

**AN ASSESSMENT OF HIGH POPULATION GROWTH AND  
DEVELOPMENT OF SANITARY FACILITIES IN URBAN CENTRES  
IN UGANDA. A CASE STUDY OF NAKAWA DIVISION**

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## DECLARATION

I, **TUSIIME JEAN** declare that this research proposal is my original work and has to the best of my knowledge has never been submitted for any award in a university or other institutions of higher learning.

Signed:   
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Date: 30/09/2016

### APPROVAL

This research report was compiled under my supervision is here by submitted with my approval as the student's supervisor.

Sign:.....

**Mr. Mpabaisi K. Tom**

Dated:.....

30/09/2016

## **DEDICATION**

I dedicate this research report to my dear parents Mr. Busingye Naboth and my Mother Mrs. Busingye Annet for all the love, care and support given to me in my entire life. I also dedicate it to my Late Grandmother Mrs. Kamazoooba Evanice who made me what I am today. I will always remember you.

**My God bless you all.**

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## **ABSTRACT**

The study assessed high population growth and development of sanitation facilities in urban centres in Uganda. A case study of Nakawa division and it was guided by the following research objectives (i) to examine the contributing factors to poor sanitation facilities in Nakawa Division, to assess the effects of poor sanitation facilities to the people of Nakawa division and to suggest way that can improve sanitation facilities in Nakawa division, Kampala. The descriptive survey design was employed to harmonize both quantitative and Qualitative data. A sample size of 50 respondents was determined and used for data collection using both interviews and questionnaires. Data was analyzed using Statistical Package for Social Scientist (SPSS) and presented in tables in which information was interpreted using themes, explanations, photographs, simple percentages and frequencies.

Finings of the study showed that some of the major contributing factors to poor sanitation facilities in Nakawa Division are poor planning as houses are constructed without approved house plans ,poor management by landlord, inadequate drainage systems, congestion and this lead to effects like spread of diseases, flooding, pollution and blockage of drainage patterns. Findings further indicated that there is need to promote community service participation by everyone, collaboration with the private sector and well as evaluation of sanitation policies and stick to their effective implementation. The study concluded that promotion of sanitation is a collective effort and therefore community involvement should be instituted at every level of project development. Better governance from the local leaders and project developers and all stakeholders will help yield sustainable results. Good governance should be adopted by all local leaders and representatives of the area so that they have one mind towards the destiny of solving the sanitation problem once and for all without politicizing the process so as to achieve as sustainable development.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 BACKGROUND**

Globally, 54 percent of the population lives in urban areas today, and this trend is expected to continue by 2045, the number of people living in cities will increase by 1.5 times to 6 billion, adding 2 billion more urban residents (World Bank, 2015). For countries, regions, states, and so on, population growth results from a combination of natural increase and migration flows particularly from rural to urban settlements (Population Reference Bureau, 2010). The rate of natural increase is equivalent to the rate of population growth only for the world as a whole and for any smaller geographical units that experience no migration.

Throughout history, sanitation facilities such as garbage collection, water and sewage treatment were practically non-existent. Yet the history of sanitation dates at least 7000 years, to Babylonians, Egyptians, Greeks and Romans. During medieval times, towns were dirty and crowded, and disease and epidemics spread unchecked because of the lack of sanitation facilities (Vanuatu Demographic and Health Survey, 2013). Water was contaminated, and personal hygiene was virtually unknown. Tuberculosis, cholera, diphtheria, small pox, yellow fever, all were rampant.

According to WHO (2004), sanitation generally refers to the provision of facilities and services for the safe disposal of both plastic and organic wastes including both human and animal wastes. On the other hand sanitation is defined as the hygiene of promoting health through prevention of human contact with the hazards of wastes as well as the treatment and proper disposal of sewage wastewater (Wikipedia, 2014). Hazards can either be physical, microbiological, biological or chemical agents of disease. Wastes that can

cause health problems include human and animal faeces, solid wastes, domestic wastewater, industrial wastes and agricultural wastes.

In Africa, as many as 150 million urban residents representing up to 50 per cent of the urban population do not have adequate water supplies, while 180 million, or roughly 60 per cent of people in urban areas lack adequate sanitation. In urban Asia, 700 million people, constituting half the population, do not have adequate water, while 800 million people or 60 per cent of the urban population is without adequate sanitation (UN-Habitat, 2008). According to the Population Research Bureau (2008), of the estimated 140 million people in East Africa, the urban population comprises of at least 25%, 18%, 17%, 13%, and 11% in Tanzania, Kenya, Rwanda, Uganda, and Burundi respectively. An estimated 60 million people reside in East Africa's informal settlements.

There are great differences in population growth from one part of the world to another. Urban development is conceptualized as the social, cultural, economic and physical development of cities, as well as the underlying causes of these processes. Many people share a conviction that over population in future will bring overcrowding, poverty, conflicts and violence and environmental degradations, high crime rates, food shortages, diseases, hence low levels of development which are all consequent factors from a rapidly growing population (Barro, 2011). It should however be noted that population growth if planned for and controlled effectively can lead to urbanization and contribute to sustainable growth and development by increasing productivity, allowing innovation and new ideas to emerge. In a different perspective, the speed and scale of urbanisation brings challenges, including meeting accelerated demand for affordable basic services sanitation facilities inclusive.

The most prominent public health problems in Pacific countries, especially among the poor, remain those of (largely preventable) infectious diseases, in particular respiratory diseases related to overcrowding (high population), and

gastroenteric diseases related to water pollution, poor sanitation, and inappropriate health and hygiene practices. Poor-quality water and sanitation facilities continue to contribute to public health risks. Infant diarrhoea is also common throughout the region. Sewage contamination of waters provided ideal conditions for the cholera outbreak in so many parts of Uganda recently [Taeuea et al, eds. 2000].

Uganda is now considered one of the fastest growing economies in Eastern Central Africa. According to the national population and housing census (2014) Uganda's population exceeds 34 million people. This is quite a large number compared to the last 10 decades. Every human being would go for greener pastures, and according to Uganda's economic growth, jobs are concentrated in urban areas which creates an avenue for an increase in rural-urban migration. This requires effective management of sanitary facilities that will raise health standards in urban areas.

The deterioration of urban living environments is exacerbating health problems. Most low-income families have gravitated to squatter and informal settlements that proliferate in and around towns. The incidence of poor sanitary facilities is high, especially among infants. However, these health risks also affect the wider urban population and can jeopardize key economic sectors.

Sanitation in Ugandan urban centres has been traditionally accorded low priority in national development. It has been often marginalised and rarely talked about in national debates. Equally, individuals and the private sector have not accorded sanitation priority. Other consequence, sanitation has previously suffered inadequate political and public support, lack of legislative and policy guidelines, poor technology choice, inadequate resources allocation (human, financial and material) as well as inadequate corroboration and coordination among all concerned parties (Ministry of Health, 1997).

