xu, & Zhang (2015) concluded that community detection and their social networks were a key point in finding the structure and discovering their functions. Social networks allowed detection of patterns of collaboration that could not be perceived intuitively (Maya-Jariego & Holgado, 2015; Todd, Houston, & Suffrin, 2015).

To draw a suitable relocation strategy, Chen (2009) highlighted that a clear socio-economic survey is a basis for planning a relocation process. Usamah & Haynes (2012) noted in their study that the main socio-economic activities were in farming and animal husbandry which had to be taken into consideration for planning of the new relocation sites. Not considering this, resulted in changing females life who were responsible for managing the house and after found themselves involved in economic activities. Income restoration was found in terms of offering land restoring, in this way there is no impact on farmer's production methods and also other activities which did not include farming production such as small rural stores, occupational training, and enterprises providing employment (Chen, 2009). Taylor (2013), mentioned the socio-economic factors as the most important factors when studying the mobility of the communities, alongside with the distribution of moves, in this case, social-networks or social ties including the respective frequency and time duration. Rufat et al. (2015) concluded that social vulnerability at community level was determined by their income, access to resources and the economic diversity.

2.3.2. New site selection and community participation

The selection of the new site for relocation does not consider only human factors but also natural factors (Yan Sun, Guoqing Shi, & Zhonggang Liu, 2011). English & Brusberg (2002) argue that, when it comes to the selection of the resettlement, location and community preservation are the most crucial concerns for the communities. Viratkapan & Perera (2006), state that for the selection of the new location for relocation, leaders and community members should be involved to express their needs which are crucial for the relocation process. According to Akukothela (2006) relocation process requires consideration of factors that ensure the suitability of the land for the relocated people. Dai, Lee, & Zhang (2001) conclude in their study that by using GIS environment, land-use planning can be very useful in finding zones for a predefined category but also in producing a map of socio-economic activities and patterns of community's daily activities.

Community participation was vital to the success of slum-upgrading projects like the relocation caused by floods in Pune, India (Cronin & Guthrie, 2011; Oliver-Smith, 1991). Community empowerment and activities which bring communities closer to each other should be fostered with activities (Viratkapan & Perera, 2006). Rashid, Hunt, & Haider (2007) suggest that proper relocation can be successful if the institutions or managers of the process can predict how people react to specific policies. During the planning and implementation process, in order to be a successful relocation process, Correa et al. (2011) identified that physical, legal, economic, social, psychological, cultural, environmental, political and territorial dimensions should be considered. Another study in Dakota, United States, concludes that communities can move towards a future free from the threat of constant flooding if the local decision makers use meaningful and participatory methods to visualize the threats that they face (Cummings, Todhunter, & Rundquist, 2012).

2.4. Review on relocation practices globally

When it comes to choosing the use of the term relocation or resettlement, Ferris (2014) defines resettlement as a permanent type of relocation. Shi (2009) refers to resettlement as a process of population removal into different areas or different spots and reconstruction of socio-economic system. Perry & Lindell (1997) discovered that permanent community relocation had become an important mitigation option for communities settled in hazardous areas. Lersch (2014) refers to relocation as a process of a change in quality of life, improving their livelihood from previous damages in different time at a specific location. Bukvic (2013) found that relocation is being considered in communities where climate change is already showing its impacts as a voluntary movement of the whole or part of a community, including their personal assets. Bronen & Chapin (2013) stated that relocation might be the best adaptation method to respond to the current situation of the community livelihood, and also it reduces vulnerability to future climate-induced threats.

Moving people from hazardous areas is not new and has been applied in many nations (Campbell, Goldsmith, & Koshy, 2005). Kuhl, Kirshen, Ruth, & Douglas (2014) referred to relocation as retreat from areas of high risk as a planned strategy as the most appropriate results in response to climate-related hazards. Cummings et al. (2012) in their study concluded that relocation can increase socio-economic resilience of flood threatened communities, which is also supported by the statement of Godschalk, Rose, Mittler, Porter, & West (2009) who added that their essential functions and social ties and identity are maintained.

2.5. Relocation policies globally

Relocation policies include different projects like public housing, site and service schemes, as well as community upgrading programs (Obudho & Aduwo, 1989). Relocation projects should not be formulated only for security of tenure, but they should take into consideration new objectives to target social welfare and community development (Viratkapan & Perera, 2006). King et al. (2014) argued that in Australia, the policy was focused on restricting further developments in areas that were identified as risky and on abandonment of existing flood-prone areas with the willingness of 10 to 20% of the population to relocate. The government in Bangladesh has been following a policy focused on doing nothing or demolishing settlements without any plan (Rashid et al., 2007). Correa et al. (2011) argue that when involuntary relocation takes place in the

projects financed by World Bank, the policy ensures that the living conditions are improved or restored to the relocated community. Moreover, in a relocation study in Alaska, Bronen & Chapin (2013) found that the existence of a government program is helping communities to create an adaptation strategy which includes relocation and recommended changes in laws for the relocation of communities followed by an institutional framework providing communities with technical assistance and funding. Also, policies on relocation in China require all government authorities to work close with the people, providing them all the support, subsidy and also encouraging them in the decision-making process (Wu, Penning, Zeng, Li, & Chappell, 2015).

Although different policies exist globally for the process of relocation, in Uganda the government does not have a clear policy for dealing with such scenarios. Nelson & Associates (2014) prepared the Resettlement Policy Framework (RPF) for agriculture development projects, which established relocation and compensation principles, describing the institutional framework in Uganda and the procedures for consultation and participation concluding in relocation of project-affected persons. Also, the authors found that the Ugandan laws do not make provision to avoid involuntary relocation although it was covering site selection, site preparation, and relocation. Rural Electrification Agency (2014), found that in the Ugandan Land Acquisition Act of 1965, there was no requirement in the law nor provision that people need assistance with relocation or that alternative land should be bought and made available.

2.6. Government involvement in relocation

In the study of Usamah & Haynes (2012) it is explained that government provided the relocation sites, documents regarding any background information on the relocation for a qualitative research and also took the responsibility for identifying, screening and assessing the beneficiaries. Further, Shreyas & Prathigna (2012) explored the role of the involvement of the government in contributing to the cost of the land, dwelling unit, also providing government land relocation project. Sipe & Vella (2014) found that there must be leadership in terms of politics and also governmental buy-in initiatives. In case they are not taken into consideration, this will lead to consequences towards the relocation process. On the other hand, Bronen & Chapin (2013) found that statutory limitations can prevent government to respond to biophysical changes which force the relocation of the communities, although their study showed relocation as the only solution for protecting the respective communities from life threats. Wu et al. (2015) explained the role of the government in organizing the relocation programs in China, in natural disaster-prone areas, sponsoring, supporting, encouraging and subsidizing without intimidating the participants, instead offering incentives for people who were willing to relocate.

While various governments have been involved in different relocation projects, governance was not a new concept and was being used very often as it included other actors rather than government actors only (UNESCAP, 2009). Furthermore, with its broad usage, various institutions and actors around the world involved in research started to define assessment criteria for good governance. IFAD (1999) reported various assessment frameworks which were introduced by different actors like The World Bank (TWB), International Development Association (IDA), Asian Development Bank (AsDB), African Development Bank (AfDB) and United Nations Development Programme (UNDP).

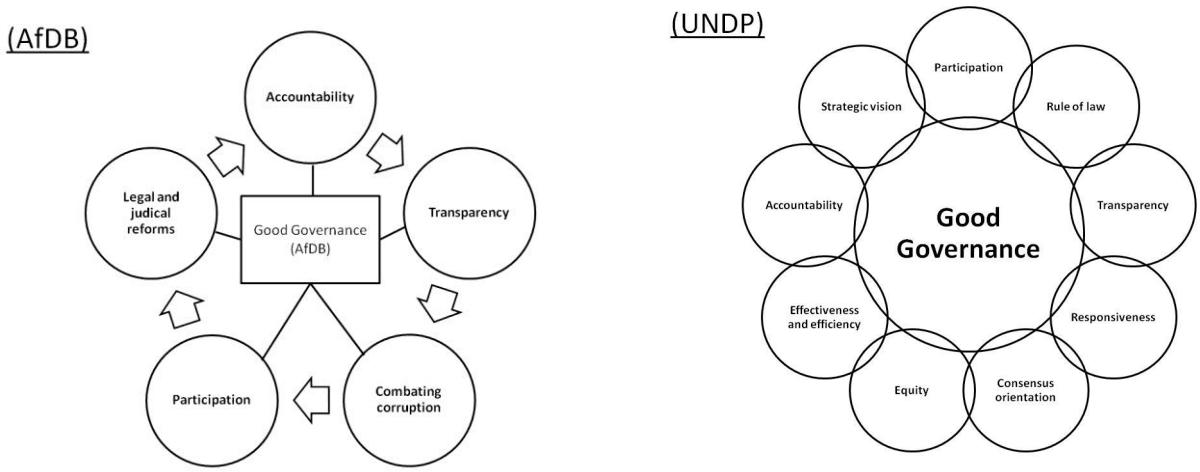


Figure 2. Assessment frameworks for good governance adapted from (UNESCAP, 2009)

The assessment frameworks that were chosen through the literature review (Figure 2.), can be applied to the context of Uganda, either the one by UNDP or AfDB. The difference between them is that the AfDB framework assesses the management of the affairs of a nation and how the power is exercised whereas the UNDP framework assesses the economy, politics and administrative authority to manage a country (IFAD, 1999). As this research was focused on dealing with communities located at city level, the model by UNDP was found to be more appropriate. In the report of UNESCAP (2009), the elements of the UNDP model were found to be used when dealing with community life, assessment of government institutions at local and national level but also civil society.

2.7. Issues leading to positive relocation experiences

Viratkapan & Perera (2006) mentioned that the success of the relocation process in Bangkok was the fulfilment of main elements like: participation of community members (mentioned also in the study of Chen (2009)), physical development of the area , award compensation in terms of security of tenure, social development and consolidation of livelihood. King et al. (2014), in his study on Australia, on relocation of two towns which experienced loss of life caused by floods, explained that government implemented a land-swap scheme to relocate residents away from flooded areas as an adaptation strategy. On the other hand, a study of relocation was conducted in Turkey by Eranıl Demirli et al. (2015) which analyzed the socio-spatial incompatibilities in the lives of poor people due to risk of a landslide. Rashid et al. (2007) followed a strategy including the choice of relocation based on financial incentives given such as grants, free land, and employment opportunities. Faziawati, Nor, & Norhuzailin (2014) concluded that government authorities, although there were some negative effects, believed that relocation solution was successful as the former community dwellers were provided homes. Airriess, Li, Leong, Chen, & Keith (2008) explored that the inclusion of the church helped the community specifically in the successful evacuation, relocation and recovery process. Community intervention and organization can improve the effectiveness of the implementation of programs (Maya-Jariego & Holgado, 2015). Usamah & Haynes (2012) mentioned another success reached after relocation, that of tenure security which was given with a full right for 99 years and longer, in this way making communities more secure about their future.

In addition, an examination process of a relocation in Turkey concluded that the significant factors which contributed towards the successful relocation were: the environment of the new settlement, the relationship between the old village and the capability of the community to develop itself (Coburn, Leslie, & Tabban, 1984); (Oliver-Smith, 1991). Usamah & Haynes (2012) sustained the same statement by adding the inclusion and consultation that was made with the communities for the selection of the relocation site. Moreover, Chen (2009) added that compensation standard was the task which community paid most attention in relocation planning as they feared the issues of openness and transparency. Taylor (2013) found another

key for success contributing to relocation, which included job retention, strong networks of family and friends, safety and education, including a plan of integration of children to the new environment. The above findings were listed and presented shortly in the table below (Table 2.).

Table 2. Previous relocation experiences derived from literature

Previous relocation experiences	
Best practices	Bad experiences
Participation of community members throughout the entire process (Viratkapan & Perera, 2006)	Breakdown of the community (Laugrand, Osten & Serkoak, 2010)
Consolidation of existing livelihood (Chen, 2009)	Cultural differences were not taken into account (Faziawati et al. 2014)
Land-swap scheme (King et al. 2014)	Absence of facilities: schools, health, sanitation (Airriess, Li, Leong, Chen & Keith, 2008)
Grants, free land and employment opportunities (Rashid, Hunt & Haider, 2007)	Community livelihood was not taken into consideration (Usamah & Hayness, 2012)
Community intervention and organization (Maya-Jariego & Holgado, 2015)	Implementation of public transport developed after relocation happened (Buchanan & Barnett, 2006)
Land tenure security (Usamah & Hayness, 2012)	

2.8. Issues leading to failure of relocation process

One of the issues from the literature was the breakdown of the community. Lack of community spirit, unawareness of the surroundings, self-centred community, civic consciousness and high level of property crime in the area were some of the issues identified in a relocation study from Faziawati et al. (2014), where the communities mentioned that they were more united living in the slums. Laugrand, Oosten, & Serkoak (2010) discovered an issue related to the breakdown of the community when the government took over the leadership, taking power from the local leaders and communities which resulted in breakdown of the communities, loss of empowerment and loss of the food sharing tradition.

Moreover, cultural and religious issues were found in many relocation studies. Faziawati et al. (2014), highlighted in his study the cultural differences that were not taken into consideration in the community that was going to be relocated, which led to a failure of adaptation to a multicultural and multi-religious environment. It was aggravated by an issue because the cultural and religious aspects were not taken into account leading to conduction of these activities inside of shop lots. Another issue causing the failure of relocation found by Laugrand et al. (2010) was the cultural tradition of the people who were perfectly adapted to inland life and not to coastal life, causing in this way distress.

Furthermore, Eranıl Demirli et al. (2015) in his study concluded that by not taking into account the residents home neighborhood environment and their communication zones, relocation faced negative consequences for the residents daily life followed by implications on their social life.

In addition, Airriess et al. (2008) argued how the absence of facilities like schools, health facilities which used to serve the poor people living in those areas led to a partial development of social capital in the new area where the community members were settled. Missing facilities concerning the community members main economic activities was a good reason that brought failure in the project of relocating people Laugrand et al. (2010).

Usamah & Haynes (2012) found that communities livelihood were not taken into consideration leaving in this way aside their life sustainability which did not include farming lands as previously communities were used to farming. In addition to this, Buchanan & Barnett (2006) found additional issues regarding the integration of the new relocation site with the surroundings and also the implementation of the public transport which was developed only in a later period, after the citizens had already moved to the new location. Final, Shreyas & Prathigna (2012) found that another issue that contributed to the failure of relocation was the lack of the political will and the bureaucracy, linked with government authorities responsible for the resettlement process. These bad experiences were synthesized in Table 2. alongside the best practices identified in section 2.7, to help the strategy to address the issues of relocation.

2.9. Elements and steps to build a strategy

After the concepts of this research had been reviewed through literature, the last step on review was on the elements and steps needed to develop a strategy. According to Oxford Dictionaires, strategy was defined as "*a plan of actions designed to achieve a long-term or an overall aim*". Strategies both national and regional, are emerging and seen as solutions to manage climate change and risk management situations (Esteves, 2014b). To achieve this plan of actions, Dix & Mathews (2002), elaborated a list of the elements needed for building a strategy. This list contained elements like analysis of the current situation, previous relocation experience factors, and governance analysis. The analysis of the current situation alongside the inclusion in the strategy of previous experiences, including also negative experiences to be avoided, was backed up also by English & Brusberg (2002) when they were preparing the handbook for resettlement. The inclusion of the governance in the strategy, needs to be incorporated in the elements as most of the work to be done in the strategy arises from government institutions but also NGOs which include themselves through civil society and participation in different programs related to slum settlements and communities living in slums.

Furthermore, after the elements needed for the strategy were defined, the next stage was to find the steps to be followed to develop the strategy. The World Bank (2010), reported that a strategy should go through the steps of creating an objective, then developing its goals and it should be finalized into concrete actions.

All the steps mentioned above including the elements that the strategy should contain will be presented in the strategy chapter 6.

3. METHODOLOGY AND STUDY AREA

3.1. Study area

Kampala is the capital city and the largest city of Uganda, located in the south of the country near the shores of Lake Victoria. The area of the city is 189 km2 divided into five boroughs which include: Kampala Central Division, Kawempe Division, Makindye Division, Nakawa Division and Lubaga Division. According to the Uganda Bureau of Statistics (2014), the population of Kampala in 2014 was 1,516,210 inhabitants.

The study area was Bwaise III parish, was located in the north of Kampala (Figure 3.) at a distance of 6 km, in the Kawempe Division. Among the neighbourhoods surrounding this area, Bwaise III, the lowest laying area is considered to be a wetland. The area was calculated to be around 18 ha, owned by the Kabaka (King) with leasing titles from the community who is occupying it. It was a mix of a residential area with economic activities for residents being in the low-income strata of the society. Bwaise III is a typical urban poor settlement with a high population growth rate in the whole district (Uganda Bureau of Statistics, 2014). The climate in the study area is a tropical one with two rainy seasons respectively one in March to May and one in September to November. With the built up area being more than 70% and inadequate drainage system, floods are a common occurring phenomenon during the rainy seasons.

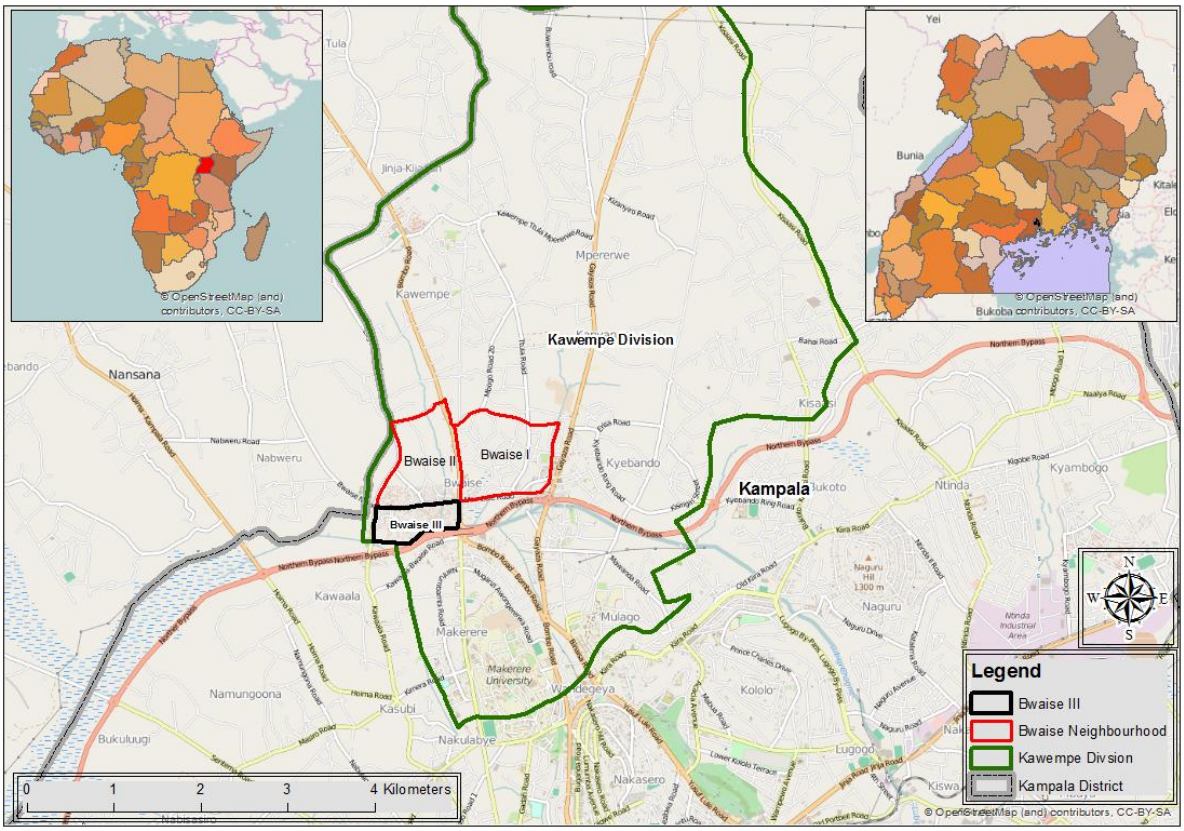


Figure 3. Bwaise III neighborhood location (Own creation, Base map: OpenStreetMap)

Moreover, according to the settlement profiles that was collected during the fieldwork, the exact number of the inhabitants remains still inaccurate. According to Actogether (2014), the entire population living in Bwaise III is estimated around 35 000 people. On the other hand, the structures were found to be 1600, divided into 1000 residential, 400 mixed use, 150 business use and 50 ranked as other (Actogether, 2014).

3.2. Research design

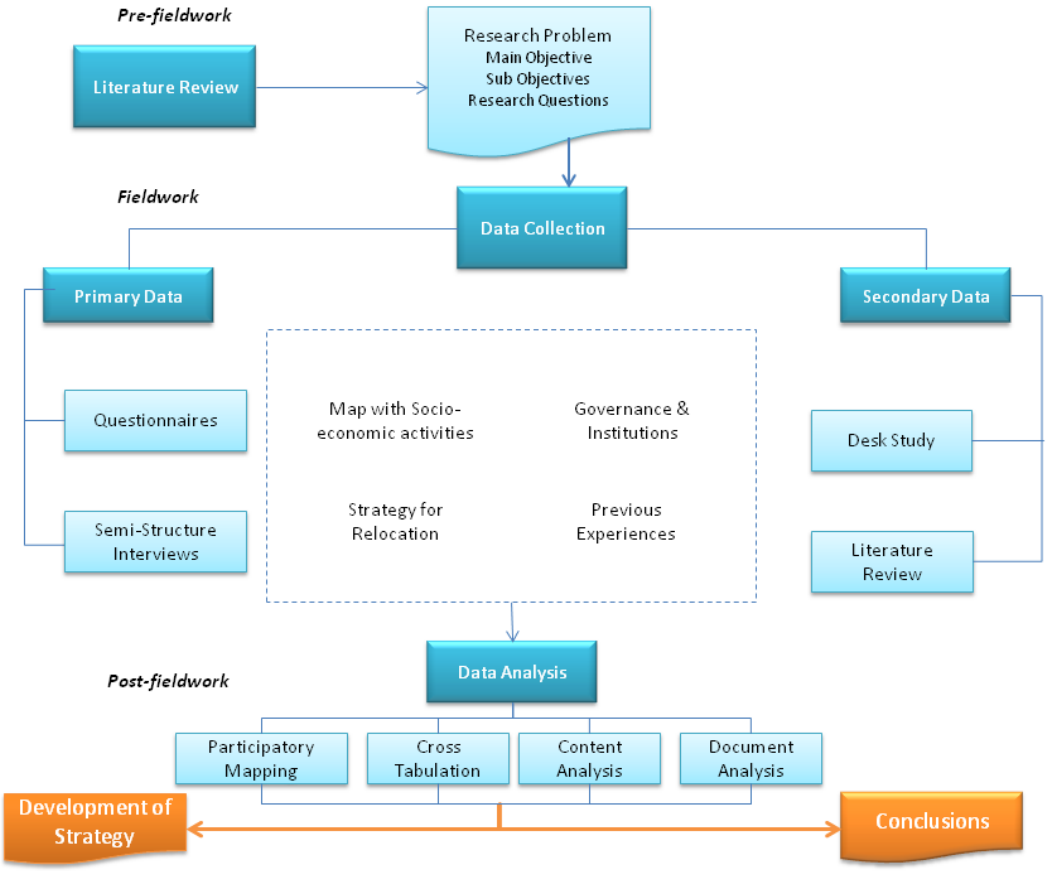


Figure 4. Research design

3.3. Research methodology

The method of this study was designed as a mixed approach study combining questionnaires and semi-structured interviews (Figure 4.). Questionnaires were used to collect data on the social characteristics and patterns of people's socio-economic activities alongside the semi-structured interviews with the responsible governance actors. Moreover, a literature review on previous relocation practices and experiences from relocation and the final part of the methodology, the preparation of the strategy followed by an evaluation from experts involved in previous relocation experiences. The research was conducted from September 2015 to February 2016 with a fieldwork period of 21 Days in Kampala, Uganda in the neighborhood of Bwaise, exactly the III parish.