## **1.2 Problem Statement**

Uganda is now considered one of the fastest growing economies in Eastern Central Africa. According to the national population and housing census (2014) Uganda's population exceeds 34 million people. The provision of adequate sanitation facilities is important. Proper disposal of all waste as well as control of the carriers of communicable diseases, including mosquitoes, rats, mice and flies, is crucial to mitigate health risks and prevent epidemics (UNHCR, 2009).

A new report by an international organization, Water Aid, shows that Uganda is still lagging behind on the reduction of people without sustainable access to basic sanitation yet the rate of population growth is very high. According to the report, Uganda has achieved only 34 per cent access to basic sanitation compared to the required 72 per cent by 2015. This means that more than half of the Ugandan population lack access to basic sanitation facilities. Sanitation provision in Kampala (the capital city of Uganda) is grossly deficient, as in most cities in sub-Saharan Africa (Hutton et al. 2015). Most people do not have access to a hygienic toilet; large amounts of faecal waste are discharged to the environment without adequate treatment; this is likely to have major impacts on infectious disease burden and quality of life. Hence this study is intended to assess the impact of high population growth on development of sanitation facilities in Nakawa division.

## **1.3 Purpose of the Study**

The purpose of this study was to examine the impact of high Population growth on development of sanitary facilities in Nakawa Division, Kampala District.

### **1.3.1 Objectives of the Study**

- i) To examine the contributing factors to the poor sanitary facilities in Nakawa division, Kampala District.
- ii) To assess the effects of poor sanitation facilities to the people of Nakawa Division.

- iii) To suggest ways that can improve sanitation facilities in Nakawa Division

#### **1.4 Research Questions**

- i) What are the contributing factors to the poor sanitary facilities in Nakawa division, Kampala District?
- ii) What are the effects of poor sanitation facilities to the people of Nakawa Division?
- iii) What are the ways that can improve sanitation facilities in Nakawa Division?

#### **1.5 Scope of the Study**

##### **1.5.1 Geographical scope**

This study was conducted in Nakawa division, which is found in Kampala district, central Uganda.

##### **1.5.2 Content scope**

The study was mainly limited to population growth and its impact on sanitation facilities.

##### **1.5.3 Time scope**

The study was conducted in a 4 months' time scope starting from May 2016 to September 2016.

#### **1.6 Significance of the Study**

Based on the findings of this research, appropriate recommendations were made to offer various suggestions on how to improve the sanitation facilities.

Furthermore, the findings from this research, may guide Nakawa division and Kampala capital city authority as a whole to develop more effective strategies

for efficient resource allocation in the areas of sanitation preferably at household level.

This study is important in so far as it will raise awareness of officials in addressing hygiene control. In effect, this specific issue has health effects and an impact on socio-economic development of the communities in Kansanga.

The study will be beneficial to policy makers to have a clear vision on what they want to achieve by using the suggested measures for effective realisation of urban development and population control.

Research is carried out to expose particular questions that need to be understood more in regard to population studies and development. It is thus an academic activity and as a result, this research is going to help academicians to add on the existing literature.



## CHAPTER TWO

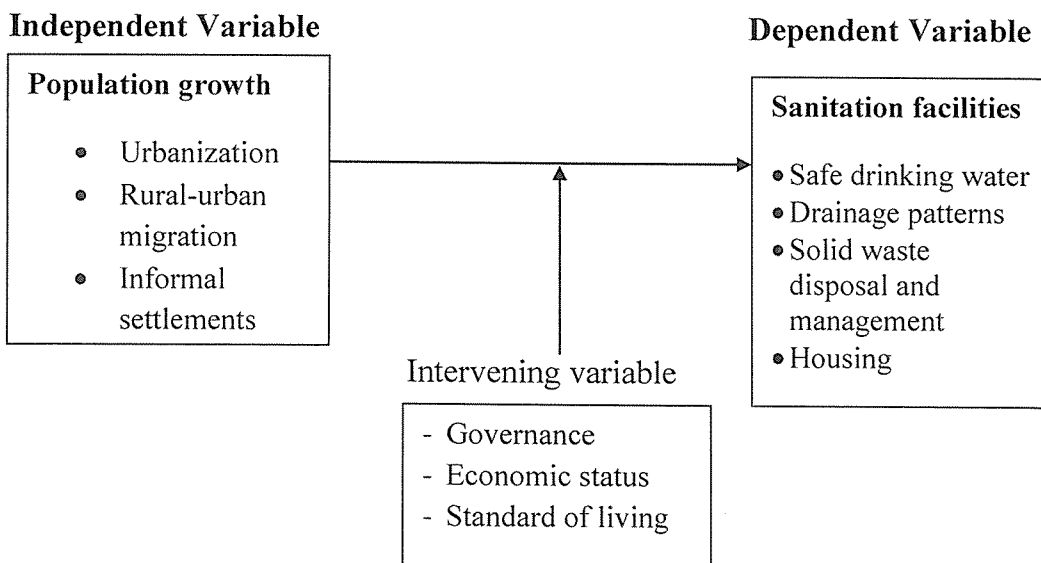
### LITERATURE REVIEW

#### 2.0 Introduction

One of the major development challenges that the majority of African countries face is that of providing safe sanitation facilities in both urban and rural areas. While effort has been made by some governments to provide a basic level of these services to the population, the coverage levels have remained insufficient and only 61 per cent of the global population uses improved sanitation facilities. At least 2.6 billion people in the world are estimated not to have access to basic sanitation, of which 72 percent live in Asia and 565 million are in Africa (WHO/UNICEF, 2010).

#### 2.1 Conceptual framework

**Figure 1:** Conceptual framework showing the effect of high population growth on development of sanitary facilities



Population growth as a result of urbanisation, rural-urban migration among others creates a high demand for provision of sanitation facilities in urban centres. There are several causes of poor sanitation which could be as a result of poor governance in the area which lead to minor or at other times no planning at all for basic infrastructure like water systems, sewerage lines,

roads, solid waste collection points among others. The situation is worsened by the inability of the existing population to afford the building of a sanitation block where they can dispose their faecal matter and that is why the issue of open defecation has been rampant in the informal settlements.

## **2.2 Sanitation and Hygiene Service Delivery Model**

This service delivery model was developed by Joep Verhagen and Peter Ryan in the year 2008. The model suggests that appropriate and sustainable service for the urban poor would be safe and easy to use and would not lead to further deterioration in the urban environment. As with most complex problems, the failure to provide such services has many tangled roots. To provide sustainable and affordable sanitation services to the urban poor a number of factors have to be in place and working together, irrespective of the technology:

- Policy and political factors to create the environment to move forward
- Knowledge factors to enable appropriate questions to be asked and decisions to be made.
- “Soft” factors such as skills, hygienic behaviour, norms and practices
- “Hard” factors such as suitable technologies
- Financial factors such as availability of finance for capital expenditure, ability/willingness of users to pay for services

For a service to work all of the above have to be in place. Where one or more are missing, the service is impaired or fails completely. With few honourable exceptions, there appears never to have been a comprehensive approach to planning and maintaining urban sanitation systems that has looked at these factors in combination.

In any event, in informal settlements, when it comes to sanitation, residents have by and large been left to fend for themselves. An individual household will take a decision to construct a toilet for its own use (perhaps shared with

neighbours). What happens downstream in terms of impact on water supply, or in terms of when the pit is filled, is not a central consideration, at least not to start with.

A service delivery approach focuses on the service itself, understood in terms of quantity, quality, reliability and accessibility as the main objective of sanitation (and hygiene) interventions. This contrasts with a project-based approach, which typically looks at sanitation delivery systems. Two key aspects of the service delivery approach are scale and sustainability.

Services are provided by delivery systems. These contain both hardware and software. For sanitation, the hardware includes VIP latrines, Vacutugs and treatment plants, while the software includes hygiene education and the skills of the environmental health technicians. In some situations the system and the service may seem to be almost the same thing: certain types of ECOSAN may be a case in point.(Verhagen & Ryan, 2008).

### **2.3 Factors leading to poor sanitary facilities in urban centres**

Globally, more people now live in urban centres than in rural areas and this trend is expected to continue. Within the next 30 years, developing countries are predicted to triple their population size and account for 80% of the world's urban population. In Asia the rural population is expected to decrease in the next 25 years.

Projections for this urbanisation look bleak, with slums to see 60% of all urban population growth and increased poverty. Without a fundamental change, our urbanising world will, in reality, become vast sprawl of inhuman slums and informal settlements. The world population is becoming predominantly urban (Kitonyi, 2014).

The institutional framework for disposal of solid and industrial (including hazardous) waste in Pacific towns is out dated and ineffective. In most towns solid waste collection is a local government responsibility and accounts for a significant proportion of local budgets. Without exception, these systems lack sufficient financial resources and technical expertise. As a result, even where the percentage of waste collected is high, the maintenance of equipment and facilities is poor and long-term sustainability is in doubt. Affordability and willingness to pay are questionable, particularly for low-income households, and cost recovery is low (Kiggwe, 2010).

The developing world has been predominantly rural but is quickly becoming urban. In 1950 only 18 per cent of people in developing countries lived in cities. In 2000 the proportion was 40 per cent, and by 2030 the developing world is predicted to be 56 per cent urban. Future urban growth in developing countries will be absorbed by urban centres, which have a high average annual urban population growth rate of 2.3 per cent, in contrast to the developed world's rate of 0.4 per cent.(UNHSP,Habitat, 2003).

Urban centres in developing countries lack the financial and technical resources to maintain and replace collection vehicles, equipment, and facilities, much less promote waste minimization and recycling or formulate and enforce policies relating to disposal of toxic wastes. Sustainability of the service is therefore uncertain, particularly due to lack of funding (Nansereko, 2010).

According to UNDESA (2008) poverty in East Africa remains one of the greatest challenges facing the people and their governments. In Uganda, poverty trends show a mixed picture. In 1992, 56% of the population was poor. This declined to 44% and 34% in 1997 and 2000 respectively. Recent estimates show that urban poverty constitutes 18% compared to 45% for the rural. Urban poverty increased from 9.6% in 2000 to 12.2% in 2002/03 (Government of

Uganda, 2004). The population in Uganda is predominantly rural and agricultural based. There are significant regional disparities in poverty levels, with the highest incidence in the north of the country. In these regions, long affected by conflict, all the MDG indicators fare very poorly.

According to Oxfam, GB (2009) Poor drainage disrupts economic activity; compounds the problems of poor housing, particularly for low-income families; and increases health risks throughout Pacific towns. In many Pacific towns, flooding is frequent, severe, and costly. Planning schemes, where they exist at all, have traditionally paid little attention to known flood risks. Few effective flood prevention or amelioration strategies are in place. Accurate records and mapping of flood events are not maintained, and estimates of the economic damage attributable to flooding have rarely been made. Moreover, many urban areas are experiencing increased flood risks due to poor urban planning.

Kitheri (2011) noted that other key issues include the lack of health awareness about stagnant water which provides a breeding ground for disease vectors (causing malaria and dengue fever); poor maintenance of infrastructure; and weak and inappropriate land use and building control. New commercial construction in the Port Vila town center, for example, has blocked drainage outfalls, causing serious seasonal flooding. In Majuro, accessibility to residential areas remains difficult for long periods following frequent rains because of the lack of coordinated planning, management and maintenance between the Ministry of Regional Development and Public Works, which is responsible for drainage on primary roads, and the Majuro local government, which is responsible for drainage on secondary roads.

Across the world, billions of people still lack back sanitation unless it is controlled and safely disposed off. Human excreta pose a major treat to health, particularly infectious disease. But basic sanitation such as latrines can protect health, waste can also be a useful resource, for example human excreta and

waste water are used and recycled in many countries for example in Agricultural and aquaculture and this can be done safely.

#### **2.4 Effects of poor sanitation facilities**

Lack of sanitation facilities can cause distress. Women and girls in particular face problems of distance, lack of privacy and personal safety. Poor sanitation is also a serious threat to the cleanliness of the environment and the water resources used for the supply of drinking water. But beyond being just an issue of convenience, children have a right to basic facilities such as school toilets, safe drinking water, clean surroundings and basic information on hygiene. In addition if sanitary conditions are created children will be more enthusiastic to come to school, they will enjoy their school experiences and will learn better; and can bring concepts and practices on sanitation and hygiene back to their families (Protos 2005). Schools can play an important role in bringing about behavioural changes and promoting better health as children are potential agents of change in their homes through their knowledge and use of sanitation and hygiene practices learned at school.

According to the State of environmental report for Uganda 2012/2013 a huge backlog in sanitation coverage indicated by the current national coverage of about 57% in both rural and urban areas is a challenge. The report further states that many urban settings in Uganda do not have access to adequate sewerage facilities. It adds that piped water and sewerage services are available to only ten of the eleven towns covered by National Water and Sewerage Corporation and that even in these towns; it's only a small proportion of the population (approximately 10% that has access to this service. (Kitonyi, 2014)

In Africa today, more than two thirds (2/3) of the population lack sanitary means of excreta disposal (WHO, 2002). It further states that lack of access to safe drinking water and poor sanitation remains one of the causes of mortality especially among children and women who suffer most due to poor living

conditions. Birley (1995) observed that sanitation conditions in rural Venezuela a developing country, infectious diseases like cholera and dysentery to escalate, was attributed to peoples' lack of access to clean water and inadequate facilities for excrement disposal.

More critically, improved hygiene practices are essential if transmission routes of water and sanitation-related diseases are to be cut and contagious diseases prevented. Diseases such as diarrhoea, parasitic worm infections, skin and eye diseases, need to be tackled by making improvements to water and sanitation facilities. These improvements in facilities must go hand in hand with hygiene behaviour change and practice, if the transmission of disease is to be prevented (Nansereke, 2014).