First, the relocation issue was examined from the perspective of community characteristics, socio- economic patterns and their social-networks. In this case, the population of the neighborhood of Bwaise III was subject to a questionnaire with a random sample that is explained in section 3.4 and also participatory mapping which included mapping of their main functions of their daily life activities in the area that they live. Based on a

satellite image and available dataset, the households were selected to conduct the questionnaires, and if nobody was present during that time, the questionnaire was processed the next day. If not, the next day then the next household was selected. The questionnaire developed for this study was included in the (Appendix 1.), giving an idea of how the questionnaire looked like and what was information was gathered through it.

Second, this part of the methodology included the analysis of the governance structures involved in the process of relocation. The approach that followed in this part of the methodology was based on interviews with governance institutions in Uganda including their identification, so who was involved in the process, how was their collaboration considering the process of relocation and also an important part, the policy was analyzed after gathering the exact information from interviews. The last was analyzed after gathering information on what were the existing policies that were being used when relocating people. All the preliminary analysis was done through content analysis examining all the answers from the interviews with the governance. In the end, the governance was assessed according to a model proposed in the literature review.

Third, this part in the methodology deals with understanding and getting a clear picture of the factors that contributed to successful relocation projects and the problems that were generated by previous relocation projects from which were identified by a broad literature review. The contribution to the development of the relocation strategy was very constructive as there can be problems which can come from another context, or problems that happened from other case studies that can help to avoid them in the development of the strategy.

Fourth, the final step was the development of the strategy for relocation. The key elements of the strategy were defined from analysis of documents and interviews, but also elements defined from previous parts of the methodology described above. This was followed by the preparation of a relocation strategy applicable to the context of Bwaise. After this, concrete actions grouped into goals were proposed for Bwaise III concluding with discussion, conclusions, and future recommendations.

3.4. Institutions interviewed in this study

To analyze the institutions involved in the relocation process, interviews were conducted with responsible government authorities. Among this institutions were: the municipality of the affected flood prone area, which was part of this study, KCCA (Kampala Capital City Authority) and also other actors from the government including MLHUD (Ministry of Land, Housing, and Urban Development) and also the OPM (Office of the Prime Minister). Respectively five interviews with key informants from KCCA, one from MLHUD and one from OPM. Furthermore, other institutions involved (see also section 5.2) were classified into NGOs (Nongovernmental organizations), which included the Church of Uganda as one of the big and private land owners, ACTogether which has been involved in slum upgrade projects and in other project specifically in Bwaise and also a small NGO created in Bwaise by community members called AFFCAD, which had different projects and connections in Bwaise. All these institutions were found to be the most relevant and closely related to the relocation process. The selection of the institutions was made in the pre-fieldwork phase concluding with an entire 11 interviews after the pre-identification phase. One of the institutions which in the pre-identification phase was found crucial, was left out of the study. Buganda Kingdom Land Board was left out because it was impossible to reach them either via the internet either in during the fieldwork. For the interview guides used to interview the key informants refer to Appendix 2.

3.5. Sampling strategy

This research proposed a random sampling strategy in the case study area since each selected element should have an equal and independent chance of being in the sample. In this case, Kumar (2010) defines equal in terms of probability of selection of each house to be the same and independent as one choice of a house does not depend on the selection of another house. The sample was made in the phase of pre- fieldwork to have access to the database and the available dataset from Kampala. With the help of ArcGIS, the creation of a rectangular fishnet, as a grid with dimensions (25m by 50m) was created to achieve more space concerning buildings in the area and the objects like roads and drains were compromising the sampling points. After the creation of the fishnet, sample points were generated automatically. In case the sampling point fell outside of a building, the nearest building was selected visually taking into consideration the shortest distance from the point to the nearest building. In total, there were 268 sampling points (Figure 5.), and the same number of questionnaire were administered.

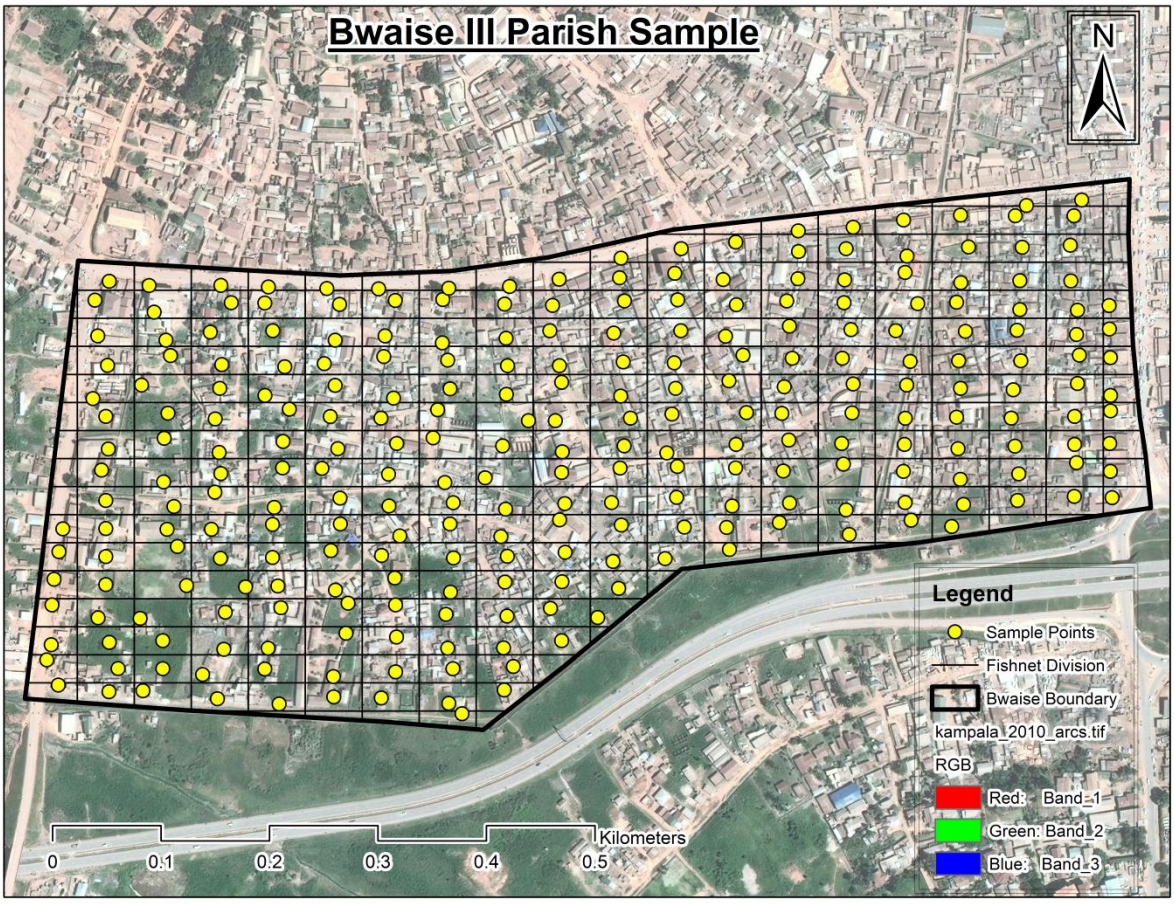


Figure 5. Sample of the case study area of Bwaise III (Own creation)

3.6. Data gathering and analysis

The methods that were used to gather data were questionnaires conducted in the study area and semi-structured interviews applied to the governance institutions, in this case government, NGOs and private partners. Furthermore, data analysis included three types of analysis for gathered data such as participatory mapping, cross tabulations, and content analysis.

According to the number of the structures located in Bwaise III, the sampling strategy, after it was defined covered 27% of the whole residential structures in the area. Questionnaires were constructed including open

answers and closed answer questions to give us an understanding of the community socio-economic characteristics, social networks, accessibility to basic services, willingness to relocate, needs and happiness in the current location. Furthermore, the questionnaire asked for modes of travel to their main activities like job, education facilities, daily food activities, shopping activities and also cultural activities like: community gatherings and religious meetings. Other points in the questionnaire were: the expectation from the government or responsible authorities that were in charge of the process; the importance of the basic services like sanitation, land rights, education and other basic facilities in the possible relocation site and also some questions on their willingness to contribute anything in case of relocation. The open questions were analyzed to understand the qualitative information for this research. Each open question was analyzed with content analysis, gathering all the information mentioned by every single community member. While on the other hand, the closed questions helped us in analyzing the quantitative part of this mixed approach research. As for clarifying the questionnaire was posed to the person who was found to be home, answering for the questionnaire with the household characteristics. The data collected through questionnaires was analyzed through participatory mapping and cross tabulations to provide insights.

Participatory mapping was used to analyze the concentration of community activities including job location, education location divided into two different fields, one the primary school and the second the secondary school location. Furthermore, this mapping method was used to identify the location of direct relatives, daily food shopping activities, clothes and shopping activities and finally to identify community gathering areas and religious buildings location of where the inhabitants of the community were going. In addition to this the cross tabulation analysis, was used to analyze questions on socio-economic status like: gender, age, family composition, reason of moving in the case study area, working in the formal or informal sector, income level, status of the house and land, data on land tenure status if it was formal or informal and also education level. Cross tabulation was necessary in analyzing the relation between willingness to relocate or willingness to spend resources from their own to relocate and other factors such as education, frequency of floods and income. Moreover, with the cross tabulation the level of happiness of living in Bwaise was analyzed and also the willingness to relocate preceded by the willingness to spend money to relocate. Finally, this method of analysis analyzed the importance of the basic services in the possible new location, that would result in impacts if not fulfilled. To conclude, through content analysis, answers from the perception of communities on positive and negative impacts of relocation; also the source of income or type of job activity were produced. The last one was then further reclassified into classes as cause of a broader and a wide diversity of job types.

Semi-structured interviews were used to interview governance actors like: government authorities, ministries, NGOs and private partners. This approach was followed to give the answers for identifying the institutions in charge of the relocation process, how was the legal collaboration framework and if there was any existing policy on relocation. The semi-structured interviews were organized into different parts including planning studies and approved plans asking if relocation was considered in the new planning studies or if any plot was saved for the relocation purpose. Semi-structured interviews held questions regarding infrastructure, provision of it in the possibly identified relocation site and also the current situation if any plot or any area was identified for relocation. Furthermore, the last part of the interviews with government authorities, like Ministry of Lands, Housing and Urban Development and also Kampala Capital City Authority included question un support and willingness of government for offering different types of infrastructure and loans. Besides, for analyzing the semi-structured interviews, content analysis was used, adding in this way the qualitative analysis part of this research. Semi-structured interviews were transcribed and inputted in a Word document and analyzed for their content. After that, the content analysis was used to find the most mentioned issues from the respondent, in order not to lose all this important qualitative information the whole issues were coded and the remaining information proceeded as a whole document. Moreover, content analysis was also used to analyze the gathered documents from government institutions gathered during fieldwork interviews.

On the other hand, semi-structured interviews with NGOs were different, providing in this answers for an assistance of NGOs to the community and involvement of the NGO in any relocation process. Awareness of any proposed relocation, sensitive issues that make people afraid to move from the existing place to a new place and another question on relocation as a good, bad or final solution for the households always threatened by floods were part of the interview.

To conclude, interviews with a private partner, in this case, the Church of Uganda were held giving answers on awareness of the situation, answers on the possible solution of the flooding problem followed by answers for possible cooperation with every involved actor in the process of a possible relocation. This interview included questions about the possibility of giving land from the church to use as a relocation site and the regulations on how this cooperation and process could be realized concluding with a final view on the final solutions for these households.

Document sources helped to define the questions for the questionnaire, following with the ideas of the main concepts touched by this research and especially of the literature review. Moreover, a help was given in identifying specifically the issues that led to the failure of relocations in other contexts and mostly on the benefits and successfulness of the relocation projects happening again in other parts of the world.

3.7. Fieldwork

3.7.1. Pre-fieldwork

The activities of this phase included:
- Intensive literature review to strengthen the concepts of the research. During this phase the identification of available data regarding the study area took place.
- Material and preparation for fieldwork to arrange all the needed materials to administer the process of fieldwork like questionnaires, interviews, printed maps for defining activities of communities.
- Study area observation to obtain data about real conditions of the study area. Based on the phases described above the sampling method was designed and also the household questionnaire followed by interviews with governance institutions and potential co-operators in the relocation process.

3.7.2. During fieldwork

The fieldwork phase was organized in different parts as defined below:
- Questionnaire with households selected after sampling.
After the sample had been designed, research assistants were provided from Makerere University. The first day included training of the research assistants, including explanation of what the research was about and also detailed meaning and explanation of each question. Then through an intermediate the translation in local language of the terms for the community members was made possible. Another day was necessary testing the questionnaire, and then the procedure started. The period for administering the questionnaire lasted for ten days together with the research assistants including visits in every selected household. During this period, some difficulties were encountered in sensitive issues like relocation with people who refused to give answers to some questions.
- Semi-structured interviews with Institutions & Governance authorities.
The phase of the interviews with government authorities, institutions and NGOs were planned and administered during the fieldwork period from 20 September to 10 October 2015. The arrangements for meetings was made through appointments. Although there were more planned interviews, due to difficulties of availability from the part of Buganda Kingdom, the interview was not done.

3.7.3. Post-fieldwork

The phase of post-fieldwork included the data processing and input, analysis and the preparation of all collected information from the fieldwork alongside with the transcription and analysis of the interviews and also the questionnaires. After all the information had been processed, the writing of the thesis followed up.

3.8. Data availability

3.8.1. Primary data

Primary data collection was conducted to get in-depth characteristics of households and communities from the questionnaires. This data included the socio-economic characteristics, flood experience, location data and also social-network activities of the communities related to the relocation process. The process of primary data collection included the information given through interviews from the semi-structured interviews with the institutions in charge.

As it was introduced in the above paragraph, the questionnaires helped in gathering primary data related to gender of the household members, their age, family composition, years living in Bwaise III, reason of moving, number of people working in formal and informal sector and their source of income alongside with their income level. Furthermore, with its help, we gathered data on house status, land status and land tenure concluding at the higher education level of the household. Moreover, primary data related to the accessibility towards health facilities, educational facilities, infrastructure, community centres and religious buildings were collected with the questionnaire. All of the data above were missing and due to the fieldwork plan and the coding method it was possible to link the point data gained from the sample with the responses from the coded questionnaires providing in this way a strong primary data collection. This data could be used in the future for other studies related to the same study area.

With the interviews, the data gathered were qualitative data which were recorded by a voice recorder in English language available for use only for this study purpose. The anonymity of the respondent was the basis on collecting relevant primary information regarding governance structures involved, their role and also information on their management of issues in this field.

3.8.2. Primary data

The secondary data collection was held by collecting data and info from local institutions and government offices, Ministry of Lands, Housing and Urban Development, Kampala Capital City Authority and land information from the biggest land owners like the Church of Uganda.

Secondary data collection included documents gathered through the institutions during the visit for the interview purpose but also, some of them were found in online sources, respectively on the website of each government authority, NGO and private partners.

The secondary data that was available before the fieldwork included a satellite image which helped us with the sampling strategy. Moreover, available secondary data included: buildings footprint data to be used in ArcGIS, data about drainage channels, land use data, wetlands data, topographic maps.

4. COMMUNITY AND LIVELIHOOD CHARACTERISTICS

This chapter presents the first analysis results of the research giving an answer to sub objective 1. It specifically analyzes the socio-economic characteristics of the community and describes their social networks. The socio-economic data consists of data regarding the employment status, income level, education level, and family composition. Community networks include data regarding their main activities concentration like job location, children education facilities divided into two groups of primary school and secondary school, the location of the relatives, shopping activities and religious buildings.

As it was introduced in the literature review and previous literature, the key to a relocation strategy is the identification of the affected community, their characteristics and their profiling (Chen, 2009); (Perry & Lindell, 1997); (Taylor, 2013); (Xu et al., 2015). As derived from the literature review and the before mentioned authors, the following framework (Figure 6.) was constructed to give insight and to understand the important aspects of the community and their livelihoods which were part of this analysis.

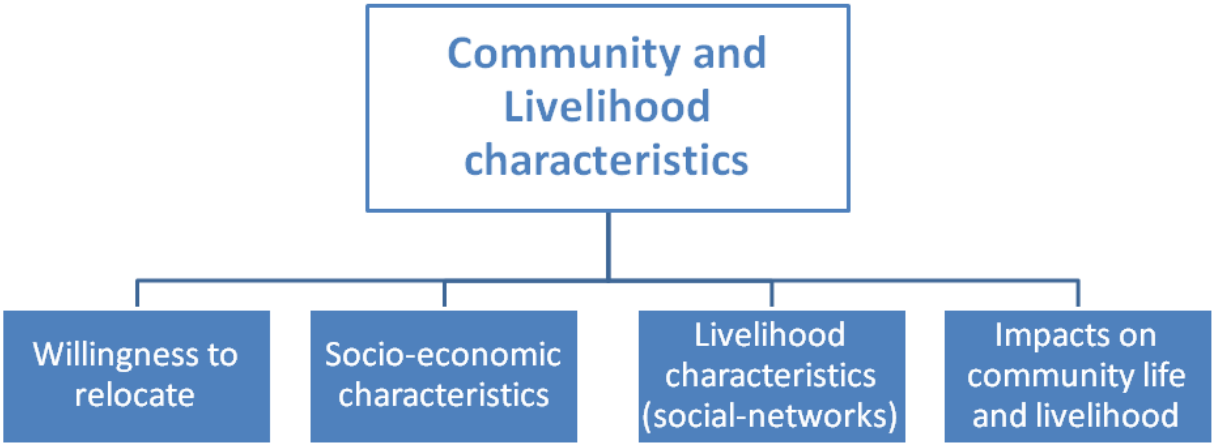


Figure 6. Framework of analysis of the community and livelihood characteristics

The analysis was completed to provide insights about data on social characteristics of the community, data on income and livelihood, data on willingness to relocate, data on impacts that could be caused concluding with socio-economic and social-network patterns. According to Xu et al. (2015), the above fields of analysis, provide insights as a key point in finding the structure and discovering community functions and socio-economic characteristics on different strategies carried out. More explanation about the analysis and the results of the data are presented in the following sections of this thesis.

4.1. Willingness of the community to relocate

During the literature review, Bukvic (2013) found that relocation was being considered through communities as a voluntary movement of the whole or part of a community including their personal assets. While, Viratkapan & Perera (2006), mentioned that success of a relocation process in Bangkok was the participation of community members, leading the way of analyzing the willingness of the community members to relocate. The results of the analysis (Figure 7.) showed that community members not only were willing to relocate but also they were willing to spend money from their resources for relocating. It was found that 72.39% of the sample were willing to relocate, and only 26.49% were not willing to relocate. Although the majority of the sample implemented different mitigation measures, they were

looking at relocation as part of a next mitigation measure that they would do. The last category of people who were willing to spend money and considering relocation as a mitigation measure dominated with 61.94% of those who were willing and 36.57% of those who were refusing to spend money to relocate
The analysis showed that the majority of people were willing to relocate in case a relocation process was going to be proposed by the government as a solution to the floods in Bwaise III. Since willingness of relocation was found to be a very crucial aspect of community participation in a relocation process, the analysis in the further sections was focused on exploring more insights, linking community characteristics and their willingness to relocate. Moreover, the flood impacts were linked to the willingness of the people to relocate to provide the analysis with results over the impact of the floods and the willingness of community members.

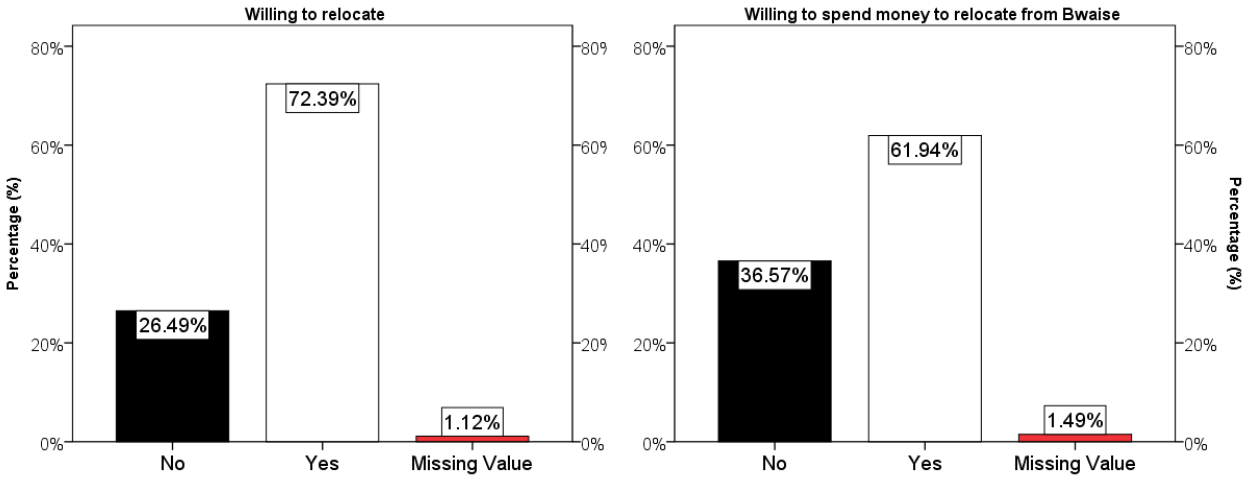


Figure 7. Willingness of community members to relocate, willingness to spend resources to relocate (right)

4.2. Socio-economic characteristics of the sample

This part of the analysis dealt with the social data including gender difference between household respondents in the questionnaire, family composition of every household, education level and income level of every household. From the analysis, we saw that among 268 questionnaires that were carried out, the households were headed by females with 73.51% over 26.12% that was males.

Furthermore, the analysis showed that the family composition of the communities in the study area was altering. It differentiated from 1 member per household up to 12 members per household as presented in (Figure 8.). Most dominant was the five-member household with 19% or 51 cases from 268, followed by the four-member and three-member households with respectively 14.2% or 38 cases from 268 each. Although we had households with 12 members, it was seen only in 4 cases which covered 1.5% of the whole study area. Even if the families with one household member were not dominant, they covered almost 7.1% with 19 from 268 cases. Obviously, it seems that the results of the analysis of the family composition inform the strategy about the structures that need to be built in the new relocation zone. In this way, the strategy needs to address house structures and planning of the new relocation site according to the family composition results of this analysis.