In Kenya over half of the urban population lives in informal settlements with no direct connection to water or sewage service. According to Nairobi Water and Sewerage Company, the water pipes serving Eastleigh were laid out in the late 1940s and early 1950s and their sizes were 14 inch for the main pipe, 4 inch for the distributor line, while 2 inch for service lines targeting a population of less than 36,616. However, the population of Eastleigh has since increased to 315,496 as at 2009 representing a 43% growth from the initial population size (Lubaale & Musyoki, 2011). From the survey, it emerged that, there is 66% inadequate access to clean water in Eastleigh neighborhood. Nairobi Water and Sewerage Company (NWSC) heavily rely on surface water that is 80% and 20% from Ngethu and Sasumua dams respectively.

According to WHO (2008), pit latrines are the most commonly used facilities for disposing human waste in developing countries. Studies indicate that the percentage of people using latrines as a means of sanitation in some part of East Africa is as follows: Kenya 30%, Uganda 60%, Tanzania 77%, and Ethiopia 7%. Sanitation service is much lower when compared with

corresponding coverage on other African countries which ranges between 30-50%.

It has been observed that in situations where sanitation facilities are inadequate or absent, hand washing is very crucial in terms of interrupting faecal oral disease transmission routes (UNICEF/NETWAS, 2005). Diarrhoea, worm infections and eye and skin infections are diseases related to water and sanitation. About three million children die from diarrhoea each year (IRC, 2004). Each of the three common worms (roundworms, whipworms and hookworms) is estimated to infect more than 500 million people. Roughly 6 million people have become blind from trachoma, an eye disease.

### **2.5 Ways to improve sanitation facilities**

Different researchers have tried to show some measures that can be employed to improve sanitation facilities. However, their research was particular to different regions other than Kampala Nakawa division in particular. In addition, its known whether they are applicable in my research area hence this study will examine further measures to improve sanitation facilities in Nakawa division and Kampala district as a whole.

### **Community**

According Huchermeyer (2006), community members in every society need to start building sanitation structures like toilets, which are strategically placed to provide access to all residents. Upon completion, residents can be in charge of maintenance of these structures. These sanitation facilities are “all-in-one complexes with VIP [ventilated improved pit] latrines, shower cubicles and water booths.”

Full involvement of communities in all stages of programme implementation and management is the correct pragmatic approach for the present. However, this approach does not divest Governments and NGOs of their responsibility



for continuing and evolving support of the programmes which they promote. As communities change, and the needs of their water and sanitation systems change, the appropriate type of support -education, training, financial subsidy, technical assistance, maintenance, even rehabilitation - should evolve. Without support, however, few community-based water and sanitation systems will achieve anything approaching permanence (Allen et.al., 2008).

## **Government**

Hakijamii& COHRE, (2008) cited that the Ministry of Local Governments should be in charge of formulation and administration of the Local Authorities Policy, the oversight and management of other local authority bodies through formulation of by-laws and also administration of the Local Authority Transfer Fund in order to oversee the general development of the local authorities in their respective cities. Specifically the Ministry of Local Government and the Ministry of Water and Irrigation have common mandates with respect to the performance and good corporate governance of public water and sanitation utilities, as well as environmental sanitation related to disposal of excreta.

In addition, COHRE (2008) said that the Ministry of Health and Sanitation should be introduced as the lead agency with respect to environmental sanitation with shared interest in the development of basic sanitation infrastructure and promotion of hygiene through continuous supply of sufficient clean water. The Ministry of Health and Sanitation, Division of Environmental Health, should have the overall mandate for hygiene education and basic sanitation where facilities do not rely on sewerage systems, such as pit latrines which are predominant within the informal settlements and in rural areas. The ministry is also expected to undertake national hygiene campaigns in fulfilling its mandate to provide basic sanitation and hygiene education within communities that are highly susceptible to sanitation issues.

The Role of National Water governing Bodies like National Water and Sewerage Corporations (NWSC) need to put in place the Informal Settlements Department that will deal with water and sanitation supply in informal settlements. This was put forward by Hakijamii and Cohre (2009) in coordination with the Athi Water Services Board, by targeting specific informal settlements to extend water and sanitation services through constructing water kiosks and ablution blocks (toilet and bathroom services).

### **Non-Governmental Organisations**

NGOs play an important role in advancing the right to water and sanitation and are necessary stakeholders in the water sector. There are a number of Non-Governmental Organisations that deal with the various aspects on the right to water and sanitation. However, it's important to note that while some NGOs assist CBOs with infrastructure development, others work purely on advocating for the human right to water and sanitation (Lubaale & Musyoki, 2011).

### **2.6 Summary**

Literature review showed various trends in sanitation particular connected to population growth. Countries have come up with various strategies to streamline the case in point but the extent to which this has been working in Uganda is not yet established. Proper sanitation is essential for urban areas. There is a limit to the effectiveness of septic tanks in urban centers such as Nakawa Division and other towns around the city. However, other low-cost sanitation technologies, such as composting toilets, have proven successful in the city centre through the use of public toilets that were recently defined by the executive director of Kampala Mrs. Jennifer Musisi. Wastewater management in Kampala is typical. It reveals the importance of taking an integrated and coordinated approach to planning for water supply and wastewater management, since improvements in water infrastructure without investments in wastewater management will invariably result in increases in public health risks.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

This chapter looked at research design, study population, sample size and selection. It also describes the methods that were employed in data collection, processing, analysis of data; the anticipated problems are also covered in this chapter as well.

#### **3.1. Research Design**

The study was descriptive and analytical in nature. It utilized qualitative methods of data collection. The qualitative method was emphasized because it was likely to reveal real and practical experiences necessary in providing a more profound understanding and analysis of all related aspects. It aimed at covering the influence of high population growth on the provision sanitation facilities in Nakawa division. The research was conducted at a single point in time and many respondents were interviewed using the qualitative method.

#### **3.2. Area of study**

The study was carried out in Nakawa Division, Kampala. However, due to resource factors like: time, money and similarity of the situation in the Division, only 3 parishes were covered and these are; Mbuya, Naguru, and Luzira. These are considered because of factors such as: convenience in terms of language, familiarity to the area by the researcher and easy accessibility because the researcher is considered an insider. Furthermore, the area has enough residents for generalization of the research findings accurately.

#### **3.3 Study population.**

The researcher targeted a population of about 120 people who included residents of Mbuya, Naguru and Luzira. It also included government officials

from National water and Sewerage Corporation, CBOs and local council leaders in the areas.

### **3.4 Sampling procedure**

#### **3.4.1 Simple random sampling.**

The researcher used this method in order to avoid bias in the process of selecting the respondents from the group of possible respondents for the number needed for this study.

#### **3.4.2 Stratified sampling**

The researcher also used this method where by a group of possible respondents were arranged in different areas within the targeted population such as men and women from the local community. As mentioned by Mugenda & Mugenda (2006) stratified sampling was used for purposes of getting more details through the use of probe questions as the respondents basically open within small groups.

### **3.5 Sample size**

A sample size of 50 people was used in this study whereby 2 people were representatives from National Water and Sewerage Corporation (NWSC), 4 were Local leaders from the different villages of Naguru, Mbuya and Luzira, 2 were officials from KCCA while 2 were representatives from CBOs/NGOs in Nakawa Division and 40 were local people (men and women) who were picked at random thus making a total sample size of 50 respondents. Sutton and David, (2004), state that a sample size should not be less than 30. Beyond basic description it would be quite difficult for the researcher to undertake more complex statistical analysis, as most of these analyses require a minimum sample of not less than 30 respondents.

### **3.6 Research Instrument**

#### **3.6.2 Questionnaire**

The researcher used questionnaire method to collect primary data where by the questionnaires was distributed to various respondents within the targeted population so as to get reliable and various views of the respondents. Farnworth et al, 2000 argues that the questionnaire method preferred because it allows respondents ample time, to think and probably give accurate information. It was also convenient in that the respondents could fill questions at the time of their choosing. The researcher therefore gave clear instructions and where possible translates to some respondents who may have a challenge of reading and writing through the research assistants.

#### **3.6.3 Interviews**

The researcher used interview method to collect data where by structured interview was used; that is face to face questions were asked to respondents. This is because the researcher needed to get more details through the use of probe questions (Farnworth et al, 2000).

#### **3.6.4 Observation**

In this method of data collection, checklists on the observation standard was developed. The observations made were noted down immediately to ensure that no information is forgotten and this aimed at ensuring that the reliability of data was maintained.

#### **3.6.5 Photographs**

Here, cameras helped to capture distinct pictures which were deemed fit for enhancing the credibility of the information gathered. Therefore the photographs were helpful in demonstrating the exact situation or representation of the way things are on the actual ground.

Also data from the library and various institution were helpful in complementing the above mentioned primary data sources.

### **3.7 Data Processing and Analysis**

Various data analysis methods was employed in this stage. Both the qualitative and quantitative data analysis was utilized during the process of data analysis and presentation. SPSS was used to develop distributions trends and graphs during the presentation of descriptive information and discussions given by respondents especially where numerical are obtained. Comparisons were performed between the primary data obtained and the secondary data to determine the relativity of the given trends in the ground.

The photographs were also be used to supplement the various data in the presentation.

### **3.8 Ethical considerations.**

Before carrying out the study, the researcher sought for an introduction letter from Kampala International University authorizing him to carry out research on the topic. The letter was presented to the respondents (i.e. LC I officials, councilors, Police) Then he proceeded to seek permission from the chairperson Local council 1 and to carry out his research.

### **3.9 Study limitations and delimitations**

Some respondents intended to refuse to respond to some questions. This was solved by explaining the purpose of the research and assuring anonymity to respondent hence data was collected successfully.

Weather changes was a big obstacle to the researcher. This was due to strong sunshine. The researcher committed to his responsibility and use possible means of transport and gadgets like umbrella.

It was hard to obtain respondents due to their daily routines and commitment to their jobs. In case more time was spent by the researcher on looking for respondents from whom data was got.

Cooperation; some respondents were not willing to spare time to respond to the interviews but the researcher assured the respondent that their responses were beneficial to the entire community in terms of promoting community health policies and that their responses were to be treated confidential.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.0 Introduction

The findings of the study are presented in relation to the study specific objectives that included; assessing the contributing factors to poor sanitary facilities in Nakawa division, examine the effects of poor sanitation facilities to the people of Nakawa division and to identify ways to improve sanitation facilities in Nakawa division.

#### 4.1 Demographic Characteristics

##### 4.1.1 Findings on the gender of the respondents

**Table 1: Gender of the respondents**

Age of the respondents	Frequency	Percentage
Females	34	68
Males	16	32
<b>Total</b>	<b>50</b>	<b>100%</b>

**Source: Field Survey, 2016**

Majority 34(68%) of the respondents were females while 16(32%) were males. This implied that most of the respondents were females. This could be due to the fact that females are usually responsible and more concerned when it comes to sanitation issues within the community.



#### 4.1.2. Findings on the marital status of the respondents

**Table 2: Responses on the marital status of the respondents**

Age of the respondents	Frequency	Percentage
Married	28	56
Singles	14	28
Divorced	04	8
Widow/widower	02	4
<b>Total</b>	<b>50</b>	<b>100%</b>

**Source: Field Survey, 2016**

This category represents the marital status of the population where the research was undertaken and it indicates that the majority of the respondents were married as represented by 56%, 28% were singles, 8% divorced while only 4% were widows or widower. Results imply that majority of the people who participated in this study were married with children and this made the research more applicable in the area because sanitation and having children around closely move together.

#### 4.1.3: Distribution of the age groups of the respondents

**Table 3: Distribution of the age groups of the respondents**

Age of the respondent	Frequency	Percentage
20-30 years	18	36
31-40 years	17	34
41-50 years	07	14
51 years and above	08	16
<b>Total</b>	<b>50</b>	<b>100%</b>

**Source: Field Survey, 2016**

Given the four different categories for the different age bracket within the population of the study area, table 3 above clearly illustrates that the bracket with the most number of people is that of 20-30 years and above. This bracket is the largest with 36% followed by those in the age bracket of 31-40 with 34% while the age bracket of 41-50 and 51 and above scored 14% and 16% respectively. Results indicated that although the larger portion of the respondents fell in the bracket of 20-30 and above, it was evident that the brackets of 31-40 constituted a bigger group as well. Therefore majority of the respondents were old enough to realize the impact of high population growth rate in relation to the provision of sanitation facilities in Nakawa division.

#### 4.1.4 Distribution of the educational qualifications of the respondents

**Table 4: Distribution of the educational qualifications of the respondents**

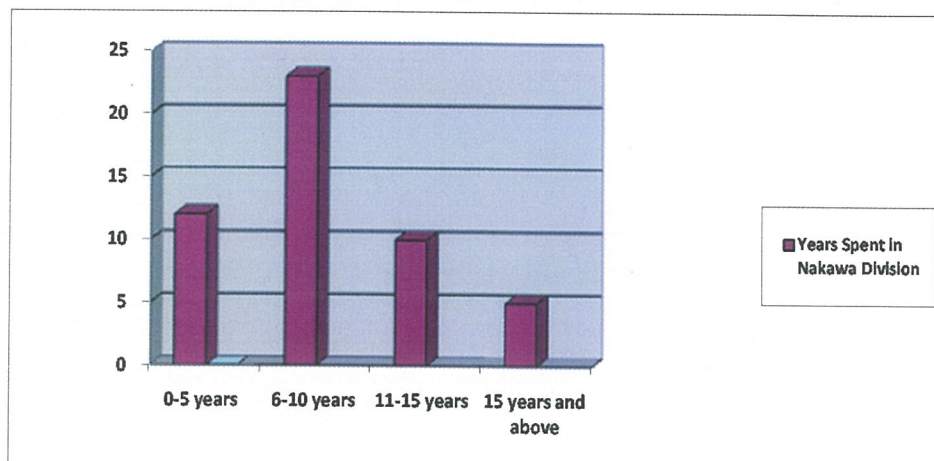
Responses	Frequency	Percentage
Certificates	7	14
Diplomas	15	30
Bachelors	28	56
<b>Total</b>	<b>50</b>	<b>100%</b>

**Source: Field Survey, 2016**

Findings in table 4 revealed that education is important to any population since it determines the perceptions, understanding and reactions towards issues. The study demonstrated no recordings for uneducated respondents, most of them were graduates with degree and diplomas as showed by 56% and 30% respective, while 14% said that they had certificates. The implication here is that Nakawa division being in an urban setting, chances of attaining high education levels are high considering the socio-economic status of majority of the populations in the area.