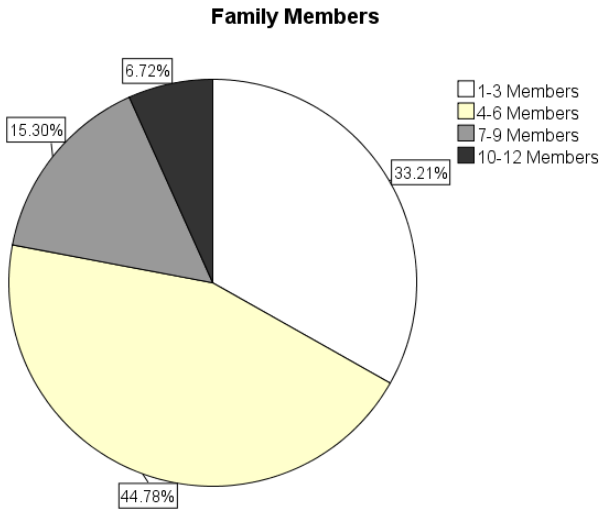


Figure 8. Family structure composition

Besides, the education level was analyzed (Figure 9.), showing that the major education level of the community was high school, dominating with 159 cases over 268. The result was followed by the primary school level of education in the second place with 21.3%. University education level was found in 42 cases, translated into a percentage of 15.7%. Although the fact that previous literature talks about slums dwellers that are illiterate and uneducated, in Bwaise III people who did not follow any education were only covering 2.6% of the 268 questionnaires. After the education level of the community had been identified, cross tabulations

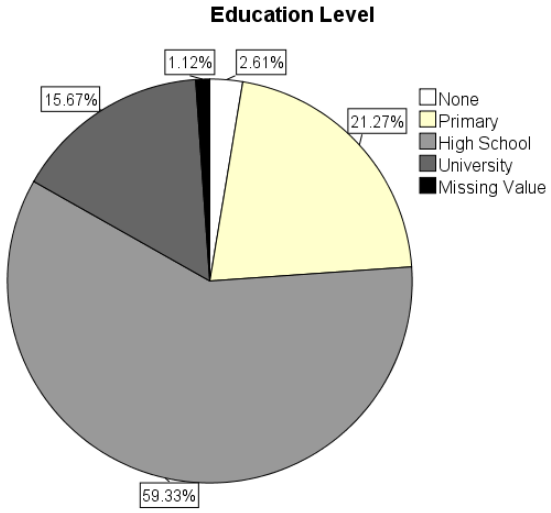


Figure 9. Educational level of community in the study area

between their willingness to relocate and education gave some insights informing the strategy that the difference in the education level was not a component causing different perception about relocation. With this results, it was concluded that the willingness to relocate was not relying on the education level (Table 2.).

Table 3. Cross tabulation proving independence of willingness to relocate from education level

		Education level				
		None	Primary	High School	University	Total
Willing to relocate	No	14.3%	19.3%	27.7%	35.7%	26.5%
	Yes	85.7%	80.7%	71.1%	64.3%	72.4%
Total		7	57	159	42	268

The income level was analyzed (Figure 10.) and divided into six ranges according to the lowest income level, available in Uganda. The analysis showed that 26.49% of the community earns up to 50.000 shillings followed by the income ranging between 75.000 to 100.000 shillings, with 25% of the community. Furthermore, 15.30% of the population received over 175.000 shillings a month. From this analysis, it was clearly visible that the community did not earn a high income.

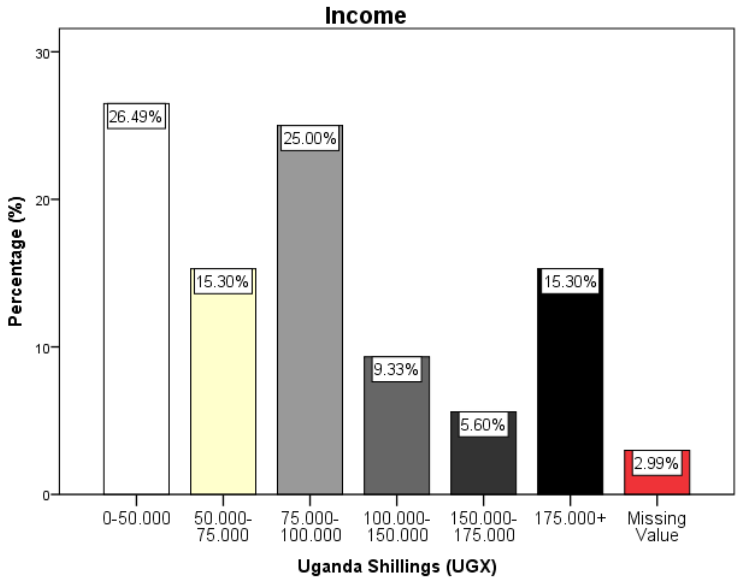


Figure 10. Income level of the community

A relationship was found through a cross tabulation between the willingness of the people to relocate and their income level (Table 3.) but also between people who were willing to contribute some money from their budget and their income (Table 4.).

Table 4. Cross tabulation showing the willingness to relocate based on the income level

		Uganda Shillings						
		0-50.000	50.000-75.000	75.000-100.000	100.000-150.000	150.000-175.000	175.000+	Total
Willing to relocate	No	28.2%	26.8%	31.3%	20.0%	33.3%	22.0%	26.5%
	Yes	71.8%	70.7%	67.2%	80.0%	66.7%	78.0%	72.4%
Total		71	41	67	25	15	41	268

The results gave some interesting insights on how the strategy needs to address the income level of the community for the relocation process. We can conclude stating the high willingness compared to community

income. Furthermore, high-income people are willing to relocate as they have some more resources and they search for a better life elsewhere, as it was observed during the administration of the questionnaire. Although people with low income were supposed not to have resources to spend for relocating, they were willing to spend some money to move from Bwaise. This result gave information on addressing the willingness of community members, despite the fact of the income strata. Community members were willing to contribute to a better life, in order not to have any more floods.

Table 5. Cross tabulation showing relation between willingness to spend money to relocate and income levels

		Uganda Shillings						Total
		0-50.000	50.000-75.000	75.000-100.000	100.000-150.000	150.000-175.000	175.000+	
Willing to spend money to relocate from Bwaise	No	31.0%	34.1%	46.3%	28.0%	26.7%	41.5%	36.6%
	Yes	67.6%	63.4%	52.2%	72.0%	73.3%	58.5%	61.9%
Total		71	41	67	25	15	41	268

Another characteristic was the reason community members chose to live in Bwaise (Figure 11.). The main reason which was found through the analysis was because of their family and relatives who live nearby. It scored 57.4% of the whole questionnaires response translated into numbers 154 over 268. Furthermore, communities ranked Job Opportunity as the second reason why they moved in Bwaise, as according to them there are more job opportunities here than where they were living before. Only 10.4% ranked accessibility as a reason that attracted them to move to Bwaise. There were dispersed cases of people who were displaced with 1.9% and people who had other reasons behind their choice to move to Bwaise. The insights gathered from this analysis, provide the answer for the strategy and the selection of the new place as the reasons why people moved are critical for the community members.

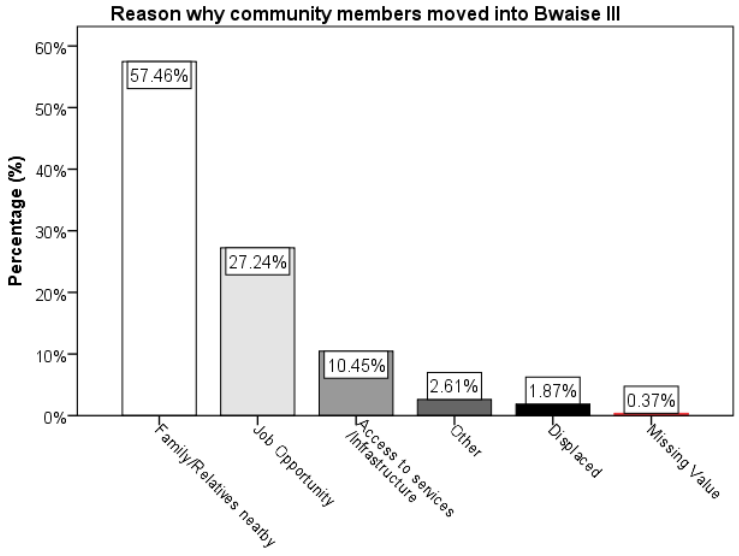


Figure 11. Reasons why community members moved into Bwaise III

From the results (Figure 11.), it becomes clear that the strategy needs to address the location of the new place and take into consideration the distance (in terms of time or length) between the new location and the community family relatives. Furthermore, the strategy should also address the creation of job opportunities in the new place to be relocated as almost 30% of the community moved to Bwaise from different places as a cause of a job opportunity. Last, the access to infrastructure should be another factor contributing to the selection of the new site and also to the strategy.

Important characteristic besides the social, were those of job type including the distribution, formality and informality of jobs concluding in the end with job types mentioned by the communities as that question in the questionnaire was an open one, but later coded and reclassified into five major classes.

The job types were analyzed separately, resulting in more or less 268 different results as people used to write the same job type differently. From the five major classes as it was explained above, enterprises were divided into small and medium, jobs divided into low income and medium income and not working for people who replied that they were not working, dependents or those that were housewives (Figure 12.).

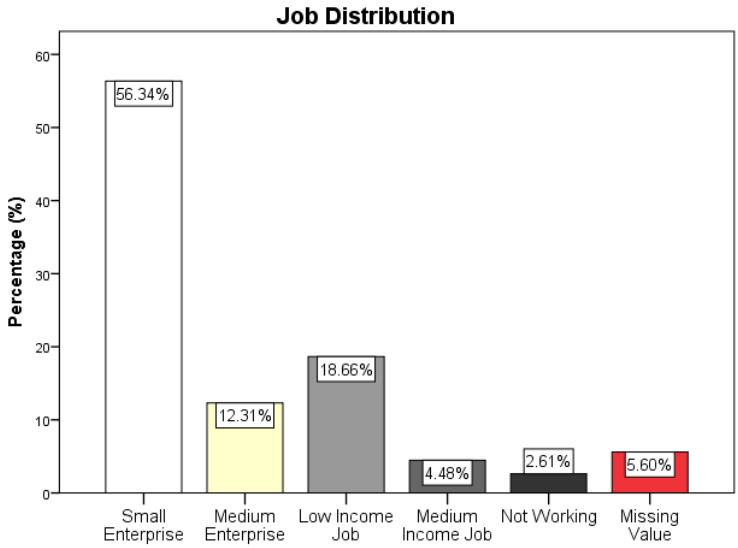


Figure 12. Job category distribution of community members in Bwaise III

From the analysis, we saw that 56.34% of the community that has been studied were in the category of the small enterprise. This category included job types like businessmen, small business, hawker, market, shoe business, small trader and those who were working in the informal sector. Second ranked, with 18.66% was the low job income, including job types as: mechanic, bus driver, builder, babysitting, transport and shop attendants. Third ranked category was medium enterprises covering 12.31% of the whole case study area with job types identified to be: hair salon, poultry keeping, retail stores, personal business, small hotel and broker. Last but not the least, the medium income job covered only 4.48% of the total community, verifying in this way the reason for choosing the income levels in the beginning of this research. This category included those people who were working in NGO, Kampala Capital City Authority, teachers, doctors and engineers. From the analysis, it was found that 2.61% of the community members who were interviewed with the questionnaire were not working.

Another important finding was the relation between job type and the income level. People who were working in small enterprises had an income level from 0-50.000 shillings which covered 30.5% of the total people working in this class. Those working in a medium enterprise had an income level 75.000-100.000 shillings covering 42.4% of the people. Furthermore, people having a low-income job made up 38% of

them receiving an income between 0-75.000 shillings with those in a medium job income which were receiving 75.000-100.000 and where 58.3% of the total people working in a medium job income category.

As explained above the job types were first identified according to the respondent's answers to the questionnaire. Furthermore, we classified them into five classes as explained in the previous paragraph but we preserved the various job types that were among the answers. The most dominant were business followed by small trade, driver, marked, trade, seller, construction and hotel, giving in this way an information of the job opportunities that should be taken into consideration when the selection of the new place is going to be made. If these opportunities in the new place do not exist then, the strategy should address their creation.

After analyzing the job type and its distribution, we analyzed the formality and the informality of the job. First of all, we started with the formal job distribution or to call it jobs that are in the formal sector. The results of the analysis on working in the formal sector (Figure 13.) showed that 83.21% of the households were having none of their family members working in the formal sector. Those households who had one and two people working in the formal sector resulted in being 11.57% and 4.48% respectively. It was found to be very rare for a household to have 3 of the members working in the formal sector with 0.37%.

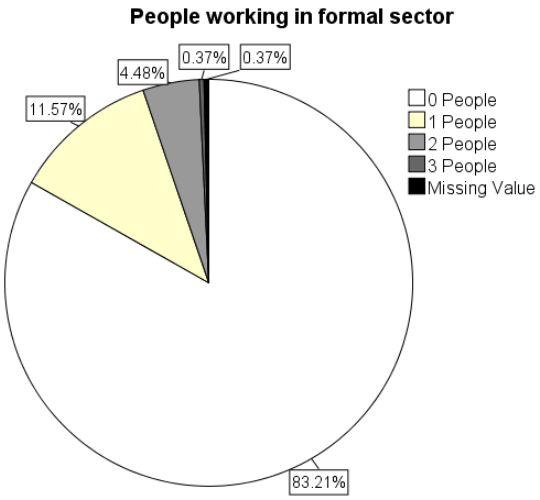


Figure 13. Community members per household working in the formal sector

In the informal sector (Figure 14.), from the responses, it was found that there was one household with seven people per household working in the informal sector. Households with one person working in the informal sector were the most common with 56.7% of the total community and after them those with two people per household working in the informal sector with 21.3% of the community members.

After the situation of the job formality was analyzed, we can conclude that the strategy should address and preserve the same job opportunities both in the formal and informal sector. A focus more on this strategy should be in the formal sector and specifically on the creation of new job opportunities to the new place to attract the community to relocate.

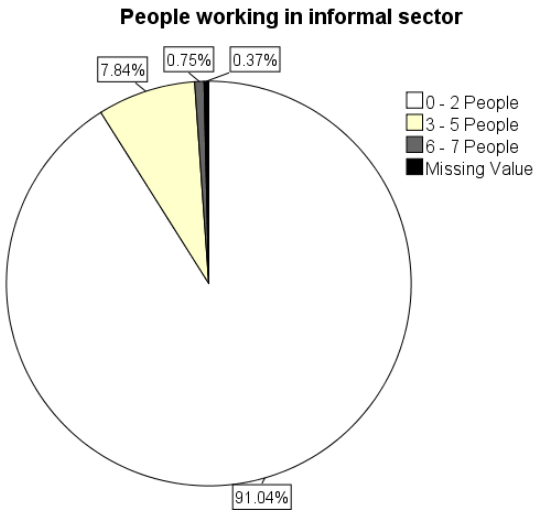


Figure 14. Community members per household working in the informal sector

House status, the land status where the informal settlement has been constructed, and the tenure of land was the focus of the next analysis carried out. The analysis undertaken was made to inform the strategy on the status of the house, land and land tenure of the current situation leading to the result of those community members to be compensated. The strategy should have the compensation according to the characteristics of the current situation divided into those who will be compensated with a house and those with a piece of land. From the first analysis of the house status (Figure 15.), the outcomes showed a result of 44.4% of community members who own the house where they live. Furthermore, the analysis showed that 49.6% of the community rents their accommodation. Last, the borrowers or caretakers make the 5.6% percent of the population making it in this way complete the house status of the case study area of Bwaise.

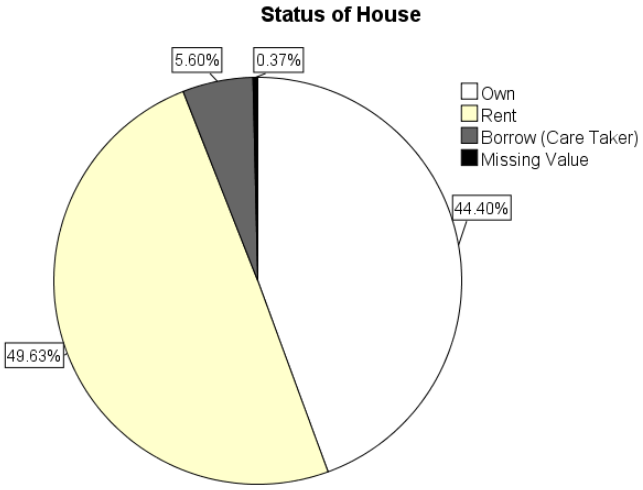


Figure 15. House status of community members living in Bwaise III

From the analysis (Figure 16. (right)) it was seen that land in Bwaise III is owned by 52.2% of the community. Moreover, rent comes second from the analysis enumerating only 30.2% of the 268 questionnaires with the caretaker coming last with only 2.6% of the community members which were taking care of somebody else's land. As for the tenure status (Figure 16. (left)), the result showed that 81.7% is considered as formal and 6.7% is considered as informal. The formal land was considered so with the Kabaka's land certificate provided from the Buganda Kingdom.

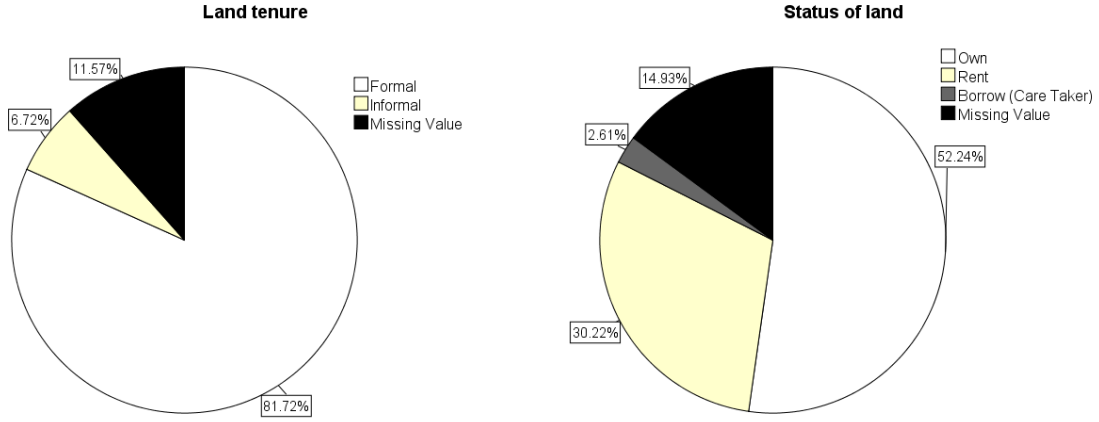


Figure 16. Land status (left), tenure status of communities living in Bwaise III

A cross tabulation operation was performed to see the relationship between land status: owned, rented or borrowed and the tenure status: formal or informal. The results showed that those community members who owned the land have responded to have a formal type of ownership are 92.1% and those who have informal ownership only 6.4%. As for those who responded to have a formal land tenure and they were renting the land, they formed 88.9% of the respondents while 8.6% resulted in having an informal type of land renting. Last, those who were borrowing or taking care of somebody's land, resulted in being formal with 85.7% and the other part did not want to reply to that answer.
Concluding from this analysis, the strategy gathered more insights on land formality and should consider compensation of those who had formal land ownership

4.3. Livelihood characteristics, social network and activity space

In the following paragraph, the social networks and community activities were analyzed and explained in terms of their usage, meaning frequency and in terms of distance to Bwaise III. The results of the analysis were separated into different sections as explained and listed below: Community social networks and activities, giving in this way answer to the sub-objective 1 and gathering results of this analysis were very helpful in addressing the issues regarding the community job activity concentration, primary schools, secondary schools, family relatives, daily food, shopping, religious buildings which have to be considered very carefully in the strategy.

4.3.1. Job location concentration

This analysis included all locations that were mentioned in the survey during the fieldwork. It was carried out in two ways; in terms of distance from the current settlement to analyze how far were the community travelling to reach their job location and second in terms of frequency to see which was the place where the community had more job opportunities (Figure 17.).

In terms of distance, the results showed a specific case of travelling 28.8 km away from Bwaise to their job in Mukono, presented in the upper left part of the map (Figure 17.). Another specific case was found to be located 12.2 km followed by 34 community members that were working in a distance between 2.61 to 8.3 km from Bwaise. 9 cases were travelling to a maximum distance of 2.61 km to reach their job location and 168 cases were working in Bwaise. In this way the mean value of travel was found to be 0.88 km, giving a precaution that job opportunities should be provided near the new selected site of relocation and addressed by the strategy. The concentration of jobs reports to the strategy the pattern of community members job location including distance to all the job locations and the mean distance of travel.

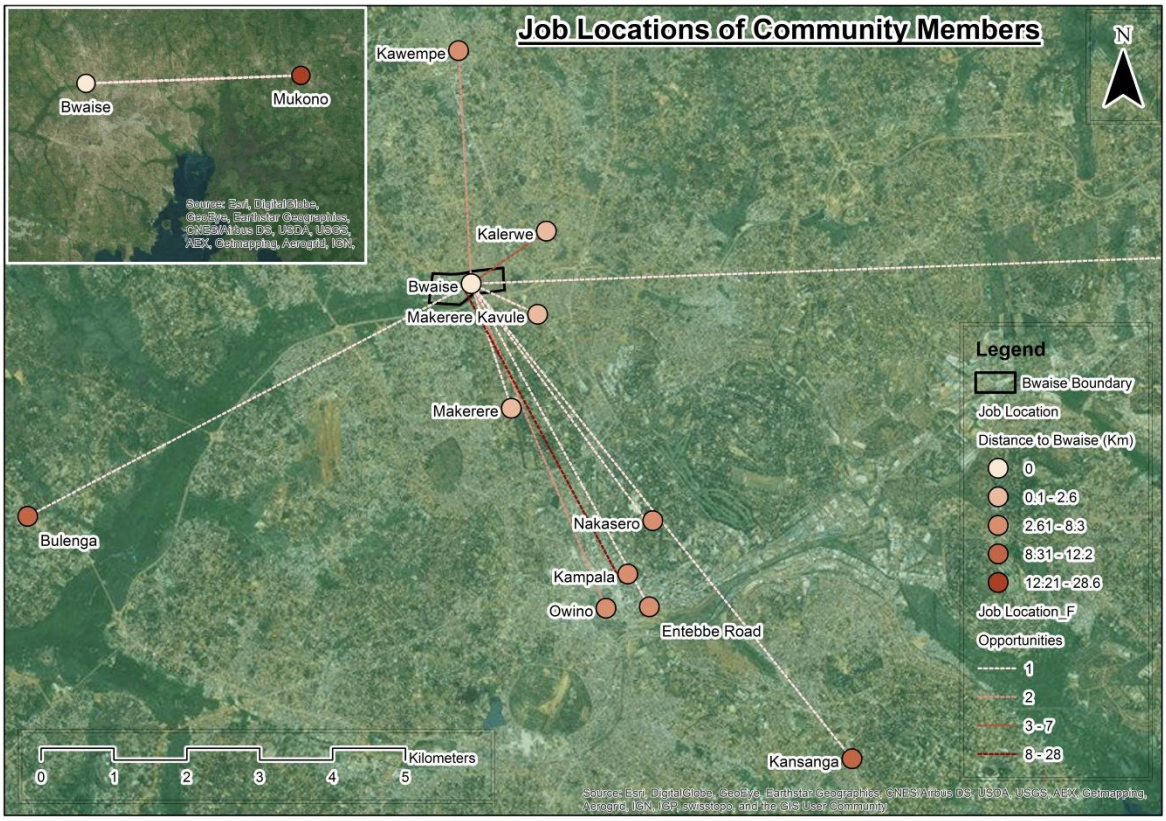


Figure 17. Job locations of community members (Own creation, Base map: Esri)

As for the frequency and more opportunities, from the results of the analysis it was found that most of the people have opportunities near the place that they reside, Bwaise. From the analysis, 30 respondents answered that they did not work and this data was excluded from the analysis alongside with those who were mobile workers, those who refused to answer and those who were working very far from the extent of Kampala. 62.7% of the community members travel to their job location by foot which translated into opportunities, gave a picture of the job pattern to be concentrated nearby Bwaise III. The information gathered from this analysis should also address that people do use other modes of travel, but the percentage of them is very low, 5% with a motorbike and 16% with taxi/minibus.

4.3.2. Primary school location concentration

As important as the job location, people were asked to answer where do their children go to primary school (Figure 18.). In terms of distance, they were travelling to reach the school facilities in Mukono. As for the location of the education facilities, Bwaise was found to be accommodating the most children of the community members alongside with Kazo in the second place.

Also in this analysis, 83 respondents answered that their children did not go to school. Those members of the community who did not answer alongside with those whose children were going to school outside of Kampala boundaries were not considered in the results of the maps. The modes of travel used by the community members in this analysis were found to be 55.1% on foot, 1.1% by bicycle, 2.6% by motorbike and 10.1% by taxi/minibus, informing in this way the strategy for the situation of the primary schools concentration nearby Bwaise III.

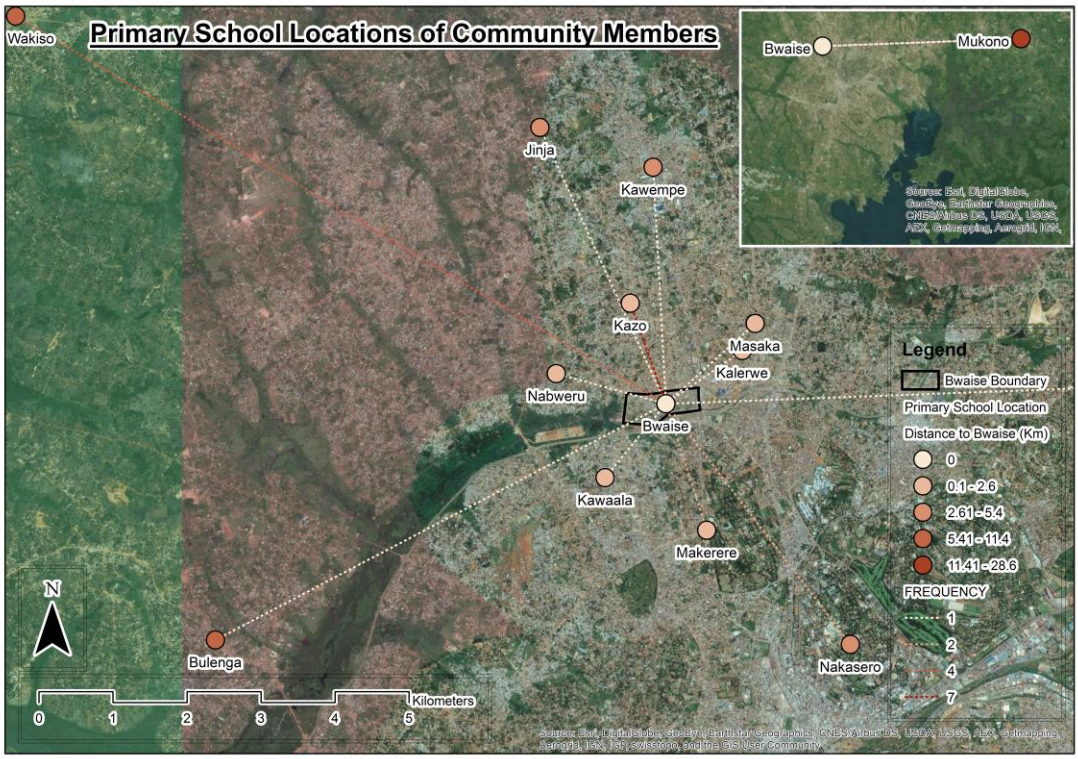


Figure 18. Primary school locations of community members (Own creation, Base map: Esri)

4.3.3. Secondary school location concentration

The analysis of the secondary school locations, in terms of distance from Bwaise III and in terms of frequent education opportunities produced the same results as the analysis of the primary school locations

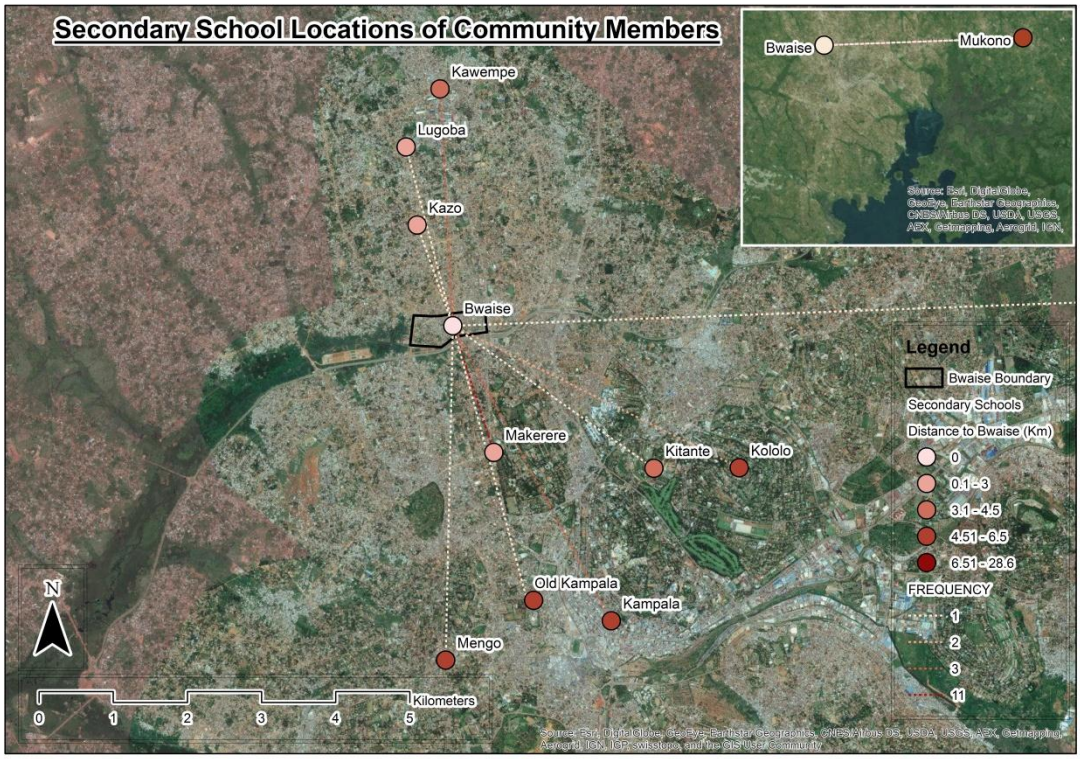


Figure 19. Secondary school location of community members (Own creation, Base map: Esri)

(Figure 19.). In this case, it was showed that education level is very low in the area. From 268 in total, 176 answered that they did not have children going in secondary school or, could not afford the tuition fees and

also 28 of them were going to secondary schools located outside Kampala district. From those communities who had their children attending secondary schools the mode of travel was analyzed by a cross tabulation with 25.7% going by foot, 2.6% by motorbike and 8.6% by taxi/minibus. The percentages were very low as 176 families did not have the opportunity to send their children to school.

4.3.4. Direct family relatives location concentration

Although the responses from the questionnaire showed that the reason the community members moved to Bwaise III was because of their relatives being nearby, the results of the analysis showed that some of their direct relatives were still living far from Bwaise (Figure 20.). Still, members of the community had to travel up to 14.1 Km far from their current location of residence to reach their direct relatives. The spread of their relatives included locations like Matugga, Wakiso, Kyengera, Kansanga, Nsambya and Makindye located between 7.61-14.1 Km. On the other hand, frequency results showed that 127 members had their relatives within Bwaise. Coming in the second place as the location of family relatives of the community members were Kazo and Kawempe with respectively 5 and 7 respondents whose family were located there.

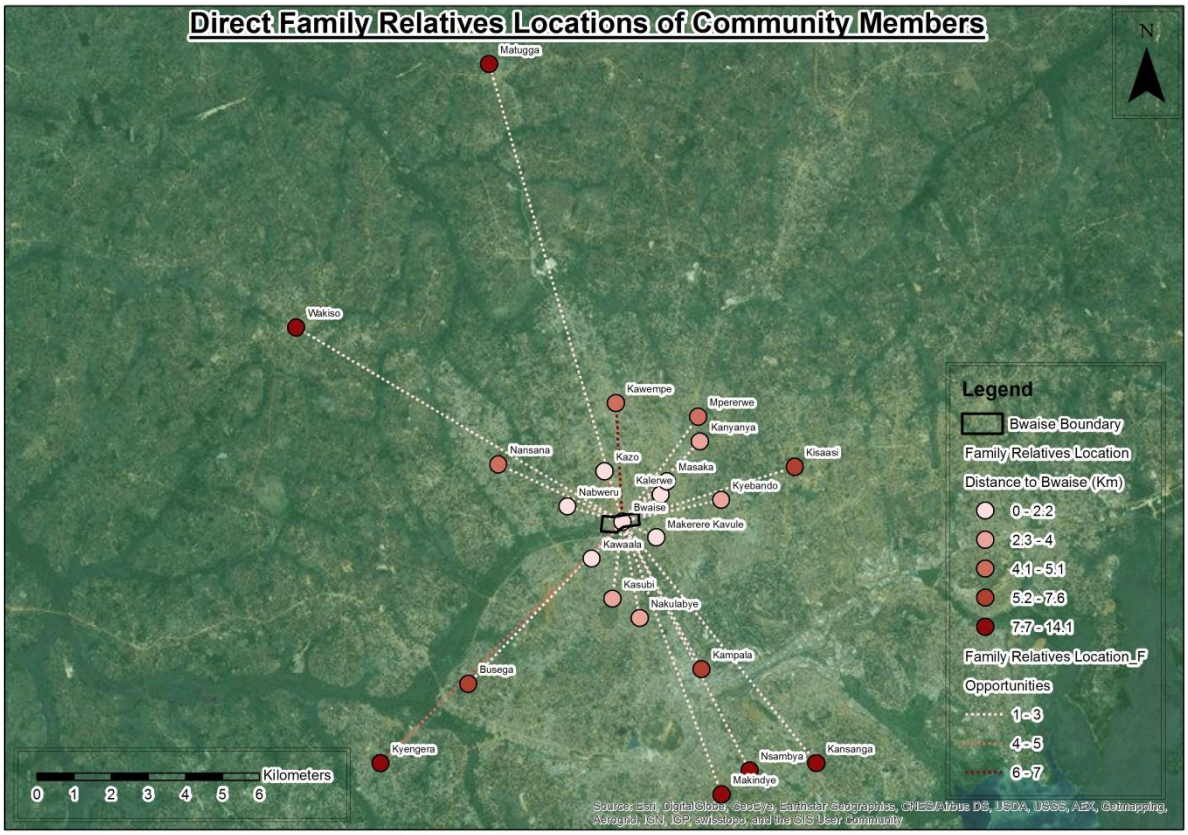


Figure 20. Direct family relatives locations of community members (Own creation, Base map: Esri)

After the analysis explaining the pattern of the location of community family relatives, the mode of travel was analyzed through a cross tabulation. As this cross tabulation was found to be necessary to inform the strategy for the way of travel community uses the results were found to be interesting. The community had a spread travel modality, with 36.2% of them travelling on foot, 1.5% by bicycle, 5.6% by motorbike, 54.1% by taxi/minibus and 1.1% by car. The results of this cross tabulation between the location of their families and the mode of travel to their families informed the strategy on the distance where their families were found to be in Bwaise III and also outside as they used taxi/minibus to travel. In this way, the strategy had to address all the categories equally but for those who used taxi/minibus the distance of relocation from the current place to the new location should not be a problem as their preferred mode of travel and the analysis showed so.

4.3.5. Daily food activity location concentration

In contrary to the spread found in the analysis that was undertaken above, the location of the daily food activities showed a concentration only in Bwaise and Kalerwe with a small response that was in Nakasero. People living there did not travel more than 1.8 Km away from their residence to buy food or provide it for their family members. There were only two cases of people travelling 5.4 Km to Nakasero, to buy their daily food supplies. These results were found to be very significant, informing the strategy about the need for creation of food shopping facilities in the new relocation site or if one exists on the new relocation site, it should not be further than the results of the analysis above that were also presented in the map below (Figure 21.).

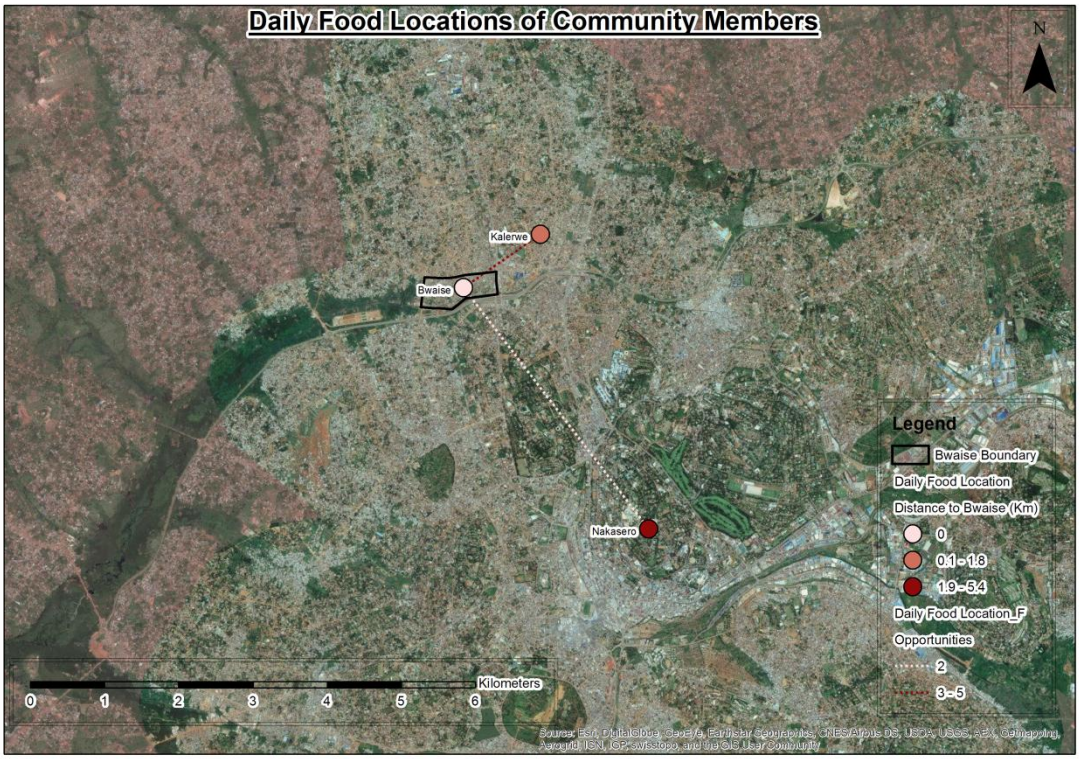


Figure 21. Daily food locations of community members (Source: Own creation, Base map: Esri)

4.3.6. Shopping activity location concentration

Shopping activities were another part of the analysis of the current livelihood explaining in this way the patterns that community members used to buy supplies that were not related to the daily food consumption (Figure 22.). People travel more for reaching places that offer shopping opportunities although 245 respondent had this opportunity in Bwaise, others were travelling to Owino, Kalerwe, Kampala and Kawempe. After finding the concentration of this activity, a cross tabulation was made to find the most used mode of travel by the communities, which will inform the strategy on how the community members reach this activity. It was found that 91% travel on foot, 1.1% by bicycle, 1.5% by motorbike and 3.7% by taxi/minibus. In this way, the strategy should focus on creating shopping opportunities for the community nearby the new location or for the selection of the new place this activity to be considered as a factor leading to the potential site.

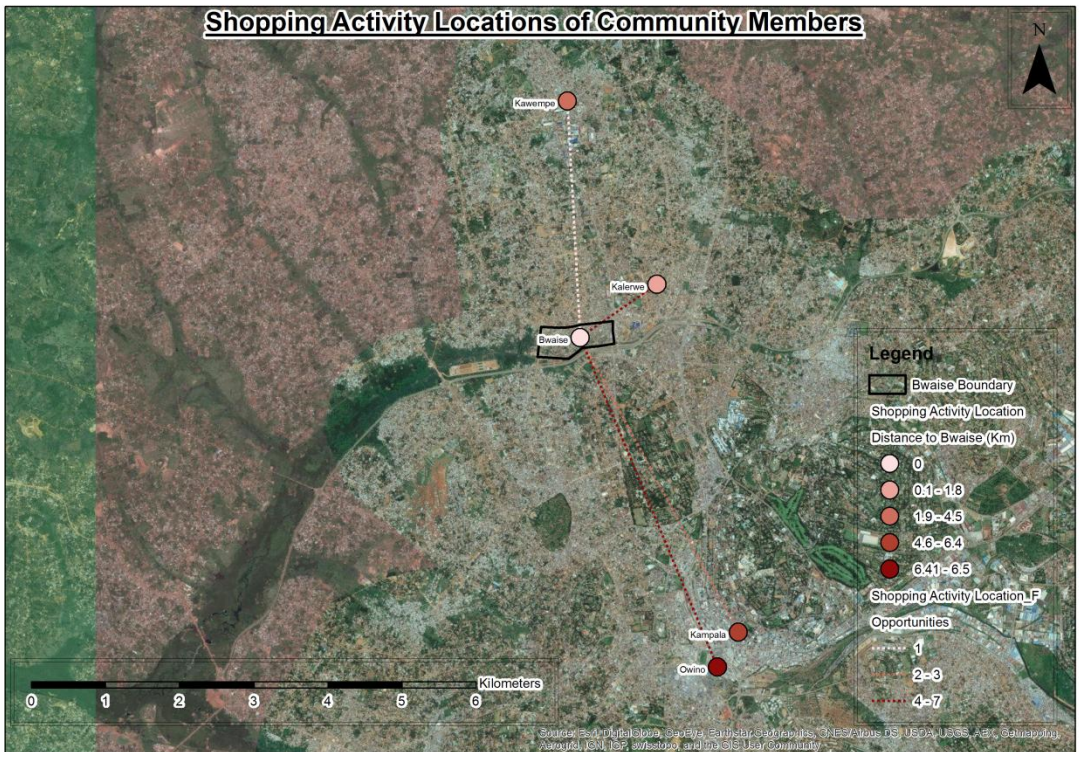


Figure 22. Shopping locations of community members (Own creation, Base map: Esri)

4.3.7. Religious buildings location concentration

Last, the analysis of the religious buildings where communities were going was conducted (Figure 23.).

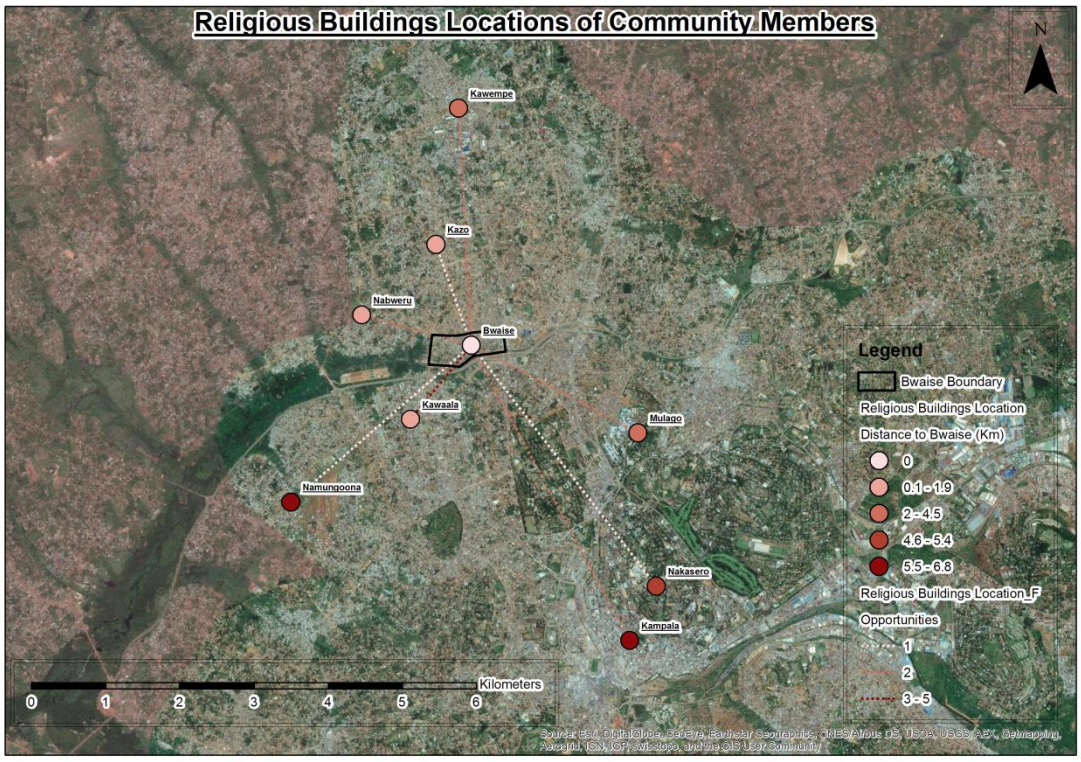


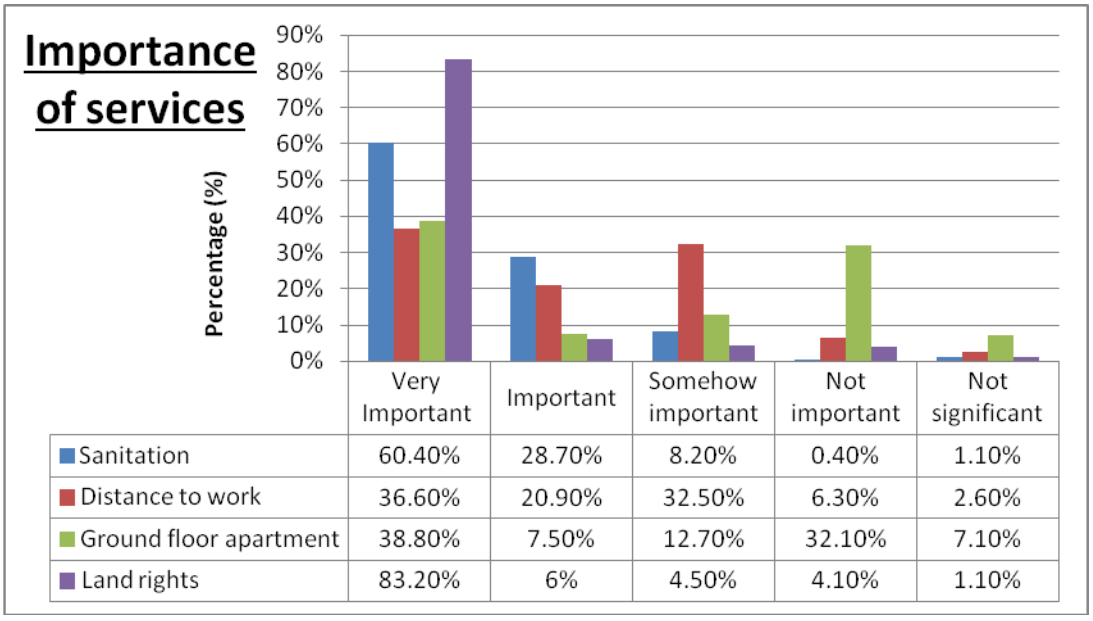
Figure 23. Religious buildings location of community members (Own creation, Base map: Esri)

It showed a concentration of 250 respondents going in religious buildings located in Bwaise. Although the biggest concentration was found to be in Bwaise, other people were even travelling a bit far to reach their religious activities. The maximum distance of their travelling pattern was found to be between 4.51-6.8 Km

away from Bwaise, respectively in locations like Namungoona, Nakasero and Kampala. Some cases showed that they were going to the nearby locations like: Kawaala, Nabweru and Kazo. The modality share between different modes of travel was found to be 89.6% by foot, 1.1% by bicycle, 4.5% by motorbike and 4.1% taxi/minibus. This results in collaboration with the frequency and the distance from Bwaise III informed the strategy on how the religious buildings should be considered and approached in the selection of the new site as a factor to be considered or as a necessity to be built on the new site in the other case.