#### 4.1.4 Years of residence in Nakawa division

**Figure 2:** Bar graph showing respondent's years of resident in Nakawa Division



Source: Field Survey, 2016

Findings in the chart above clearly exhibits the year's respondents had lived in Nakawa division. It was clear that majority of the respondents had lived in Nakawa between 6-10 years, 52%, followed by those between 0-5 years with 32% while 10% and 6% had lived in Nakawa between 11-15 years and 15 years and above respectively. This shows that majority of this population is migratory population who are new to the area. Therefore this strongly supports that urbanization is still a factor causing the weakening the state of sanitation in Nakawa division being a Kampala metropolitan comprised with major informal settlements.

## 4.2 Findings on contributing factors to poor sanitary facilities in Nakawa Division

**Table 5: Showing findings on the contributing factors to sanitary facilities in Nakawa division**

Responses	Frequency	Percentage
Poor planning	15	30
Informal management of Landlords	06	12
Poor drainage patterns	13	26
Migration of people	7	14
Poverty	9	18
<b>Total</b>	<b>50</b>	<b>100%</b>

### Field Survey, 2016

Respondents had different views on the contributing factors to poor sanitation in Nakawa division whereby majority 30% blamed poor sanitation to poor planning. They said that houses are informally constructed without approved plans and as a consequence the area is lacking a lot of social infrastructures like proper trenches and this has in turn led to declining levels of sanitation. Inadequate planning is confirmed by a lot of variables like poor housing which has not given room for the development of drainage and sanitation infrastructure; minimal organization for systems of solid waste collection and the existing narrow, muddy pathways among others.



**Figure 3:** Informal settlement near Railway in Kinawataka **Figure 4:** Dumping in a wetland in Luzira

This was followed closely by poor drainage patterns and the poor management by landlords. They were blamed for not constructing toilets even when they are building new houses but rather concentrated on increasing their income by increasing rent.

Another factor cited out was poverty as put forward by 18% of the respondents. The key informants said that majority of the local people in Nakawa division are low income earners whereby even if good sanitation facilities were put in place for a small charge, they would not be able to pay. Poverty was also blamed as a contributor to the low sanitation levels because initially people regarded access to sanitation as a very costly expense thus this led to more and more of open defecation.

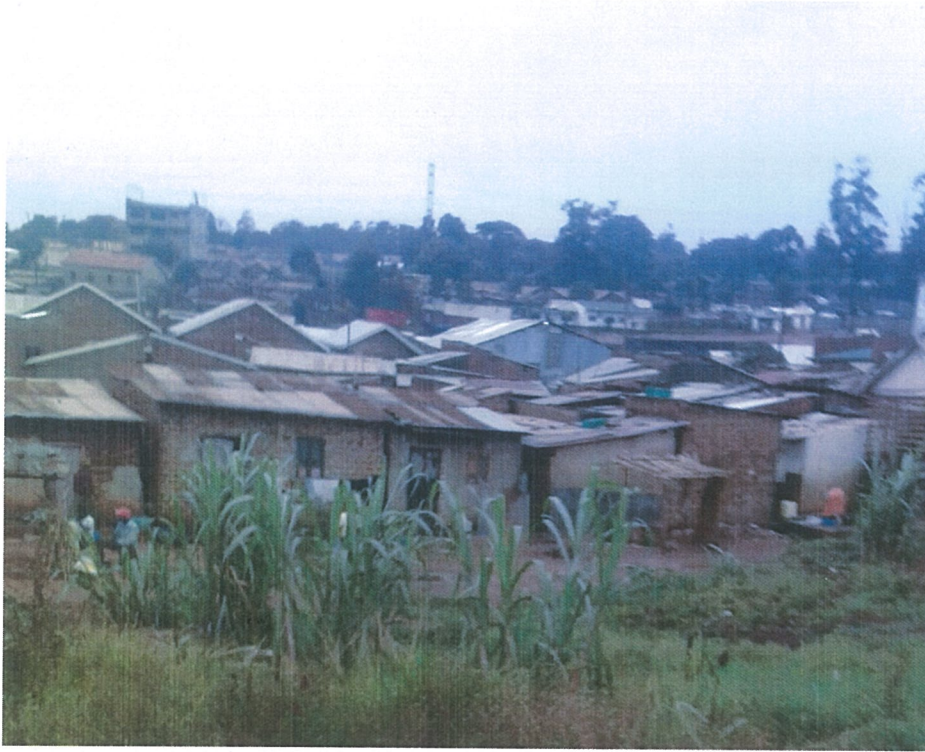




**Figure 5:** Dumping in drainage patterns

**Some of residents use those polythen bags for toilets and dump them in drainage patterns like the one in the figure 5 above.**

Key informants also mentioned migration of people (14%) and Poor drainage patterns which was represented by 26%. Migration was a contributing factor because this influx brings in people with different socio-cultural backgrounds which in most cases are challenging to sanitation while poor drainage patterns leads to poor flow of wastes and sewerage pipes are at times broken while others are leading to open trenches which expose more sanitation danger in the community.



**Figure 6: Informal Settlement in a Wetland**

### **4.3 Findings on the effects of poor sanitation facilities to the people of Nakawa Division**

The second objective of the study was to establish the effects of poor sanitation facilities to the people of Nakawa Division, the findings were as follows;

#### **4.3.1 Lead to spread of diseases**

Results showed that poor sanitation facilities lead to easy spread of diseases like cholera, malaria, Ebola among others. The respondents said that many National Water and sewerage corporation pipes for example are leaking while others are passing through dirty drainage full of solid and liquid waste which poses health risk to the users. These kinds of exposures really increase the vulnerability of the residents to water borne diseases and other associated risks.





**Figure 7:** Water pipes passing through stagnant water in Mbuya



**Figure 8:** Toilet in a very sorry state



#### **4.3.2 Pollution**

From the focus group discussions held, respondents said that poor sanitation facilities leads to pollutions resulting from the poor handling and management of both the solid waste and liquid waste. This is ascertained by the overwhelming proportion of 90% of population who declared that they directly dispose their household waste into the nearby swamps of Luzira area along the shores of Lake victoria. This has resulted into high pollution of which can now not support different domestic purposes like washing, drinking and also cannot support aquatic biodiversity.