4.4. Impacts on community life and livelihood

The analysis of impacts on the community life and their livelihood is focusing on five topics. It starts with the importance of infrastructure like: sanitation, ground floor apartments, distance to work, land rights, etc. Second, the analysis was focused on providing answers for the most important basic needs that community had in order to prevent impacts in the future. Furthermore, the analysis derived answers on positive and negative impacts in a qualitative way, to conclude with the flood frequency characteristic.
As discussed in the literature review, the importance of the infrastructure as mentioned above was found to be necessary when dealing with a strategy in order to gather insights on the services that should be build and addressed by the strategy. The results of the analysis, as perceived by the community members, (Figure 24.), showed that the strategy should give importance to the land rights and to the sanitation with the respective 83.2% and 60.40% of the community members ranking these services as crucial.



	Very Important	Important	Somehow important	Not important	Not significant
Sanitation	60.40%	28.70%	8.20%	0.40%	1.10%
Distance to work	36.60%	20.90%	32.50%	6.30%	2.60%
Ground floor apartment	38.80%	7.50%	12.70%	32.10%	7.10%
Land rights	83.20%	6%	4.50%	4.10%	1.10%

Figure 24. Perceived importance of services to be build in order to avoid impacts

The basic needs of the community that could cause an impact if not addressed in the strategy were analyzed resulting very thorough as in the questionnaire it was an open question. This needs of the community that should be reached, were sorted according to the importance. The results showed that the most important and must have facilities were found to be the health facilities and housing units in order for the strategy not to cause impacts in their daily life. Furthermore, the water provision and supply were selected from the majority as an important need. Next to the water supply and the water provision the educational facilities were ranked third in importance as the education was an enormous problem for those who had children. Fourth most important were found to be the land rights and the security of tenure providing them with a valid certificate in the new place to be used for relocation. In the end, the community members chose markets and clothing store alongside with the infrastructure and transportation concluding in this way the list of most important services needed. By doing so, we had created a list with all the important characteristics that the strategy should address according to the community needs and their importance in order to prevent the creation of impacts from relocation.

In addition, a qualitative analysis was performed to analyze the positive and the negative impacts as perceived by the community members. The analysis showed that among the positive impacts of relocation, community members perceived that they would have better services and facilities in terms of sanitation, water supply, power supply. Besides this, community perceived as a positive impact the chance for getting a better land without floods and also all members of the sample responded that getting rid of the floods was a general perception of all the community members. Better living standards, improvements to their health and education, improvements in infrastructure and security improvement of their livelihood were among the positive impacts perceived by the people. Differing from this, negative impacts, were perceived as loss of rights to the land. Adding to this, the insecurity of coping with the new environment, followed by the loss of family ties, which in Ugandan culture and particularly in Bwaise was more important than the services that people used to get. High costs of living were an impact that was perceived from the community members in case of relocation, alongside with the loss of job which the last one was found to be perceived in very few cases. Although this important evidence that should be addressed properly and minimized by the strategy, there were people who to the negative impacts did not perceive that they will have negative impacts.

On the other hand, the last analysis on impacts caused to the community, dealt with flood characteristics (Figure 25.). From the analysis of the responses it was seen that 48.5% of the community experienced flood indoor every time it rained with some exceptional cases of people experiencing only floods in their backyard or public space only. Secondly with 28.4% of the results came the answer of the every year flooding. Once in a 5 year flood event was only seen in 9 cases making it only 3.4% of the study area. Once in a 10 year flood event was very rare experienced only in two cases from 268 cases with 0.7%. Although most of the people experience floods in Bwaise, it was an interesting outcome that there were also people whose house does not flood. This answer was found in 42 cases out of 268 scoring 15.7% of the whole answers.

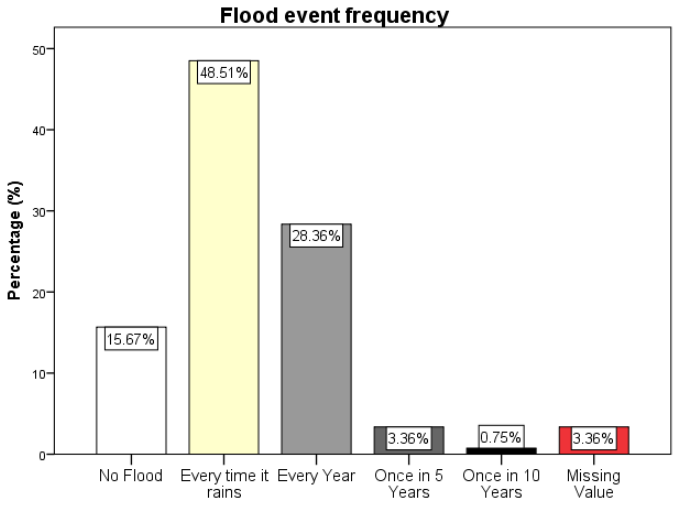


Figure 25. Flood event frequency in Bwaise III

The flood frequency was analyzed in order to determine a relationship between the willingness of people to relocate and their affection from flood frequency.

Table 6. Cross tabulation between willingness to relocate and flood frequency

		How often your house floods					Total
		No Floods	Every time it rains	Every Year	Once in 5 years	Once in 10 years	
Willing to relocate	No	40.5%	21.5%	21.1%	33.3%	100.0%	26.5%
	Yes	59.5%	77.7%	77.6%	66.7%	0.0%	72.4%
Total		42	130	76	9	2	268

The results of the analysis (Table 5.), justified the need for a relocation strategy that not only for people who face flood severely but also those who face floods once in 5 years were willing to relocate, pointing out the necessity of a strategy to relocate them. From the results of this analysis it was proved that the two specific cases in the study area that faced floods once in 10 years were not willing to relocate. In addition, from this analysis people who were living in Bwaise for a short period of time were excluded, caused by their knowledge of the past events. From these flood data the spread was presented in (Figure 26.).

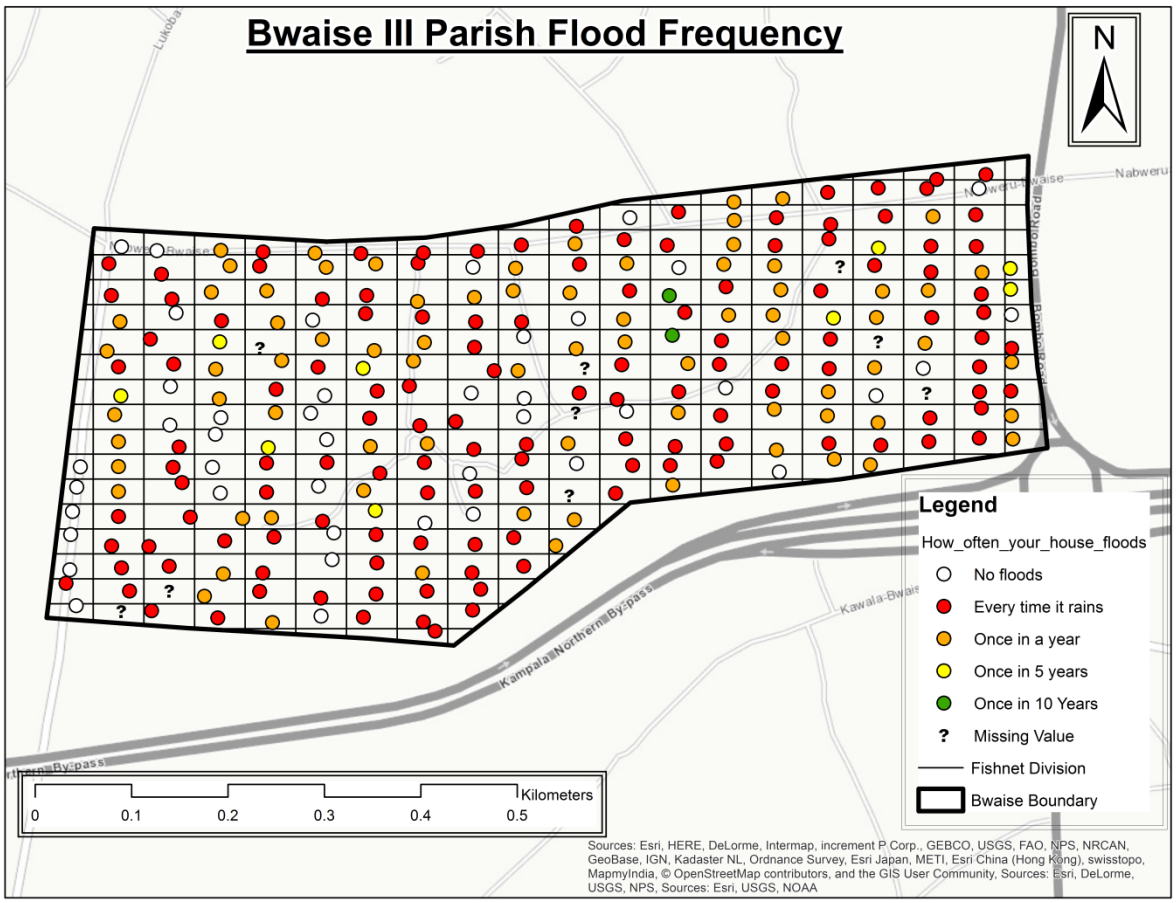


Figure 26. Map showing flood frequency spread in Bwaise III (Own creation, Base map: Esri)

From this analysis and as it was seen (Figure 26.), it can be said that the most frequent flood event occurring was **every time it rains** was spread throughout the area. Another remark was that the **once in 10 years** flood event was concentrated in the centre of the study area showing that these locations were more protected from floods as observed during the fieldwork. **No flood** event was seen in the area where the terrain was elevated

as cause of a bridge nearby, but also where people used mitigation measures to protect themselves against serious threats from floods. **Every time it rains** and **once in a year event** which were found alongside the secondary drainage channel. In the questionnaire, these two events were asked: Every time it rains happening every time it was raining and Every year happening only once per year. To conclude with the concentration in the middle of the study area of **once in 10 year flood** event. The information explored from the analysis, help the strategy in defining the priority to relocate. When talking about priority of relocation, the relocation of the whole community is impossible at the same time, causing in this way a necessity for a relocation divided into phases with the first phase of those who are more affected, translated in this example the community members who are experiencing floods every time it rains to the second or the third phase of the community members experiencing floods less frequently.

4.5. Community social-netowrks and their socio-economic characteristics.

This final section includes all the results of the analysis, which are at the same time the answers of the research questions for this thesis. In this way the social characteristics, economic activities, social-networks and the pattern of the affected community members in Bwaise are defined. This analysis was undertaken to inform on the current situation of the neighbourhood of Bwaise and also to give insights about which socio-economic characteristics should be taken into account for a relocation strategy. Furthermore, the results illustrate social-network patterns, which for the strategy need to address.

4.5.1. Socio-economic characteristics for the strategy

The results of the analysis showed that the willingness of the community to relocate was a key factor, and it should be a characteristic that all the relocation strategies should include its measurement. Furthermore, the characteristics of the community members, in this study, family composition, education level, income level. should be taken into account as profiling the affected community members to be relocated. In addition, the job distribution and its characteristics should also be included in the strategy to gain insights on the source of income and its distribution throughout the community members. Among this, the characteristics dealing with the tenure status of the house and land was another characteristic to be taken into account when building the strategy, which emerged from the analysis. To conclude, between all these characteristics the strategy should address the perceived impacts, despite the fact of being positive or negative. Job opportunities should be available or offered in the new location, respectively in the formal sector and also informal sector applying to the existing situation which was seen as a source of income for people who were uneducated. The last point should be addressed as a preservation of community needs with focus on job creation and formality of the informal sector jobs. In line with the job type, house and land tenure gave insights on the percentage of people who own their houses or land providing some clear information on percentage of people to be compensated with a house or a piece of land.

4.5.2. Social-network patterns informing the strategy

The pattern of the community members network between themselves and their relatives were analyzed, displaying in a way the main activities location. By doing so, the pattern included the concentration of the main activities which were found to be the job locations, education facilities both primary and secondary, direct family relatives (which they visit more often), daily food activity, shopping activity and one of the most important aspects in the culture of Uganda the pattern of religious buildings. In this section the reason of movement into Bwaise of all the community members was analyzed simultaneously with perceived impacts on livelihood from relocation of the community members. The results of the analysis of all the above mentioned fields would inform the strategy on issues concerning the social-networks, providing also a pattern in order to preserve as much as possible their networks in case of relocation. By doing so, the pattern of the most visited and used locations among the community members would give a broad frame on the livelihood, that the relocation strategy should address for the relocation process in the future.

Starting with the job locations pattern the distance from the new place to the job locations should not surpass the existing distance and should offer all available modes of travel currently available in Bwaise III. Proceeding with patterns of primary schools for children of community members, which were found to be reached by foot 55% and also by taxi/minibus 10%, insights that advise the strategy to address the creation or the selection of the site with location of primary schools nearby the new site. Results for the secondary schools, direct family relatives, daily food activity, shopping activity and religious buildings were also presented. Respectively, secondary school pattern is focused around Bwaise III in a maximum distance of 28.6 Km in only one case but mentioning here that not many of the children were going to a secondary school. Direct relatives concentration demonstrated interesting results on the spread of the community families location and distance. In addition, travel modality share was very high by taxi/minibus with 54% informing that people will use taxi/minibus or other methods to reach their relatives caused by a strong relationship between families in the Ugandan culture. Daily food activities and shopping activities were focused mostly on a maximum distance of 6.5 Km informing that the new site should include this activities, or that the selection procedure of the new site should include this activities as a factor to be in the vicinity of the new place. Religious buildings pattern was found mainly inside in Bwaise III with 250 cases out of 268, but with some exceptions that people were also going in Kampala city centre and Kawempe district.
The results of the analysis both those of socio-economic characteristics and social-networks, which were also the answers of the research questions will be presented in the strategy as concrete actions to be addressed by the strategy.

5. GOVERNANCE OF RELOCATION PROCESS

The aim of this chapter is to define and explore governance involved in the relocation process. The term governance is used as this shift from government to governance reflects the inclusion of multiple actors from nongovernment organizations to public-private partnerships (Armitage & Plummer, 2010). This chapter seeks to answer the research questions 2.1, 2.2 and 2.3 (by analysing the interviews with the respective authorities but also policies and documents. The chapter begins with discussion governance and its actors. Next sections, analyze which government actors are involved in a relocation process and how do they collaborate. On collaboration, both institutional and legal frameworks are analysed. Furthermore, the policies of relocation in case of a risk management situation in Uganda are analysed. Finally, the last section includes a comparison between a governance model and the existing model found in Uganda plus a summary of all the above mentioned topics. These results inform the relocation strategy on the governance institutions that are involved and how do they need to collaborate to achieve a relocation strategy fulfilling the main research question in minimizing the impact and affection of the life of the community members.

5.1. Governance and institutions

Governance, as a term, is applied in studies dealing with community members life. Türke (2008) explained its usage in evaluation and improvement in a sustainable and viable way of all institutions identified. Taking into consideration this statement as a starting point and proceeding further with the institutions involved in the governance for the relocation process in Uganda, all the relevant institutions were selected to be part of the research

5.2. Government institutions involved in relocation

The interview with the pre-selected government institutions mentioned in section 3.5 provided answers for the research questions in the involvement on the relocation process. The information absorbed through the interviews was in the field of policy, previous experiences, organization of the process of relocation, criteria in line with the possible relocation site. Moreover, the support of the government, the sensitive issues, development plans and the role of each single government institution and government agency in the process. Additionally, land ownership situation in Kampala, collaboration with private actors and planning of the new possible site were gathered as qualitative information from all government institutions which are presented in the below section.

Although relocation was not considered as a process for people settled not only in Bwaise, but in all areas that were prone to flooding in Kampala *(Respondent 6)*, key informants provided some answers. To the question **What are the institutions that are involved in a relocation process?**, the majority of the responsible government authorities provided with thorough and deep answers. As the research included qualitative information, none of the respondents answer was carried out of this analysis. *(Respondent 5)*, answered by classifying relocation happening inside or outside Kampala, which in the case of relocation inside the same municipality, the government institutions in charge were KCCA and the MLHUD. Contrary to the relocation happening inside Kampala, for the relocation happening outside the MLG (Ministry for Local Government) and KCCA, are included because the citizens probably will be moved outside of the capital city. Moreover, the other institutions involved mentioned by the respondent were MDP (Ministry for Disaster and Preparedness) with their role as consultants and coordinators during a relocation process, Prime Minister's Office involved as one of the main government actors responsible for buying the land. MLG was involved in case community members were going to be relocated outside Kampala boundary, with the MF (Ministry of

Finance) responsible for providing founds for the process of relocation. Everybody was playing its role in the relocation process from buying land to getting money and also facilities like schools where the ME (Ministry of Education) plays its role in providing the schools and educational institutions. *(Respondent 7)*, explained about the government institutions that it is a direct responsibility of the KCCA which also includes the Prime Minister itself as a stakeholder. Furthermore from the analysis of his responses the MLHUD was currently formulating the National Resettlement Policy caused by natural disasters like: floods, landslides and also from development programs. *(Respondent 8)*, added MH and the department of surveying and mapping located in Entebbe. In addition to all answers, *(Respondent 9)*, added the Parliament as according to him "*it was a major decision that has to be discussed by people's leader as Uganda is a democratic country*".

5.3. NGOs and private partners involved in relocation

Interviews were conducted with two NGOs and one private partner. The focus of the interview was on cooperation, requirements for cooperation, previous experience and about sensitive issues as the NGOs and the private partner were operating very closely inside Bwaise. Further, they were interviewed about the possible assistance, sensitization and mobilization of the community with also some questions which derived a little from the structure as the interviews were semi-structured interviews.

In addition, to the government institutions involved in the relocation process, NGOs, Civil society and private partners were found very relevant by key informants answering the question **What are the actors that are involved in a relocation process?.** They should be involved in the relocation process as they deal with land issues and they are very active as far the target is the urban poor *(Respondent 7)*. The Church of Uganda was another partner, private, which also has a spiritual position helping the government with development programs *(Respondent 10)*. Furthermore, the analysis of the key informant interviews showed that most of the educational institutions and hospitals were funded by the church on their land, making them key partner and also a big land owner. Civil society was seen very important in being involved into the relocation strategy as *(Respondent 9)* discussed the availability of their expertise which would be crucial in this situations.

5.4. Collaboration between involved actors

Collaboration between governance actors involved in relocation process is necessary to achieve a successful relocation. In our case, the collaboration was asked to both key informant respondents from government and from NGOs and private partners. This analysis was made to answer the research question **How governance collaborates in a relocation process?**. The post processing of this analysis with the method of content analysis gave very interesting results on how each of the involved governmental institutions, NGOs or private partners collaborates with each other in the process of relocation. It was observed that all the institutions involved in the process responded positively to the option of collaboration defining whose responsibility is what. *(Respondent 7)* mentioned the institutional collaboration and the legal framework, where the first described how institutions collaborate between each other, and the last one was about the policies that every single authority has. In the case of relocation, the issue of land acquisition was covered by the Land Act and by the Land Acquisition Act who were compiled by the MLHUD, guiding throughout the process of land acquisition. According to *(Respondent 9)*, KCCA has a specific geographical coverage with a specific budget which in the collaboration between institutions has the responsibility of providing the infrastructure like: roads, drainage channels, solid waste management, electricity, health facilities and schools. *(Respondent 5)* added to the above discussion that the collaboration between the government and KCCA is based on each responsibility of the government mandate. It was mentioned that when the schools have to be build in the new place, there should be a collaboration between the Ministry of Education and Sports and KCCA as the budget of the KCCA is low. Furthermore, the answers included more examples on the health facilities which should be a shared responsibility and collaboration between KCCA and Ministry of Health. In a nutshell all the government authorities had to collaborate with KCCA sustaining the rules and the laws.

The most important was the focus on the collaboration between the governance institutions where all the above mentioned institutions should collaborate. The cooperation between government institutions and private partners, in this case the Church of Uganda, was seen as a very possible opportunity for relocating the affected community of Bwaise *(Respondent 9)*. They move anywhere they smell an opportunity and with a collaboration between KCCA and the Church of Uganda there is any chance that they will relocate. On the other hand, *(Respondent 7)* mentioned that a public-private partnership can be a way of collaboration by engaging a private partner with a big land owner under the provision of technical support from the government, to complete the process. However, so far none of the above partners was contacted to do so, although a potential exists as many of the private partners focus on humanity. *(Respondent 10)* mentioned that government authority KCCA should collaborate with UN to provide help with transport methods for the people to be relocated as it will decrease the total cost of the process. *(Respondent 6)* agreed of a possible collaboration between the Church of Uganda while he was sceptic on how attractive the deal would be for both communities, Church of Uganda and government. To conclude, *(Respondent 1)* answered that the whole process should be organized as a joint cooperation or collaboration between the government who has the mandate to protect and serve their people, the NGOs who sensitize, mobilize and inform people and the private partners or the investors in this case the Church of Uganda themselves. The government should plan and arrange the area where we will provide the land as a planned approach with planned low-cost housing, water, electricity, sanitation, education, health facilities and religious buildings to live their life normally like all the Ugandans concluded *(Respondent 1)*.

5.5. Policies relevant for relocation

In Uganda, a clear relocation policy was missing, confirmed also in one of our interviews. *(Respondent 7)* confirmed that there was not a specific policy, but the way government used to deal with relocation was prepared by combining different policies. For instance the environment policy, the national policy for disaster preparedness and management made by the Office of The Prime Minister, which was also noted by *(Respondent 5)*, and then land policy from the Ministry of Land Housing and Urban Development, concluding in a scattered policy, which in the future would be addressed. Moreover *(Respondent 7)*, explained about other policies which were taken into consideration when dealing with resettlement which was the use of the National Land policy and the Land Use policy. Initially, the land use policy which was found to deal with issues of land use planning of a settlement and issues of urbanization, while the national land policy focuses on land tenure framework, legal framework, land rights and land management. Furthermore, the disaster policy which was mentioned by *(Respondent 7)* and *(Respondent 5)*, handled different risks, among which that of the internally displaced persons, dealing with people displaced by a disaster like flooding or other natural hazards *(Respondent 8)*. Another important fact on this policy was the consideration relocation from areas suffering land or mudslides while on the other hand, the same policy had to determine disaster prone areas either natural or human-induced concluding that people living in very risky areas would be assisted to relocate voluntarily.

5.6. Assessment of the relocation process using a framework on good governance

As it was introduced in the literature review, in the section 2.6., the assessment on the good governance of the relocation process was done according to the framework of UNDP. In the literature review two frameworks were introduced concluding with the selection of the following governance assessment framework which was more appropriate for this study. The choice of the UNDP governance model was

explained by UNESCAP (2009) as the most appropriate including and covering aspects of community members but also assessing both local government, national government and NGOs/civil society. According to IFAD (1999), the definition of UNDP (United Nations Development Programme) for defining a good governance was seen as the exercise of managing country's affairs at all its levels, comprising in the existence of processes, mechanisms and institutions which exercise their legal rights and articulate respective interests. For achieving this, the assessment (Figure 27.) focused on the analyzing essential characteristics like: participation, rule of law, transparency, responsiveness, consensus orientation, equity, effectiveness and efficiency, accountability and strategic vision. All the above mentioned elements that were analyzed to assess the governance were classified into 'good' or 'to be improved' categories, after comparing them with the current situation found in Uganda.

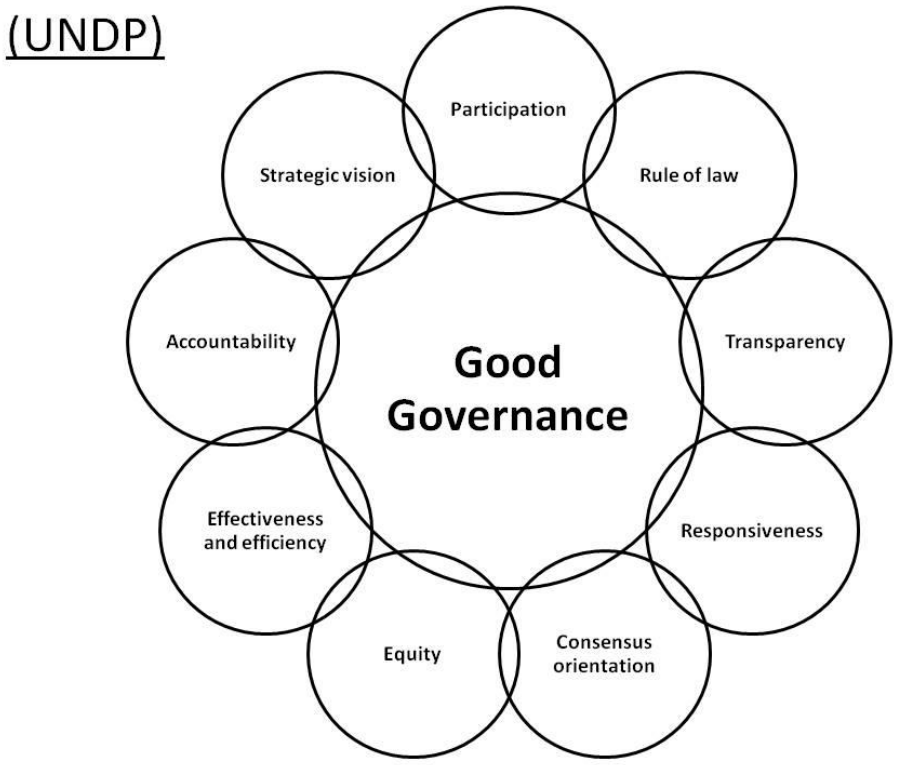


Figure 27. Good governance assessment framework adapted from UNDP

Participation. Participation was done mainly through local leaders of the communities. Unfortunately, there was no exact or specific information about the level of participation, if everybody could have their voice raised in a decision-making process. Bagenda (2007), also found that community was participating in constructing of community boreholes rather than participating in taking charge of their own development. An important role in participation was made through NGOs which were very much involved in helping community members to participate in projects related to their wellbeing.

Rule of law. Amnesty International (2014), advised the government of Uganda to make changes in some Acts in order not to violate human rights. As it was seen from the observations during the fieldwork, discrimination problems were faced in accessing health care.

Transparency. Most of the information was available to the citizens. Institutions were directly accessible to the citizens with only one ID card. Processes were made public by all governance actors also through the involvement of the civil society.

Responsiveness. The level of responsiveness found during the fieldwork was very good. All the institutions that were approached for this study were found to be responsive to one another, especially to those institutions who had direct collaboration. Institutions that were interviewed, answered that the response level is very fast towards all the problems and difficulties that other collaborative

institutions might have. No difficulties were faced between institutions regarding their responsiveness towards any issue.

Consensus orientation. From the field observation and from the interviews, in Kampala there was not much of a consensus orientation as KCCA had their vision on the development of the city. One clear example was seen when an infrastructure development programme was being build or when drainage channels had to be widened there was no consensus with the affected people, but it was a notification that they should leave in 28 days.

Equity. As for the equity level, it was impossible to measure as the questionnaire and the interviews did not include equity assessment questions. As observed during fieldwork visits made in the case study area with the community members, it seemed that men had more opportunities to maintain and improve their well-being.

Effectiveness and efficiency. This assessment element was seen to be a point that almost every interview mentioned saying *if we could manage and make the best use of our resources we would not face problems*. Deriving from this phrase and also from KCCA Strategic Plan, it was clear that it should be improved.

Accountability. Because all the funds to the local government were provided by the Ministry of Finance, the accountability of the local official's towards their citizens was found to be missing. Moreover, laws on accountability existed but during the interviews no answer was provided over who accounts who in the end of a process.

Strategic vision. The vision of KCCA for Kampala had three elements. Vibrant, sustainable, attractive. All these three elements were linked with the city and its inhabitants. Furthermore, the existence of a strategic vision up to 2040 was seen to be present in the KCCA Strategic Plan 2014-2019 focusing on economic growth, transportation and infrastructure, social development, health, education and urban governance.

After the governance was assessed the results were visualized in Table 6. and divided into two categories those elements that needed to be improved and those elements which were found to be working good. The criteria used to construct this table was based on the results after the good governance assessment framework was applied in the above paragraphs. As the framework was for good governance those elements who did not fulfil the criteria were classified as to be improved. The final answers on governance assessment were based on fieldwork visit, documents and reports gathered during fieldwork.

Table 7. Governance assessment table according to UNDP framework

Governance assessment in Uganda			
Nr.	**Elements**	**Good**	**To be improved**
1	Participation		
2	Rule of law		
3	Transparency		
4	Responsiveness		
5	Consensus orientation		
6	Effectiveness and efficiency		
7	Accountability		
8	Strategic vision		

6. RELOCATION STRATEGY

This chapter deals with the relocation strategy. By providing the relevant answers regarding the elements that a strategy should contain and steps that should be followed as introduced in the literature review section 2.9. The development of the strategy takes place in the second section of the chapter, concluding with the fulfilment of this research and the main objective, developing a relocation strategy for Bwaise III.

6.1. Elements and steps for developing a strategy

In order to formulate a strategy, elements and steps should be defined first. As it was introduced in the literature review, the strategy contains elements found from previous literature and elements derived from the analysis of the case study area. In addition to this, a strategy needs to follow some steps. The objective, mentioned as a step when developing the strategy is linked to the main objective of this study. Since floods are a sensitive issue that affects directly the human life this strategy is focused on all the possible areas that floods impact in the community life. To move forward, the goals of the strategy were chosen according to the elements that a strategy should contain as described in section 2.9 and presented below (Figure 28.). Each of these goals consists of a set of concrete actions which came out from the analysis previous relocation studies, related to community life, livelihood, governance, previous experiences and relocation design. These concrete actions were included to fulfill specifically each goal of the relocation strategy.

The community relocation strategy is designed to help communities who face flood problems to relocate from these flood-prone areas. This strategy proposes a new way of working to achieve improvements in the relocation process. Government, non-government organizations and communities will work together to put this strategy into action.

6.2. Relocation strategy for Bwaise III

Objective: Relocation of communities from flooded areas minimizing the impacts caused to communities.

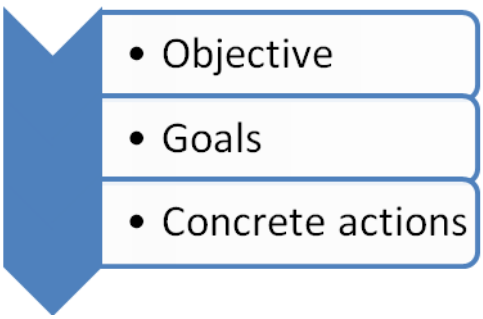


Figure 28. Elements of the Relocation Strategy for Bwaise III
(Own creation)

Figure 29. Goals of the Relocation Strategy for Bwaise III (Own creation)

The goals of the strategy focus on five main aspects. The basis for developing the goals was the analysis conducted in the case study followed by the literature review on previous relocation experiences. The goals of this strategy are presented below.
As the goals were presented the hierarchy of the elements for the strategy came to the concrete actions. The concrete actions were identified during each analysis and interview. Furthermore the previous experiences either successful either not successful relocation, as stated by the authors of the studies, were a strong point for this strategy in order not to commit mistakes that we should learn from.

This relocation strategy, includes also institutions who are responsible for taking the lead and those who are needed to cooperate in order for the concrete actions to be fulfilled. In the table of the strategy the institution which has to take the lead are differentiated visually from the other collaborators in the action.

In addition, the strategy states the resources that are needed. The list of resources is filled by resources that deal with hard resources like human resources or skilled staff members, data gathering and information and sensitization campaigns alongside capacity building for staff members. The last would give more experience to staff members of government institutions to gain more experience on relocation processes and practices.

To conclude the strategy its limitations or barriers are also presented, which if are not taken into consideration might lead to misinformation or wrong frame of the concrete action to be taken.

All the above mentioned elements are presented in the tables of the strategy. The relocation strategy document presented below can be considered also as a stand-alone document as all the concrete actions are justified and explained after the presentation of the Relocation Strategy.

Table 8. Goal 1 - Relocation Strategy for Bwaise III

Goal		Concrete actions	Responsibility of: (Lead) (Collaborate)	Resources needed:	Limitations/barriers:
1. Community & livelihood characteristics	1.1	Identifying community willingness and participation in the process	KCCA / MLHUD / NGOs	Household survey on the community	Declining to answer on relocation
	1.2	Identifying demographic characteristics of the community	KCCA / MLHUD / Uganda Bureau of Statistics / NGOs	Human resources needed for field survey, Data and Information through household survey	Difficulties to identify all the demographic characteristics
	1.3	Identifying economic characteristics of the community	KCCA / MLHUD / Uganda Bureau of Statistics / NGOs	Local resources, Statistics, Community profiling from NGOs	Economic issues are sensitive and people give untrue info
	1.4	Mapping of community social-networks (Job, Primary and Secondary schools, Direct Relatives, Shopping, Religious)	KCCA / National Planning Authority / NGOs	Local resources, Maps, Community profiling from NGOs	Inaccurate information on path used by community members
	1.5	Identifying possible impacts caused to community life and livelihood	KCCA / MLHUD / Ministry for Disaster Preparedness & Refugees / NGOs	Data and Information from survey, Studies on impacts	Positive impacts perceived as negative impacts
	1.6	Ensuring community involvement and participation throughout the process	KCCA / MLHUD	Workshops/Group Discussions with community members	Low percentage of participation / people not willing to relocate
	1.7	Identifying access to services (Health care, Sanitation, Education, Religious buildings)	Ministry for Works and Transport / Ministry of Health	Human resources to do on field survey, Maps, Data and Information	Perception of community for the term 'access'
	1.8	Sensitization of community members to relocate	KCCA / NGOs / Church of Uganda	Sensitization campaigns	Programs and materials

The first goal (Table 8.) of the strategy is divided into 8 concrete actions needed to get information regarding the communities

- Identifying community willingness and their participation in the process:

The identification of the communities willingness is linked to strong with their participation in the process, resulting in the need for measuring, as it is recommended from the literature (Viratkapan & Perera, 2006). KCCA should take the lead through the involved NGOs in Bwaise.

- Identifying demographic characteristics of the community:

Community demographics should be identified before relocating them. In order to create a profile with all the details of community member a survey should be done to gather all the demographic information. Demographics of the community are necessary, to have clear information about the needs to fulfil when relocating them. If demographics are not identified, than problems will arise as explained by Eranıl Demirli et al. (2015). This action should be leaded by the Uganda Bureau of Statistics in collaboration with the other responsible actors.

- Identifying economic characteristics of the community:

Uganda Bureau of Statistics should be also involved here to identify and then make available the data for KCCA, MLHUD in order to have all the insights on what the economic is and how it should be preserved. This was a necessary step which was found also in the literature by Eranıl Demirli et al. (2015)

- Mapping of community social-networks (Job, primary and secondary schools, Direct relatives, shopping, religious):

Mapping of all social-networks of the community members were part of this study and were already completed as a step. Furthermore, in case they need more detailed maps the National Planning Authority in collaboration with KCCA and NGOs involved in Bwaise III should complete this step as found by Perry & Lindell (1997) as a very crucial step bringing to failure of relocation or comeback of the community in case it was not done as a step.

- Identifying possible impacts caused to community life and livelihood:

Impacts on community life and their livelihood were identified in this study. NGOs who are involved in Bwaise III alongside other actors with specialized staff should identify all the impacts caused to their life from relocation and list them as priorities to be fulfilled.

- Ensuring community involvement and participation throughout the process:
Derived from the literature, Chen (2009), stated that the community should participate and be involved throughout the process. The involvement and participation includes also self-organizing of the community of some processes. The process should be leaded by Ministry of Lands, Housing and Urban development by organizing workshops and group discussions with community members and their leaders.
-Identifying access to services (Health care, Sanitation, Education, Religious buildings):
All the access to services needs to be identified through each responsible actor but leaded by the Ministry for Works and Transport. The access to the services like health care, sanitation, education and religious buildings was found as a very crucial step needed to adapt the environment of the new livelihood to that of the existing one. The process should consist on field survey through skilled human resources gathering access level for all the above mentioned services. This conclusion was also backed by Airriess et al. (2008) when he described the failure of the relocation process caused by missing of service facilities.
- Sensitization of community members to relocate:
The knowledge of the community regarding relocation is too vague. This was concluded in an interview with the key informants in Uganda, bringing the need for sensitization campaigns leaded through the involved NGOs and their programs on community members. The sensitization of the community members for the relocation process is seen as a step increasing their willingness to get involved in the process.

Table 9. Goal 2 - Relocation Strategy for Bwaise III

Goal		Concrete actions	Responsibility of: (Lead) (Collaborate)	Resources needed:	Limitations/barriers:
2. Flood information	2.1	Mapping flood extent on the current livelihood	Ministry for Disaster Preparedness & Refugees / Ministry of State for Relief & Disaster Preparedness, OPM / KCCA	Flood data information, buildings footprint, software for mapping flood extent and flood modeling	Inaccurate flood data
	2.2	Identifying and Mapping flood frequency	Ministry for Disaster Preparedness & Refugees / Ministry of State for Relief & Disaster Preparedness, OPM / KCCA	Weather stations, statistics, human expert for identifying and mapping, software package for mapping	Missing of weather stations
	2.3	Identifying most affected community members	KCCA / Ministry for Disaster Preparedness & Refugees / Ministry of State for Relief & Disaster Preparedness, OPM	Software for spatial analysis and mapping, Accurate data, human experts to run the model and identify most affected community members	Identification errors

After the first concrete actions has been completed, the information on community livelihood and community characteristics is gathered in order to proceed with the further goals. The second goal (Table 9.) included three concrete actions to be made over the flood information.
- Mapping flood extent on the current livelihood:
KCCA with the other collaborators identified in (Table 3.), should create flood hazard maps of the current livelihood. Jha et al. (2012), found that the mapping should be done in order to have a flood hazard map and with the further concrete actions to give priority first to people who are affected heavier by floods.
- Identifying and mapping flood frequency:
This aspect was covered by this study and it was found to be the responsibility of the Ministry for Disaster Preparedness & Refugees to collect all the information regarding the flood frequency and its spread on the area.
- Identifying most affected community members:
As its already known, different community members experience different flood extent, height, durability so this concrete action alongside with the two concrete actions mentioned and explained above will give priority to the most affected community members, when relocating them. Again the leader of this action does not change from the above action but it is advised that all the actors should be highly involved to get accurate results through exchange of experienced workers.
All the above actions were derived from the literature, except the flood frequency that was mapped but not in specific details.

Table 10. Goal 3 - Relocation Strategy for Bwaise III

Goal		Concrete actions	Responsibility of: (Lead) (Collaborate)	Resources needed:	Limitations/barriers:
3. Governance on relocation	3.1	Assessment of governance	Office of the Auditor General	Assessment framework, Skilled human resources needed to assess independently	Non collaboration of local government
	3.2	Identifying government institutions, NGOs in charge	KCCA / MLHUD	Legal acts, Laws, Data and Information	Conflict on competences, No exact database on NGOs operating with communities
	3.3	Ensuring proper collaboration between government institutions and NGOs	Ministry for Disaster Preparedness & Refugees / Ministry of State for Relief & Disaster Preparedness, OPM / KCCA	Data and Information, Workshops between governance actors	Willingness of institutions to collaborate
	3.4	Identifying existing laws, acts and policies	KCCA / MLHUD / Ministry for Local Government / National Planning Authority	Documents, Land acts, Policies	
	3.5	Establishing a relocation policy	KCCA / MLHUD / International Organizations	Legal acts, Studies, Land policies	Human resources, Willingness to establish a policy

The third goal (Table 10.) gives focus on the governance included in the relocation process. This goal comes in action after the community and their livelihood characteristics have been identified. Moreover, through the second goal of flood information, the most affected community members have been identified. Hence, the third goal is compiled by the following concrete actions.

- Assessment of governance:

An assessment of the complete governance should be done by the Office of the Auditor General through an international assessment framework. This assessment was part of the study, there are provided answers which could be found in chapter 5. For this action it should be considered that the government either local or central could not collaborate.

-Identifying government institutions, NGOs in charge:

An analysis completed in this study as the institutions, were identified through legal acts, laws plus data and information gathered through interviews. The attention should focus on conflict of competencies for the government institutions and on missing data for the exact numbers of NGOs involved in Bwaise III.

- Ensuring proper collaboration between government institutions and NGOs:

This element was found to be very significant in the literature and was also studied in this research. Data and information on collaboration should be collected and analyzed to make sure the collaboration is done in a proper and right way. Again a limitation here is the willingness of the institutions to collaborate as many times the local government with the national government lack of collaboration. In order to collaborate, Esteves (2014a) proposed a participatory process, giving confidence to the involved actors through workshops.

- Identifying existing laws, acts and policies:

A missing policy for relocation was one of the conclusions on analysis done for the governance part, emerging the need for a relocation policy to be leaded by the Ministry of Land, Housing and Urban Development alongside the collaborators on (Table 10.). Documents, land acts and policies should be identified for having a governance and a high level strategy.

- Establishing a relocation policy:

Analysis of this study evidenced a missing policy on relocation. This caused the existence of scattered policies combined together to deal with situations like relocation. Ministry of Lands, Housing and Urban Development should take the lead alongside KCCA in establishing a relocation policy to be used in local and national level. The responsible actors should pay attention to the willingness of establishing a relocation policy as it is not in the favor of the government. Human resources should be skilled and with experience in order to formulate a good relocation policy.

Table 11. Goal 4 - Relocation Strategy for Bwaise III

Goal		Concrete actions	Responsibility of: (Lead) (Collaborate)	Resources needed:	Limitations/barriers:
4. Impacts from relocation	4.1	Avoiding breakdown of community	Ministry for Disaster Preparedness & Refugees / Ministry of State for Relief & Disaster Preparedness, OPM / KCCA / NGOs / Church of Uganda	Detailed analysis on the new relocation site, skilled human resources in the field of psychology	Misinformation
	4.2	Identifying cultural differences between community members	KCCA / NGOs	Data and Information on religion of community members, Statistics	
	4.3	Ensuring service facilities (Health care, Sanitation, Education, Religious buildings) in the new relocation site	KCCA / MLHUD / MWT / MES / NGOs / Religious Institutions (all should lead and collaborate)	Data and Information on availability of service facilities, Statistics on capacity of existing services (if low than new service needs to be constructed)	Budget
	4.4	Ensuring political will throughout the process of relocation	Parliament of Uganda / OPM / President	Meetings, Guidelines and directives from International bodies (African Union)	Information sharing
	4.5	Avoiding bureaucracy throughout the process	Parliament of Uganda / OPM / President	Laws, Policy, Transparency of the process	Time
	4.6	Strengthening community participation in the decision-making process	NGOs / Community Leaders	Sensibilization campaigns on attracting community to participate in the process	Willingness to participate

The fourth goal (Table 11.) was derived from the previous experiences and recommendation gathered through various studies on relocation as a process. After having completed three out of five goals and having all the needed information to proceed further, an important step is the fulfilment of the fourth goal. The previous experiences were included in order to benefit from them and to learn from previous experiences.
For this reason, the following concrete actions were set to be completed:

- Avoiding breakdown of community:
Is an element that according to Faziawati et al. (2014) when is not taken into consideration leads to failure of relocation. The breakdown of the community is caused by government taking leadership over the communities, taking power from community local leaders, unawareness of the surroundings, elevated crime rate in the area and lack of community spirit. All the responsible institutions should be involved into a detailed analysis for the new relocation site. More, human resources in the field of psychology will provide assistance when talking with community members guiding them throughout the process. An eye should be dedicated to misinformation leading in wrong knowledge about the new site or unskilled human resources.
- Identifying cultural differences:
Cultural differences need to be identified through the involvement of both NGOs and KCCA to provide statistics needed for identifying the multicultural dimension of relocating people with religious differences. Can be identified sites where they are not willing to relocate..
- Ensuring service facilities (Health care, sanitation, education, religious buildings) in the new relocation site:
The above mentioned services should be included in the new relocation site; as according to Airriess et al. (2008), when communities missed the service facilities, the relocation process failed. The budget is the main constrain of not providing the exact service facilities that communities had in their previous livelihood. All the identified actors should play their role as every facility falls under different institutions responsibility.
- Ensuring political will throughout the process of relocation:
Shreyas & Prathigna (2012) identified that political will is the most essential element giving solution to problems like relocation. This is the responsibility of the Parliament and the President which should be done through meetings with all the institutions to support them with all their needs. Furthermore this should be also sustained by international bodies like African Union, whose support will be very fruitful to the process as whole.

- Avoiding bureaucracy throughout the process:
Time is a very big constrain favouring bureaucracy. To avoid this problem, higher institutions like the Parliament and the President are advised to introduce laws, policies and full transparency on the process.
- Strengthening community participation in the decision-making process:
NGOs should provide campaigns to strengthen community participation in the process of decision-making for their relocation. Willingness of the community members to participate is a constrain as the older people refuse to participate and to answer questions regarding the relocation.

Table 12. Goal 5 - Relocation Strategy for Bwaise III

Goal		Concrete actions	Responsibility of: (Lead) (Collaborate)	Resources needed:	Limitations/barriers:
5. Relocation design	5.1	Collecting information about available relocation sites	National Planning Authority / MLHUD / KCCA / Church of Uganda	Land ownership, Land use, Masterplan, Private landlords	Poor availability of relocation sites
	5.2	Identifying the precise location to be used as relocation site	National Planning Authority / MLHUD / KCCA / Church of Uganda	Human resources, Land, Flood information, Geological study, Data and Information on infrastructure and accessibility	Disagreement between KCCA, Central Government and Church of Uganda
	5.3	Establish access roads, drainage system and solid waste system in the new relocation site	Ugandan National Road Authority / Ministry of Water and Environment / Ministry of Works and Transports (all should lead and collaborate)	Funds, Maps, Data, Software to be used for planning, Skilled human resources	Budget
	5.4	Establish low cost housing facilities in the new relocation site	KCCA / MLHUD / Private donors	Funds, Planning, Private donors	Budget
	5.5	Establishing sanitation facilities, educational facilities, health facilities and religious buildings in the new relocation site	KCCA / Ministry for Education & Sports / Ministry for Public Service / Ministry for Health / Church of Uganda (all should lead and collaborate)	Funds, Planning, Software, Data and Information	Budget
	5.6	Establishing water supply and power supply	Ministry for Water & Environment / Ministry for Energy & Minerals	Drainage Master plan, Power supply system	Budget
	5.7	Establish community gathering buildings	KCCA / MLHUD / Ministry for Local Government	Funds, Planning	Budget, Location
	5.8	Preserving community life and existing livelihood	MLHUD / KCCA / National Planning Authority / NGOs	Data and Information on existing livelihood, Statistics, Maps	Adaptation of community to the new livelihood
	5.9	Establishing tenure security and land rights	MLHUD / Ministry of States for Lands / KCCA	Land acts	Land ownership unclear, Time
	5.10	Establishing compensation strategy	MLHUD / National Planning Authority / Land Commission / Land Registry / District	Laws, Land acts	Land ownership unclear, Time

Having collected all the information regarding the community to be relocated, identified the responsible actors from the governance, identified the most affected community members and learned from the experiences in relocation the last goal of this strategy is presented. The fifth and final goal of the strategy deals with the design of the relocation process. This goal is divided into 10 concrete actions. These actions present the last steps of the relocation strategy, needed before the relocation occurs. Concretely these actions are presented in the table (Table 12.) and explained below.

- Collecting information about available relocation sites:
This concrete action should be done by the National Planning Authority with the help of the other collaborative institutions either from government both local and central and also private partners. This action includes collection of information about possible relocation sites available for use. **Remark**: In this study, a site in Mukono was found available after the interview with the Church of Uganda and their willingness to offer land from the church property. The land is around 40 hectares. The same place, Mukono is a place undergoing development as it is considered one of the satellite towns in Kampala. This location was found also in the analysis of this research as cause that some community members were having their daily activities in Mukono.

- Identifying precise location to be used as relocation site:
After the information for the relocation sites is collected the identification of the exact location should be done. This location should be selected by all the involved actors and most important the community representatives should be those with more weight in selecting the exact relocation site. On this phase, it is important to consider the flood risk, geological risk for the selected relocation site, making use of preventing planning to avoid the presence of natural hazards in the new area. A disagreement between institutions from local or central government and a private partner could be a limitation threatening the selection of the site that might be better for communities.

- Establish access roads, drainage system, solid waste in the new relocation site:
All the above mentioned institutions should do their duty as it is written in their mandate. The Ugandan National Road Authority should establish the access roads in the relocation site with the collaboration of the Ministry of Works and Transport in case they are not existing, or improve them when improvement is needed. Ministry of Water and Environment should provide a well planned drainage system and also a solid waste system to avoid the creation of existing problems found in Bwaise III. Budget in this concrete action is seen as a limitation but through donors and private investors it should not be considered as a problem to achieve.

- Establish low-cost housing facilities in the new relocation site:
KCCA should establish low-cost housing units for community members who will be relocated. Through private donors or through programs from their budget with the help of the Ministry of Land, Housing and Urban Development, this action can be fulfilled. Budget is seen as a constrain for this action, bringing the need for collaboration with private donors.

- Establishing sanitation facilities, educational facilities, health facilities and religious buildings in the new relocation site:
In order to establish these facilities all the institutions should lead for their specific field of expertise. Sanitation facilities should be established in the new relocation site, in case they do not exist, by the Ministry for Public Service. Ministry of Health should provide health facilities and hospitals for the community members in the new site where they are going to be relocated. Educational facilities are the responsibility of the Ministry for Education and Sports, which should establish or improve the educational facilities, respectively in the case where they do not exist and in case where they exist but an improvement is needed. Religious buildings should be build by the religious institutions active in Uganda. The constrain of the budget can be avoided by allocating specific funds and finding international donors willing to invest.

- Establish water supply and power supply:
Ministry for Water and Environment should establish the water supply system at the new relocation site. Also the power supply should be offered by the Ministry for Energy and Minerals as these two concrete actions were found to be crucial from the analysis of the study area of Bwaise III.

- Establish community gathering buildings:
Communities gather in the community gathering buildings, designed by KCCA to keep their links strong with each other, to solve problems and other activities where they are included. It was found important to have them for avoiding the breakdown of the community as found in the chapter 5 in the analysis of impacts caused to communities. Budget and location of the facilities to be build can be constrains for KCCA who leads this action and other supporters including Ministry of Lands, Housing and Urban Development but also Ministry for Local Government in case of relocation outside Kampala.

- Preserving community life and existing livelihood:
This action involves KCCA and National Planning Authority on preserving the community life and their livelihood in planning process of the relocation site. After the analysis of this research in chapter 4 for characteristics of the community and their livelihood the responsible authorities alongside with the

MLHUD as their collaborator should make sure the community life and their livelihood does not differ from their existing life and livelihood.

- Establishing tenure security and land rights:

Land rights and security of tenure for the relocation site should be established for each household head. This means that MLHUD alongside KCCA should provide land titles for the communities to be relocated. **Remark**: Land titles should be given with household head having 50% of it and the remaining 50% should be given to KCCA to avoid problems. These problems arise because some of the community members sell their new land and go back to the previous livelihood.

- Establishing compensation strategy:

MLHUD alongside the National Planning Authority and Land Commission should gather and establish a proper compensation strategy. This compensation strategy should address the proper compensation of the communities based in two principles to offer a deal which will attract the community to relocate and second to reduce costs on government actors. Time and unclear land ownership come as limitations because there is a limited time to establish a compensation strategy and the land ownership is still not known and mapped. A compensation strategy needs further studies and special attention. Security of land rights or compensation may have same effect. People can get the land or money and after a while they will move in their back environment.

- For the relocation site, as it was mentioned in the concrete action 5.1, the availability of a plot of land with possible use for relocation site in case of agreement and joint cooperation through public private partnership between Local Government (KCCA)-Central Government (MLHUD)-Private partner (Church of Uganda) should be highly considered.

7. DISCUSSION AND CONCLUSIONS

In this chapter the discussion, limitations of this research, conclusions and further research recommendations are presented. The results are discussed in terms of the relevance and the literature review, while the part on limitations is focused on what were the limitations and what was left out of this work. Furthermore, conclusions address if the research objectives were sufficiently specific to be addressed. Besides, the application of methods and data collection are summarized if they were sufficient or what should have been added. The application of the results is also summarized in a conclusion to provide an answer if it was generic or not. Finally, further research recommendations to be taken after this research alongside follow-ups conclude this research.

7.1. Discussion

The result of this research was to design a relocation strategy. As this strategy was designed, five main goals were part of it. These goals, were the result of analysis, literature review, identification in chapters 2,4 of previous relocation experiences and chapter 5 on governance. As these results were described in their specific chapters, the need for discussing them with the relevant literature proposed in the literature review chapter but also in the introduction chapter emerged.

In the study by Egan et al. (2015), relocation impacts needed to be identified resulting in a missing point which was filled by this study and addressed in the section 4.4. Moving forward another important result was an added research on inland cities as according to Lwasa (2010), research on relocation was done mainly in coastal cities. The two results presented above belonged to the introduction chapter, while more findings are discussed further. In addition to these findings, the research contributed into gathering and identifying previous experience on relocation but what was more important, practices that should be avoided when dealing with relocation. These two improvements to the relocation studies were also a part of the strategy, to be taken into consideration as learning from the previous practices was one of the main pillars of the strategy.

The main objective of this research was justified again, this time from the results proving that people were not only willing to relocate but they were also willing to spend money in order to relocate. This finding was considered very important as Chen, 2009; Viratkapan & Perera (2006) recommended that community participation which was related to their willingness was a very important factor in all relocation studies. Besides this Chen, 2009; Eranıl Demirli et al., 2015); (Taylor, 2013) found that the community social networks were crucial in their studies in order to preserve the environment that communities had in their previous location. After this strategy was designed the identification of social networks for the community would be a very important objective in order to relocate communities. As those social networks which were identified in this study are recommended to be very important, they should be considered in every relocation study. To be added, the assessment of the governance and its involvement in the process was never made before in a relocation study, but they were taking only leadership from community and its leaders resulting in breakdown of the community (Laugrand et al., 2010). By doing so, this research suggested that when a relocation process needs to be carried out the second sub objective of its strategy is crucial in identifying government institutions, NGOs, civil society and private partners without leaving out their collaboration. In conclusion, with the most important achievement of this study, the relocation strategy itself. In previous literature relocation was not treated sufficiently with the growing demand on it.

As it was explained in the introduction with the increase of the sea level and the change in climate, nowadays a need for a strategy emerged. By having this strategy now, it can be used and applied in the case study area of Bwaise III but also it can be applied and adapted globally for many relocation studies. Moreover it can be improved or changed easily according to the needs and requirements of each context.

7.2. Limitations

The section of limitations has as focus to express the humility of the research. First of all, one limitation of this research was that in the beginning a private partner, specifically Buganda Kingdom was included to be interviewed as part of this research and as one of the biggest land owners in Kampala. As the partner was approached and contacted during the fieldwork and after the fieldwork in Uganda, without any response it was decided to be left out of the study.

Besides the inclusion of the above mentioned private partner, as cause of time constrain not all social characteristics were identified and some of them were left out of this study, showing a decrease in the total percentage of implementing the strategy in Bwaise. The results of the social characteristics that were not identified would not cause problems in the implementation of the strategy but it is advised that when implementing the social characteristics to identify according to those defined by United Nations (United Nations Statistics Division, 2014)

Furthermore, missing data on how the existing policies were applied in a relocation process, led us to limit the analysis only in identifying the policies. Perhaps, another limitation which needs to be stated was the identification of indicators to evaluate and assess the implementation in more detail, but such indicators to be measured would require a longer time to be spent in the fieldwork. More than the time constrain, data availability on some specific indicators would result to be very crucial in case the indicators were planned to be in the strategy and then as cause of missing data, just to be removed.

Having said so, the limitations discussed above did not pose any threat to the fulfilment of the research objectives or to the relocation strategy.

7.3. Conclusions

This research had as its main objective to develop a strategy for community relocation, minimizing the impact affecting the life of the communities that are going to be relocated. In order to reach this main objective the study was divided into 4 sub objectives each providing an answer for what the strategy should address and serving also as three main disciplines that the strategy relied on.

The first research sub-objective was *To analyze the socio-economic characteristics and social-network pattern of the communities*. This sub objective was linked with three research questions providing the answers presented below. The social characteristics of the affected community members were their willingness to relocate, family composition, educational level, gender, age, income level and reason of movement in Bwaise. The main socio-economic activities and social-networks were the second point of analysis for the first sub-objective where the main activities were focused in small enterprises and low income jobs while this were found to be more evident in the informal sector. The social-networks were those of job location, primary and secondary schools, direct family relatives, shopping activities and daily food shopping activities concluding with the religious activities. To finalize with the third research question about the pattern of the socio-economic activities which was explained above with the low income jobs and its informality, the social-network pattern pointed out that their activities were found to be not very far from Bwaise. Except the direct family relatives for which the pattern was found to be very spread.

Second sub-objective was *To analyze governance structures involved in the relocation process*, sought to analyze the governance and the institutions followed by the policy. The institutions involved in the relocation process were found to be Kampala Capital City Authority (KCCA), Ministry of Lands, Housing and Urban

Development (MLHUD) for relocations happening inside the Kampala boundary while for relocation happening outside the inclusion of Ministry of Disaster and Preparedness, Prime Minister's Office, Ministry of Local Government, Ministry of Finance, Ministry of Education, ending the list with the NGOs and the civil society which were involved in the case study area of Bwaise. Moving towards the answer for the collaboration of the institutions responsible for the relocation process, which was the second research question of the sub-objective 2, all the institutions should collaborate between each other with the main role of the NGOs to support and sensitize people and the private partners to offer land and cooperation schemes as a public-private partnership. The third research question highlighted a gap in policy, missing a specific relocation policy. Furthermore, this research question provided the scattered policy, compounded by the Land Use policy, National Land policy, Environment policy and National policy for Disaster and Preparedness which combined have been used without any proof of evidence on how this combination was working.

Third sub objective, *To analyze the best practices and experiences from past relocation studies* provided the best practices and those to be avoided in a relocation process. The practices included: participation of community members throughout the entire process, consolidation of existing livelihood by taking in account the current extent of the livelihood, land-swap schemes, grants free land and employment opportunities. In this best practices that were recommended to be followed community intervention and organization together with the land tenure security compiled the list o the best practices answering the first research question of the sub-objective 3. The second research question, on practices that should be avoided included practices regarding the breakdown of the community, not taking into account cultural differences and their livelihood characteristics. Absence of facilities like schools, sanitation and health facilities and implementation in a later period of the public transportation, completed the list of these practices to be avoided and also answered the research sub-objective 3.

The final sub-objective was *To develop the strategy for relocation*, was accomplished after the answers for three research questions were given. Specifically in the results of the answers the elements to be included in the strategy were: the analysis of the current situation of the existing livelihood where the community was living, the governance role in the process and the practices from previous relocation experiences with communities, flood information and finally relocation design. Moreover, after defining the elements to be included in the strategy, the second research question of this sub-objective sought to define the steps on how a strategy was prepared. The list of the steps included: the objective and then the division in goals with its final step evidencing the concrete actions.

After this research sub-objectives were summarized and concluded, the more case study specific conclusions were provided. The research questions were sufficiently specific to be addressed and to provide answers for the sub-objectives of this research leading to a fulfilment of the main objective. The methods that were applied, were found to be successful for answering the above research questions, but further methods should be tried in order to see the difference in the results. The data collection was more than sufficient, gathering data for more variables than used in the thesis but the lack of data on social characteristics which was mentioned as a limitation in the discussion chapter needed to be made available. The case study area, was more than appropriate to answer this questions as being an area of very high interest in Kampala and one of the most wanted areas to live and to use it as a bench to jump from village in to the life of
Kampala. Finalizing the conclusions the results achieved from this research, especially that of the relocation strategy is specific result for Bwaise III neighbourhood but it can be applied everywhere that a relocation problem is faced. The methods that were used in this study can be applied in different case study with a different location and the results would differentiate as the governance and the

characteristics of the affected community members change from community to community and for sure in a different country from Uganda.

7.4. Recommendations

Although the fact that the context of application of this strategy might differ, the following recommendations were made helping in future for research on relocation, research on improved strategies for relocation.

-As all the social characteristics were not included in the analysis on social characteristics of this study, a recommendation is to include all this social characteristics and to see if the results for the strategy would change.

-Second, the implementation of this strategy in a different context rather than Uganda to test its global applicability is another recommendation to be considered in the future.

-Third, it is recommended that this strategy should be applied in a country where existing policies and practices on previous relocation experiences are available. The results would help in improving the reliability on this strategy and exploring new insights from experiences which are not made publically available as online publications.

-Another recommendation which popped-out during the fieldwork was a more participatory method with tables or track pads to identify in a more detailed way the social-networks of community networks. Furthermore to this recommendation interviews with community members should be added to gather more qualitative results, on perception of community members.

-The developed strategy should be presented and further discussed with all the relevant stakeholders. From these discussions and from the suggestions that will be produced the tuning of the strategy is recommended, finalizing with the pilot of the strategy to see if it works or not.

To conclude, further research on relocation should focus more on impacts created to the community and their daily life but also on minimizing the impacts to a extent which will increase their willingness to relocate, willingness to participate in the process but most important to relocate and not to go back in the previous livelihood.

LIST OF REFERENCES

Actogether. (2014). *Kampala profiles: Kawempe division. Slum Setlement Profile*. Kampala, Uganda. Retrieved from http://askyourgov.ug/request/37/response/37/attach/2/Kawempe Municipality.pdf

Airriess, C. A., Li, W., Leong, K. J., Chen, A. C.-C., & Keith, V. M. (2008). Church-based social capital, networks and geographical scale: Katrina evacuation, relocation, and recovery in a New Orleans Vietnamese American community. *Geoforum*, *39*(3), 1333–1346. doi:10.1016/j.geoforum.2007.11.003

Akukothela, N. R. (2006). *Assessment of Opportunities for the Resettlement of the San people - A GIS case study for the Ohangwena Region, Namibia*. Faculty of ITC, University of Twente.

Amnesty International. (2014). *Rule by law - Discriminatory legislation and legitimized abuses in Uganda*. Retrieved from https://www.amnestyusa.org/sites/default/files/afr59062014en.pdf

Armitage, D., & Plummer, R. (2010). Adaptive Capacity and Environmental Governance. In D. Armitage & R. Plummer (Eds.), (pp. 287–302). Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/978-3-642-12194-4

Bagenda, J. (2007). *The challenges of community participation in decentralization processes in Uganda: A case study of Kibaale District*. Retrieved from http://kimmagedsc.ie/wp-content/uploads/2013/10/justine_bagendasmallpdf.com_.pdf

Birkholz, S., Muro, M., Jeffrey, P., & Smith, H. M. (2014). Rethinking the relationship between flood risk perception and flood management. *Science of The Total Environment*, *478*, 12–20. doi:10.1016/j.scitotenv.2014.01.061

Bowman, L. J., & Henquinet, K. B. (2015). Disaster risk reduction and resettlement efforts at San Vicente (Chichontepec) Volcano, El Salvador: toward understanding social and geophysical vulnerability. *Journal of Applied Volcanology*, *4*(1), 14. doi:10.1186/s13617-015-0031-0

Bronen, R., & Chapin, F. S. (2013). Adaptive governance and institutional strategies for climate-induced community relocations in Alaska. *Proceedings of the National Academy of Sciences*, *110*(23), 9320–9325. doi:10.1073/pnas.1210508110

Buchanan, N., & Barnett, R. (2006). Peripheral Residential Relocation and Travel Pattern Change. *Urban Policy and Research*, *24*(2), 217–236. doi:10.1080/08111140600703824

Buckle, P., Mars, G., & Smale, S. (2000). New Approaches to Assessing Vulnerability and Resilience. *Australian Journal of Emergency Management*, *15*(2), 8.

Bukvic, A. (2013). Identifying gaps and inconsistencies in the use of relocation rhetoric: a prerequisite for sound relocation policy and planning. *Mitigation and Adaptation Strategies for Global Change*, *35*(2), 264–278. doi:10.1007/s11027-013-9532-5

Campbell, J., Goldsmith, M., & Koshy, K. (2005). *Community Relocation as an Option for Adaptation to the Effects of Climate Change and Climate Variability in Pacific Island Countries (PICs)*.

Chen, S. (2009). Participation Capacity Building in Involuntary Resettlement and Rehabilitation Induced by Dam Project. In *Advances in Water Resources and Hydraulic Engineering* (pp. 1433–1439). Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/978-3-540-89465-0_250

Coburn, A., Leslie, J., & Tabban, A. (1984). *Reconstruction and resettlement 11 years later: a case study of Bingol Province, Eastern Turkey*. Balkema, Rotterdam.

Correa, E., Ramírez, F., & Sanahuja, H. (2011). *Populations at Risk of Disaster A Resettlement Guide*.

Cronin, V., & Guthrie, P. (2011). Community-led resettlement: From a flood-affected slum to a new society in Pune, India. *Environmental Hazards*, *10*(3-4), 310–326. doi:10.1080/17477891.2011.594495

Cummings, C. A., Todhunter, P. E., & Rundquist, B. C. (2012). Using the Hazus-MH flood model to evaluate community relocation as a flood mitigation response to terminal lake flooding: The case of Minnewaukan, North Dakota, USA. *Applied Geography*, *32*(2), 889–895. doi:10.1016/j.apgeog.2011.08.016

Dai, F. ., Lee, C. ., & Zhang, X. . (2001). GIS-based geo-environmental evaluation for urban land-use planning: a case study. *Engineering Geology*, *61*(4), 257–271. doi:10.1016/S0013-7952(01)00028-X

Dix, J., & Mathews, H. L. (2002). *Strategic planning process. Competitive Intelligence Review*. Retrieved from http://fisher.osu.edu/supplements/10/1470/All_Articles.pdf

Egan, M., Lawson, L., Kearns, A., Conway, E., & Neary, J. (2015). Neighbourhood demolition, relocation and health. A qualitative longitudinal study of housing-led urban regeneration in Glasgow, UK. *Health & Place*, *33*, 101–108. doi:10.1016/j.healthplace.2015.02.006

English, R., & Brusberg, E. F. (2002). *IFC Handbook for Preparing a Resettlement Action Plan*. Retrieved from http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_handbook_rap__wci__1319577659424

Eranıl Demirli, M., Tuna Ultav, Z., & Demirtaş-Milz, N. (2015). A socio-spatial analysis of urban transformation at a neighborhood scale: The case of the relocation of Kadifekale inhabitants to TOKİ Uzundere in İzmir. *Cities*, *48*, 140–159. doi:10.1016/j.cities.2015.06.013

Esteves, L. S. (2014a). Current Perceptions About Managed Realignment (pp. 109–123). doi:10.1007/978-94-017-9029-1_10

Esteves, L. S. (2014b). Examples of Relevant Strategies and Policies (pp. 45–60). doi:10.1007/978-94-017-9029-1_4

Faziawati, A. A., Nor, A. I., & Norhuzailin, H. (2014). The Impact of Slum Relocation on the Cultural and Locality of Desa Mentari's Community in Selangor, Malaysia. In *Fifth International Cultural Landscape Conference, Teheran, IRAN* (p. 11).

Ferris, E. (2014). *Planned Relocations, Disasters and Climate Change: Consolidating Good Practices and Preparing for the Future*. Retrieved from http://www.unhcr.org/53c4d6f99.pdf

Godschalk, D. R., Rose, A., Mittler, E., Porter, K., & West, C. T. (2009). Estimating the value of foresight: aggregate analysis of natural hazard mitigation benefits and costs. *Journal of Environmental Planning and Management*, *52*(6), 739–756. doi:10.1080/09640560903083715

IFAD. (1999). *Good governance: An overview*. Retrieved from http://www.ifad.org/gbdocs/eb/67/e/EB-99-67-INF-4.pdf

IPCC. (2014). *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Yokohama, Japan.

Jha, A. K., Bloch, R., & Lamond, J. (2012). *Cities and Flooding*. The World Bank. doi:10.1596/978-0-8213-8866-2

Kabumbuli, R., & Kiwazi, F. W. (2009). Participatory planning, management and alternative livelihoods for poor wetland-dependent communities in Kampala, Uganda. *African Journal of Ecology*, *47*, 154–160. doi:10.1111/j.1365-2028.2008.01063.x

King, D., Bird, D., Haynes, K., Boon, H., Cottrell, A., Millar, J., … Thomas, M. (2014). Voluntary relocation as an adaptation strategy to extreme weather events. *International Journal of Disaster Risk Reduction*, *8*, 83–90. doi:10.1016/j.ijdrr.2014.02.006

Kuhl, L., Kirshen, P. H., Ruth, M., & Douglas, E. M. (2014). Evacuation as a climate adaptation strategy for environmental justice communities. *Climatic Change*, *127*(3-4), 493–504. doi:10.1007/s10584-014-1273-2

Kumar, R. (2010). *Research Methodology: A Step-by-Step Guide for Beginners* (Vol. 12). SAGE Publications. Retrieved from https://books.google.com/books?id=df5cBAAAQBAJ&pgis=1

Laugrand, F., Oosten, J., & Serkoak, D. (2010). "The saddest time of my life": relocating the Ahiarmiut from Ennadai Lake (1950–1958). *Polar Record*, *46*(02), 113. doi:10.1017/S0032247409008390

Lersch, P. M. (2014). *Residential Relocations and their Consequences. Residential Relocations and their Consequences*. Wiesbaden: Springer Fachmedien Wiesbaden. doi:10.1007/978-3-658-04257-8

Liao, K.-H. (2012). A Theory on Urban Resilience to Floods--A Basis for Alternative Planning Practices. *Ecology and Society*, *17*(4), art48. doi:10.5751/ES-05231-170448

Lwasa, S. (2010). Adapting urban areas in Africa to climate change: the case of Kampala. *Current Opinion in Environmental Sustainability*, *2*(3), 166–171. doi:10.1016/j.cosust.2010.06.009

Maldonado, J. K. (2012). A New Path Forward: Researching and Reflecting on Forced Displacement and Resettlement: Report on the International Resettlement Conference: Economics, Social Justice, and Ethics in Development-Caused Involuntary Migration, the Hague, 4-8 October 2010. *Journal of Refugee Studies*, *25*(2), 193–220. doi:10.1093/jrs/fer036

Maldonado, J. K., Shearer, C., Bronen, R., Peterson, K., & Lazrus, H. (2013). The impact of climate change on tribal communities in the US: displacement, relocation, and human rights. *Climatic Change*, *120*(3), 601–614. doi:10.1007/s10584-013-0746-z

Maya-Jariego, I., & Holgado, D. (2015). Network analysis for social and community interventions. *Psychosocial Intervention*. doi:10.1016/j.psi.2015.10.001

Moldonado, J. K., Colombi, B., & Pandya, R. (2014). *Climate Change and Indigenous Peoples in the United States*. (J. K. Maldonado, B. Colombi, & R. Pandya, Eds.). Cham: Springer International Publishing. doi:10.1007/978-3-319-05266-3

Nelson & Associates. (2014). *AGRICULTURE CLUSTER DEVELOPMENT: Resettlement Policy Framework (RPF)*.

Obudho, R. A., & Aduwo, G. O. (1989). Slum and squatter settlements in urban centres of Kenya: Towards a planning strategy. *The Netherlands Journal of Housing and Environmental Research*, *4*(1), 17–30. doi:10.1007/BF02498028

Okada, T., Haynes, K., Bird, D., van den Honert, R., & King, D. (2014). Recovery and resettlement following the 2011 flash flooding in the Lockyer Valley. *International Journal of Disaster Risk Reduction*, *8*, 20–31. doi:10.1016/j.ijdrr.2014.01.001

Oliver-Smith, A. (1991). Successes and Failures in Post-Disaster Resettlement. *Disasters*, *15*(1), 12–23. doi:10.1111/j.1467-7717.1991.tb00423.x

Oxford Dictionaires. (n.d.). strategy - definition of strategy in English from the Oxford dictionary. Retrieved January 15, 2016, from http://www.oxforddictionaries.com/definition/english/strategy

Perry, R. W., & Lindell, M. K. (1997). Principles for Managing Community Relocation as a Hazard Mitigation Measure. *Journal of Contingencies and Crisis Management*, *5*(1), 49–59. doi:10.1111/1468-5973.00036

Peters-Guarin, G., McCall, M. K., & van Westen, C. (2012). Coping strategies and risk manageability: using participatory geographical information systems to represent local knowledge. *Disasters*, *36*(1), 1–27. doi:10.1111/j.1467-7717.2011.01247.x

Rashid, H., Hunt, L. M., & Haider, W. (2007). Urban Flood Problems in Dhaka, Bangladesh: Slum Residents' Choices for Relocation to Flood-Free Areas. *Environmental Management*, *40*(1), 95–104. doi:10.1007/s00267-006-0233-7

Rufat, S., Tate, E., Burton, C. G., & Maroof, A. S. (2015). Social vulnerability to floods: Review of case studies and implications for measurement. *International Journal of Disaster Risk Reduction*. doi:10.1016/j.ijdrr.2015.09.013

Rural Electrification Agency. (2014). *ENERGY FOR RURAL TRANSFORMATION PHASE III (ERT III) - RESETTLEMENT POLICY FRAMEWORK (RPF)*.

Shi, G. (2009). Discussion on Resettlement Science. In *Advances in Water Resources and Hydraulic Engineering* (pp. 1456–1462). Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/978-3-540-89465-0_253

Shreyas, S., & Prathigna, P. K. (2012). *Role of Multi-Actor Participation in Slum Upgradation*. doi:10.13140/RG.2.1.3983.1526

Sipe, N., & Vella, K. (2014). Relocating a Flood-Affected Community: Good Planning or Good Politics?

Journal of the American Planning Association, *80*(4), 400–412. doi:10.1080/01944363.2014.976586

Sliuzas, R., Jetten, V., & Flacke, J. (2013). *Flood Risk Assessment, Strategies and Actions for Improving Flood Risk Management in Kampala*.

Taylor, N. (2013). Relocation Following Parental Separation: International Research, Policy and Practice. *Children Australia*, *38*(04), 134–142. doi:10.1017/cha.2013.22

The World Bank. (2010). *Strategic Planning: A ten-step guide*. Retrieved from http://siteresources.worldbank.org/INTAFRREGTOPTEIA/Resources/mosaica_10_steps.pdf

Todd, N. R., Houston, J. D., & Suffrin, R. L. (2015). Applying affiliation social network analysis to understand interfaith groups. *Psychosocial Intervention*. doi:10.1016/j.psi.2015.07.007

Türke, R.-E. (2008). *Governance*. Heidelberg: Physica-Verlag HD. doi:10.1007/978-3-7908-2080-5

Uganda Bureau of Statistics. (2014). *The 2014 Uganda Population and Housing Census*. Republic of Uganda. Retrieved from http://www.ubos.org/onlinefiles/uploads/ubos/NPHC/NPHC 2014 PROVISIONAL RESULTS REPORT.pdf

UN. (2004). *Guidelines for Reducing Flood Losses*. Retrieved from http://www.un.org/esa/sustdev/publications/flood_guidelines.pdf

UNESCAP. (2009). What is Good Governance ? *United Nations Economic and Social Comission for Asia and the Pacific*, 1–3.

UNHCR. (2014). *Planned Relocation, Disasters and Climate Change: Consolidating Good Practices and Preparing for the Future*. Sanremo, Italy. Retrieved from http://www.unhcr.org/cgi-bin/texis/vtx/home/opendocPDFViewer.html?docid=54082cc69&query=relocation

United Nations Statistics Division. (2014). UNSD // United Nations Statistics Division - Demographic and Social Statistics. *2014*. Retrieved January 15, 2016, from http://unstats.un.org/unsd/demographic/

Usamah, M., & Haynes, K. (2012). An examination of the resettlement program at Mayon Volcano: what can we learn for sustainable volcanic risk reduction? *Bulletin of Volcanology*, *74*(4), 839–859. doi:10.1007/s00445-011-0567-8

Viratkapan, V., & Perera, R. (2006). Slum relocation projects in Bangkok: what has contributed to their success or failure? *Habitat International*, *30*(1), 157–174. doi:10.1016/j.habitatint.2004.09.002

Wu, Z., Penning, M. J., Zeng, W., Li, S., & Chappell, N. L. (2015). Relocation and Social Support Among Older Adults in Rural China. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. doi:10.1093/geronb/gbu187

Xu, Y., Xu, H., & Zhang, D. (2015). A novel disjoint community detection algorithm for social networks based on backbone degree and expansion. *Expert Systems with Applications*, *42*(21), 8349–8360. doi:10.1016/j.eswa.2015.06.042

Yan Sun, Guoqing Shi, & Zhonggang Liu. (2011). Selection of resettlement relocation region based on multi-criteria spatial decision model. In *2011 2nd International Conference on Artificial Intelligence, Management Science and Electronic Commerce (AIMSEC)* (pp. 3341–3344). IEEE. doi:10.1109/AIMSEC.2011.6011262

Appendix 1. Questionnaire

QUESTIONNAIRE FOR ASSESSING FLOOD MITIGATION PROCESSES IN BWAISE

Good day. Simbarashe Chereni and Glen Olli - students from the University of Twente in the Netherlands are studying flood mitigation processes in Bwaise community. This research is a partial fulfilment of the requirements of The Master of Science degree in Geo-information Science and Earth observation. You have been selected as one of the people who can contribute the required information. We kindly request your time to provide answers for the questions below. The information gathered will be used for solely academic purposes and no names will be publicly used without your consent.

Contacts:

Simbarashe Chereni, *Faculty of Geo-Information Science and Earth Observation, University of Twente, Enschede, The Netherlands. Email: s.chereni@student.utwente.nl*

Glen Olli, *Faculty of Geo-Information Science and Earth Observation, University of Twente, Enschede, The Netherlands. Email: g.olli@student.utwente.nl*

Questions on socio-economic status

1. Gender: ☐ Male ☐ Female Location of House: _____X_____Y
2. Age: ☐ Years
3. Family composition: ☐ People
4. How long have you been living here? ☐ years
5. What is the reason that you moved here:
   - ☐ Job Opportunity
   - ☐ Access to services/Infrastructure
   - ☐ Family/Relatives located nearby
   - ☐ Displaced
   - ☐ Other
6. How many people work in this house?
   ☐ People in formal sector ☐ People in informal sector
7. What type of activity/job is the source of income?
   ☐
8. What is your income level per month?
   ☐ **0-50.000** UGX ☐ **50.000-75.000** UGX ☐ **75.000-100.000** UGX ☐ **100.000-150.000**UGX
   ☐ **100.000-150.000** UGX ☐ **150.000-175.000** UGX ☐ **175.000+** UGX
9. What is the status of this house?
   - ☐ Own
   - ☐ Rent (if rent How much is rent price in UGX/month?) ☐
   - ☐ Borrow
10. What is the status of your land?
    - ☐ Own
    - ☐ Rent (if rent How much is rent price in UGX/month?) ☐
    - ☐ Borrow
11. What is the land tenure status of this house?
    ☐ Formal ☐ Informal
12. What is the highest education level reached by any member of your household?
    ☐ Primary ☐ High School ☐ University ☐ None

Questions on threat appraisal

13. In your opinion, what is the likelihood of your house being flooded?
    No (0) ☐ (1) low ☐ (2) Medium ☐ (3) High ☐

14. What is the likelihood of flood damage on your house?
    No (0) ☐ (1) small ☐ (2) Medium ☐ (3) High ☐

15. How do you rate the benefit you are likely to get in case of flooding? If no skip Qn 16.
    No (0) ☐ (1) small ☐ (2) Medium ☐ (3) big ☐

16. Please write in the space provided, the type of benefits you get during flooding.
    (a)……
    ……..
    (b)……
    ……..
    (c)……
    ……..

Questions on coping appraisal

17. Which damage mitigation measures does your family adopt to deal with flooding?
    ……
    ……
    ……
    ……
    ……
    ……..

18. Are you or any member of the family able to implement the following damage mitigation measures?

(a) Building small dykes	(0) No	☐	(1) Yes	☐
(b) Clearing the drainage	(0) No	☐	(1) Yes	☐
(c) Putting grass on your yard	(0) No	☐	(1) Yes	☐
(d) Capture rainwater to reduce runoff	(0) No	☐	(1) Yes	☐
(e) Putting sand bags to protect the yard	(0) No	☐	(1) Yes	☐
(f) Raising the floor of your house	(0) No	☐	(1) Yes	☐
(g) Putting electric sockets higher	(0) No	☐	(1) Yes	☐

19. How do you perceive the effectiveness of the following mitigation measures?
    (a) Building small dykes
    (0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
    (3) Very effective ☐

    (b) Clearing the drainage
    (0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
    (3) Very effective ☐

    (c) Putting grass on your yard
    (0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
    (3) Very effective ☐

(d) Capture rainwater to reduce runoff
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

(e) Putting sand bags to protect the yard
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

(f) Raising the floor of your house
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

(g) Putting electric sockets higher
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

(h) Putting your goods on high place
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

(i) Moving away to friends & family
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

(i) Sharing high places with others
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

(k) Moving away to public places
(0) Ineffective ☐ (1) Somewhat effective ☐ (2) Effective ☐
(3) Very effective ☐

20. How do you perceive the time requirements for implementing these measures?

(a) Building small dykes	(0) Less	☐	(1) More	☐
(b) Clearing the drainage	(0) Less	☐	(1) More	☐
(c) Putting grass on your yard	(0) Less	☐	(1) More	☐
(d) Capture rainwater to reduce runoff	(0) Less	☐	(1) More	☐
(e) Putting sand bags to protect the yard	(0) Less	☐	(1) More	☐
(f) Raising the floor of your house	(0) Less	☐	(1) More	☐
(g) Putting electric sockets higher	(0) Less	☐	(1) More	☐
(h) Putting your goods on high place	(0) Less	☐	(1) More	☐
(i) Moving away to friends & family	(0) Less	☐	(1) More	☐
(j) Sharing high places with others	(0) Less	☐	(1) More	☐
(k) Moving away to public places	(0) Less	☐	(1) More	☐

21. What is your judgement of the costs of implementing such measures?

(a) Building small dykes	(0) low		(1) High	
(b) Clearing the drainage	(0) Low		(1) High	
(c) Putting grass on your yard	(0) Low		(1) High	
(d) Capture rainwater to reduce runoff	(0) Low		(1) High	
(e) Putting sand bags to protect the yard	(0) Low		(1) High	
(f) Raising the floor of your house	(0) Low		(1) High	
(g) Putting electric sockets higher	(0) Low		(1) High	
(h) Putting your goods on high place	(0) Less		(1) High	
(i) Moving away to friends & family	(0) Less		(1) High	
(j) Sharing high places with others	(0) Less		(1) High	
(k) Moving away to public places	(0) Less		(1) High	

Questions on flood experience

22. Have you ever experienced flooding or inundation No (0) ☐ (1) Yes ☐
23. Please explain the extent of the flooding in the space provided below (Nature, level & duration
    ……
    ……
    ……
    ……
    ……

24. Have you ever incurred health problems (e.g. Malaria, dengue, diarrhoea, skin problems)? If yes please explain in the space provided
25. No (0) ☐ (1) Yes ☐
    ……
    ……
26. Have you ever incurred financial loss during flooding? If yes please explain in space provided No (0) ☐ (1) Yes ☐
    ……
    ……..

Questions on Risk attitudes

27. How willing are you to spend resources in order to protect your property against flooding?

(0) Not willing ☐ (1) somewhat willing ☐

(2) Willing ☐ (3) highly willing ☐

28. Please explain your answer in the space provided below:
    ……
    …….

Questions on Risk management policies

29. Have you ever looked for information about flood risk?
    No (0) ☐ (1) Yes ☐

30. Have you ever received information about flood protection
    No (0) ☐ (1) Yes ☐

31. What is your feeling about flood protection from the government/municipality?
    (0) Not protected ☐ (1) somewhat protected ☐

(2) Protected ☐ (3) highly protected ☐

32. Have you ever received an incentive to implement mitigation measures? If yes please explain in the space provided
    No (0) ☐ (1) Yes ☐
    ……..

33. Please explain the type of incentive you got in the space provided below:
    ……
    ……
    ……
    ……
    ……

Question about social networks

34. Have you taken/intended to take mitigation measures because your family/friends/relatives did the same at their houses?
    No (0) ☐ (1) Yes ☐

Questions about mitigation measures

35. Which flood damage mitigation measures have you implemented
    ……
    ……
    ……
    ……..
36. Which other flood damage mitigation measures do you intend to implement?
    ……
    ……
    ……
    ……..

37. How is the access to public services?

	Good	Fair	Bad
Health			
Education			
Infrastructure			
Community Center			
Religious Place			

38. How often does your house flood?
    ☐ Once in 5 year ☐ Every time it rains ☐ Every year ☐ No Flood
    ☐ Once in 10 years

Relocation Questions

39. Where is your job located?
    ☐

40. Which primary school/s do your children attend (in case children live in the household)?

41. Which secondary school/s do your children attend (in case children live in the household)?

42. Where are your direct relatives living?

43. Where is your daily food shopping activity located?

44. Where is your shopping area located (clothes, and personal belongings)?

45. Where is the community gathering area and religious building locations?

46. How do your household members reach the following people and services? Please indicate in appropriate column?

	Foot	Bicycle	Motor Bike (Boda Boda)	Public Transport (Taxi)	Car
Go to Job location					
Go to Primary school					
Go to Secondary school					
Go to visit Relatives and friends					
Go to Daily Food shopping					
Go to General shopping					
Go to Community and religious activities					

47. In case of relocation from here, how important are the following services in the new location? Please indicate your ranking by encircling the appropriate level.

	1	2	3	4	5
Sanitation					
Distance to Work					
Ground Floor Apartment					
Land Rights					
Other (Please specify)…… ……					

48. In case of relocation what are the five most important basic needs that you expect to be fulfilled?

1. 2. 3. 4 5

49. How happy are you with your life, living in Bwaise.

1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0

50. Are you willing to move from here, in case of a relocation project?

51. Are you willing to spend some money to move from here, in case of a relocation project?

☐ Yes ☐ No

52. Based on your opinion what are the main positive and negative impacts from relocation?

Positive					
Negative					

53. What are your expectations from the government authorities for supporting relocation?

1.	2.	3.
4.	5.	6.

54. What are you prepared to contribute yourself (labor, amount of money)?

1.	2.	3.

Thank You Very Much for your time!

Appendix 2. Interview guides used with key informants

Interview guide for Ministry of Land Housing and Urban Development & KCCA

My name is Glen Olli - a student from the University of Twente in the Netherlands. I am studying a relocation process in Kampala area. This research is a partial fulfilment of the requirements of The Master of Science degree in Geo-information Science and Earth observation. You have been selected as one of the people who can contribute the required information. We kindly request your time to provide answers for the questions below. The information gathered will be used for solely academic purposes and no names will be publicly used without your consent.

Part 1: General Information

1. Who are the institutions involved in a relocation process?

2. How is the legal framework for collaboration between different involved institutions?

3. What is the policy (if there is) for relocation in a dangerous and often flooded area?

Part 2: Planning Studies & Approved Plans

1. What is your experience in the relocation process related to the past and current planning situation?

2. Is relocation considered in the new planning studies and in the future plans? If yes in which extent and if not how can it be considered?

3. What are the criteria that should be considered when relocation is implemented in the new plans?

4. Are there any potential or appropriate zones identified as zones to be used for relocation?

Part 3: Infrastructure

1. What are the infrastructure costs when a relocation process takes place?

2. What is the current situation of infrastructure for identified potential zones?

3. In case of a relocation process is the government going to provide the infrastructure for the relocation zone?

Part 4: Potential Zones (If potential zones exist if not what criteria makes it a potential zone)

1. What elements were taken into consideration when finding potential zones for relocation?

2. What elements make a specific zone a potential candidate to be selected and used for relocation?

Part 5: Support

1. What can government offer to support relocation?

2. Is the government willing to offer new infrastructure, payment with soft loan and long term payments?

3. Is the government offering a land swap procedure for relocation? (Buying the actual land to the community and offering free land to a potential zone)

4. What can be done to build and provide a relocation project from the government or nongovernmental organization?

Interview guide for NGOs working in Kampala area

My name is Glen Olli - a student from the University of Twente in the Netherlands. I am studying relocation process in Kampala municipality. This research is a partial fulfilment of the requirements of The Master of Science degree in Geo-information Science and Earth observation. You have been selected as one of the people who can contribute the required information. We kindly request your time to provide answers for the questions below. The information gathered will be used for solely academic purposes and no names will be publicly used without your consent.

Part 1: Interview Questions

1. What is your position in your organisation?
2. How does your organisation can assist households in a possible relocation process?
3. Is your organisation involved in any activity regarding the floods ?
4. What do you think about the measures taken by the government/ municipality to mitigate flood damage?
5. Are you aware of a proposed relocation process by the government/municipality?
6. Do you think that relocation is the best and the final solution for the households being always threatened by floods?
7. Based on your opinion which are the most sensitive issues for the people, to move from the existing houses and businesses ?

Interview guide for Uganda Church

My name is Glen OLLI - a student from the University of Twente in the Netherlands. I am studying a relocation process in Kampala area. This research is a partial fulfilment of the requirements of The Master of Science degree in Geo-information Science and Earth observation. You have been selected as one of the people who can contribute the required information. We kindly request your time to provide answers for the questions below. The information gathered will be used for solely academic purposes and no names will be publicly used without your consent.

Part 1: Interview Questions

1. What is your position in the Uganda Church hierarchy/administration?
2. Are you aware about floods in the territories of Kampala?
3. How can the flooding problem be solved ?
4. Are you aware of any solution proposed by the government/ municipality regarding the flooded areas?
5. Are you ready to cooperate with government/municipality/households in a possible relocation process in the flooded areas ?
6. Do you see any possibility for offering land from Church properties for the households part of the relocation process.
7. What kind of regulations needed for making that cooperation applicable?
8. What are you views regarding a final solution for that category of households always threatened by floods?