#### **4.3.3 Health Impacts**

A health personnel from Hope Medical centre in Luzira area said that poor sanitation was reported to be a major cause of the rampant communicable diseases in Nakawa Division. Some of the major common illness reported in the health centre include; typhoid, diarrhoea, skin infections, respiratory tract problems, eye and ear infections among others. These does not only affect the people in those specific untidy places but they also pass it to other people from different areas. For example by use of public transport means, skin infections and respiratory tract problems like flu and cough are easily spread and this leads to economic hardships while trying to heal the ailment. Hence, its seen that the above diseases are related because they have a connected cause to the poor sanitation which means for them to be reduced then sanitation has to be improved.

#### **4.3.4 Environmental degradation**

Findings also established that poor sanitation facilities lead to environmental degradation due to dumping, and lack of proper waste disposal. 57% of the study participants attributed that waste is poorly disposed in most parts of Nakawa Division and this is simply because there is lack of adequate drainages and the few that are there are poorly maintained. Residents tend to block these

drainages with solid waste especially polythene papers. This is said to be causing a lot of flooding when it rains. Also this stagnant water in the drainages is associated with the high rate of malaria in the slums because they act as breeding grounds for mosquitoes which negatively impacts on the health of the dwellers of the surrounding area.



**Figure 9:** Water lodged as a result of brick laying in an urban setting

#### **4.4 Findings on ways to improve sanitation facilities in Nakawa Division**

This was intended to answer research question or objective three which was to identify ways to improve sanitation facilities in Nakawa division. The findings under this objective are presented below;

##### **4.4.1 Community participation**

Findings from the field suggested that community members together with their leaders should promote sanitation within their communities starting from their households through participatory community service “*Bulungi Bwansi*” by clearing and cleaning up the surrounding breeding areas for mosquitoes and other diseases. The areas that need attention included trenches, toilets, and disposal units that should be cleaned regularly. They also added that this will attract other stakeholders to support (both financial and technical) their initiatives hence improving sanitation.

##### **4.4.2 Government involvement**

It was suggested that the government through its agents i.e. Kampala Capital City Authority and National Water and Sewerage Corporation need to implement strategies channelled towards improving sanitation facilities. 46% of the respondents said that this can be done through effective garbage collection at household level rather than collecting it from a few allocated points which majority of the residents cannot even access. The council should also issue title deeds to facilitate better housing and better services.

##### **4.4.2 Strengthening laws against settlement into wetlands**

Given that informal settlement into wetlands and swampy areas is a contributing factor to poor sanitation, residents of Nakawa division suggested that there the enacted laws against encroachment on wetlands should be strengthened by closely monitor and supervise these areas regularly so that settlement is avoided other than taking so long to monitor and only to supervise

when people have already settled in swamps and displacing them is another challenge and costly.

#### **4.4.3 Construction of Pit Latrines**

Pit latrines is a requirement and must need for every household, 76% of the responses said that landlords before even starting constructing the house, they should first put in place such toilets and make them accessible to every tenant or member of their household. This will prevent dumping of human waste in dustbins and drainage patterns.

#### **4.4.4 Implementation of Sanitation programmes and projects**

There are many NGOs and CBOs whose activities are to promote community wellbeing yet those with the major objective of improving sanitation are very few. Respondents called upon development practitioners to come up with projects that will improve sanitation facilities. This could be done through soliciting funds both from the government and NGOs.

Similarly NGOs that already promoting sanitation were called upon to offer a chance to community members to get involved in their programmes in any stage of planning, implementation or monitoring and Evaluation as this will enhance the success of their project with a significant impact particularly on sanitation and community well being.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter presents the summary of findings of this study. This has been presented in line with the study objectives which guided this researcher. They included; to examine the contributing factors to poor sanitation facilities in Nakawa Division, examine the effects of poor sanitation facilities to the people of Nakawa and to suggest ways to improve sanitation facilities in Nakawa Division.

#### **5.1 Summary of Findings**

According to the findings on the first objective, results showed that some of the major contributing factors to poor sanitation facilities in Nakawa Division are poor planning whereby houses are constructed without approved house plans and this does not give room for the development of drainage and sanitation infrastructure hence leading to minimal organization for systems of solid waste collection and the existing narrow, muddy pathways among others.

It was further established that poor drainage patterns as a results of landlord's reluctance to construct proper housing leads to a poor state of sanitation. This creates a significant impact and contributes in magnifying the already existing problem of sanitation due to congestion resulting from informal settlements and migration (Rural-urban). Thus the study findings showed that the issue of inadequate planning, lack of proper management by the landlords, congestion due to rural-urban migration and poor drainage systems are the major cause for the problem of sanitation in Nakawa Division.

In reference to the second objective which was about the effects of poor sanitation, it was established that health problems are common given that sanitation facilities like latrines which most people are accustomed to are limited in addition, majority of those that exist are in a very sorry state. This shows that the problem of sanitation is far from being explored appropriately. Flooding during rains amplifies the existing problem by resulting to overflow of the much relied latrines thus deteriorating the environment through pollution and bad outlook of the informal settlements. Majority of the residents agreed that there is shortage of sanitation facilities like dumping sites for solid waste, lack of proper drainage patterns and also believe that the facilities have not attained the desired hygiene standards.

The poor sanitation levels are negatively impacting on the health standards of Nakawa Division residents. With the interviews conducted at Hope Health Centre, the major outcome was that the most trending diseases originating from the poor state of sanitation include; diarrhoea, typhoid, malaria, skin infections and other various infections are always on the rise thus this vulnerability is greatly escalated by the existing sanitation levels.

Results on the third objective showed that there is need to promote community participation in activities of community service "*Bulung bwansi*" and this should probably be mandatory in collaboration with relevant stakeholders such as Kampala Capital City Authority, CBOs and NGOs who usually try to play a significant role to elevate the sanitation levels. Again the findings showed that consultation of community members on the major pressing issues on sanitation should always be a priority from key development players so that major issues are adequately addressed.

## **5.2 Conclusion**

It was clearly established that provision of sanitation facilities in Nakawa Division is inadequate considering the ever increasing population. Therefore, for proper levels of sanitation to be promoted in Nakawa division and to address this situation, there must be measures implemented since its everyone's right and responsibility to live up to acceptable hygiene standards. Thus all relevant stakeholders with diverse interests in to promote development right from the grassroot level, need to come together and see how Nakawa Division can be transformed from a mere desire in paper to become a reality. In addition, since promotion of sanitation is a collective effort then community involvement should be instituted at every level of project development. Better governance from the local leaders and project developers and all stakeholders will help yield sustainable results. Perhaps, for the service delivery of amenities and infrastructure to materialise, it is high time for the government to do a formal planning for this settlement and issue title deeds that will ensure permanent houses can be availed with approved plans that will enhance establishment of adequate sanitation facilities.

## **5.3 Recommendations**

Good governance should be adopted by all local leaders and representatives of the area so that they have one mind towards the destiny of solving the sanitation problem once and for all without politicizing the process so as to achieve as sustainable development.

Community participation should be made a priority in any development or project being established in Nakawa Division so as reduce level of resistance and thus increase the chances of acceptability and success of the undertaking.

Government should facilitate all the Health Centres i.e.in form of enough health personnel, drugs and financial resources to help promote health education to the residents and treat the unending health-related diseases

brought about by the poor sanitation levels e.g. malaria, diarrhoea, typhoid, eye and skin infections, cholera among others.

Effective planning for infrastructure and utilities need to be focussed. This will be achievable once a master plan for the large informal settlement is developed since inadequate planning is coming out as a strong factor leading to poor sanitation levels.

The private sector and NGOs need to empower the local residents through organisation of workshops, seminars as well as trainings which will help teach this population on the importance of achieving sustainability when it comes to promoting environmental cleanliness.

The Kampala Capital City Authority together with Kira Town Council need to establish a better solid waste management systems by establishing even if its large containers that will be used as disposal points to promote a clean environment at Zone level.

More CBO"s need to be formed in order to supplement the works of NGO"s and private sector in the area .e.g. to help in sensitization and educating the community on hygiene promotions.

#### **5.4 Areas for further research**

This study has been limited to sanitation facilities in Nakawa division, therefore further research should be conducted in the entire district of Kampala since its population is growth at a faster rate for effective policy formulation and implementation.

Another research should also be conducted to examine the contribution of Private sector in promoting sanitation and primary health care.



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## APPENDICES

### APPENDIX A: QUESTIONNAIRES

I am Tusiime Jean, a third year student of Kampala International University offering a bachelor of Development Studies. I would like to conduct a research on the Assessment of High Population Growth And Development of Sanitary Facilities In Urban Centres In Uganda. A Case Study of Nakawa Division

Dear Sir/ Madam, you have been chosen to participate as a respondent in this research by kindly filling this Questionnaire and your cooperation will be highly appreciated.

#### Background Information

Please tick the appropriate box

1. Sex: 1. Male ☐

2. Female ☐

2. Age:

1) Below 20 years ☐

2) 20-25 years ☐

3) 25-29 years ☐

4) 30&above years ☐

3. Marital status: 1. Married ☐

2. Single ☐

3. Widowed ☐

4. Educational level

1. Primary ☐

2. Secondary ☐

3. Tertiary ☐

4. University ☐

5. How many years have you lived in this area?

1) 0-10 years ☐

2) 11-20 years ☐

3) 20-30 years ☐

4) 30-40 years ☐

5) Above 40years ☐

6. Please tick the correct income range

Income	<input checked="" type="checkbox"/>
1. less than 50,000	<input type="checkbox"/>
2. 50,001-100,000	<input type="checkbox"/>
3. 100,001- 350,000	<input type="checkbox"/>
4. 350,001-500,000	<input type="checkbox"/>
5. above 500,000	<input type="checkbox"/>

7. Which of the following do you use for waste disposal?

Toilets ☐

Biocentres ☐

Ecological sanitation ☐

Any other (please specify) ☐

8. What factors do you think are contributing to the poor state of sanitation in your area?

1.	Management(Landlords)	<input type="checkbox"/>
2.	Inadequate Planning	<input type="checkbox"/>
3.	Inadequate water provision	<input type="checkbox"/>
4.	Migration of people	<input type="checkbox"/>
5.	Poverty	<input type="checkbox"/>
6.	Building in wetlands	<input type="checkbox"/>
7.	Congestion	<input type="checkbox"/>
8.	All the above	<input type="checkbox"/>

9. Any other, please specify

.....

10. Where do you dispose your household solid waste?.....

11. Is there any nearby sanitation facility in your community?

Yes ☐

No. ☐

12. Do the facilities have enough water?

Yes ☐

No. ☐

13. Are they usually clean for use?

Yes ☐

No. ☐

14. What is the cost of accessing sanitation facilities?

Cheap

☐

Affordable

☐

Expensive

☐

15. Do you think the county council is doing enough to improve sanitation in your area?

Yes ☐

No. ☐

16. Rate the efforts of the city council in promoting sanitation services in your area?

1. Excellent ☐

2. Good ☐

3. Fair ☐

4. Poor ☐

17. Which programmes have been initiated in the community to upgrade the level of

sanitation?.....

.....

.....17b) Have you ever participated in any of those programme?

Yes ☐

No. ☐

1) Please indicate at which stage were you involved in the sanitation project

Level/Stage of the Project	Tick
1) Conception	<input type="checkbox"/>
2) Planning	<input type="checkbox"/>
3) Implementation	<input type="checkbox"/>
4) Monitoring & Evaluation	<input type="checkbox"/>
5) None	<input type="checkbox"/>

End

## APPENDIX B: INTERVIEW GUIDE

I am Tusiime Jean, a third year student of Kampala International University offering a bachelor of Development Studies. I would like to conduct a research on the Assessment of High Population Growth And Development of Sanitary Facilities In Urban Centres In Uganda. A Case Study of Nakawa Division

Dear Sir/ Madam, you have been chosen to participate as a respondent in this research by kindly filling this Questionnaire and your cooperation will be highly appreciated.

1. What do you think about the state of sanitation in Nakawa slums?

.....  
.....  
.....  
.....

2. What do you think are the major causes of poor sanitation state in Nakawa division?

.....  
.....  
.....  
.....

3. What is general awareness in the community regarding importance of better sanitation? .....

4. In your opinion, what is the state of sanitation facilities in Nakawa division?

a) Adequate

b) Reliable

c) Accessible

d) Well maintained

6. How has the state of High population impacted sanitation and health of residents in Nakawa division

7. What are the common causes of high population in your area

.....  
.....  
.....

8. What are some of the challenges you have encountered in your strife towards promoting sanitation in your community?

.....  
.....  
.....

9. What measures have you put in place to remedy the challenges stated above?

.....  
.....  
.....  
.....

10. Have you partnered with any organisation with the view of promoting sanitation?

Yes ☐

No. ☐

If yes; Which

one.....

11. What do you think should be done to improve sanitation levels in Nakawa Division slums?

.....  
.....  
.....

**Office of the Head of Department**

**5<sup>th</sup> September, 2016**

Dear Sir/Madam,

**RE: INTRODUCTION LETTER FOR MR. TUSIIME JEAN,  
REG. NO.BDS/37949/143/DU**

The above mentioned candidate is a bonafide student of Kampala International University pursuing a Bachelors Degree in Development Studies.

He is currently conducting a field research for his dissertation entitled, **AN ASSESSMENT OF HIGH POPULATION GROWTH AND DEVELOPMENT OF SANITARY FACILITIES IN URBAN CENTRES IN UGANDA, A CASE STUDY OF NAKAWA DIVISION.**

Your organisation has been identified as a valuable source of information pertaining to his research project. The purpose of this letter then is to request you to accept and avail his with the pertinent information he may need.

Any data shared with him will be used for academic purposes only and shall be kept with utmost confidentiality.

Any assistance rendered to him will be highly appreciated.

Yours truly,

  
Ms. Ainembabazi Rosette  
HOD, Development, Peace and Conflict Studies

