

Examining The Effect Of Urbanization On Wetlands Management In Uganda. A Case Of Lubigi Wetland, Wakiso District

1 Nalubega Jackline, 2 Kaziro Nicholas, 3 Kobusigye Prudence, 4 Friday Christopher, 5 Ntirandekura Moses, 6 Asimwe Isaac Kazaara, 7 Nankunda Ruth

1 Metropolitan International University, 2 Lecturer Metropolitan International University, 3 Lecturer Metropolitan International University, 4 Lecturer Metropolitan International University, 5 Lecturer Metropolitan International University, 6 Lecturer Metropolitan International University, 7 Lecturer Metropolitan International University

Abstract: *The Lubigi Marshes in the Wakiso District were used as a case study in the study to examine how development affects the preservation of wetlands in Uganda. The basis of this examination was the study's objectives, which also included. Examine the effects of growth in population and urbanization on the Lubigi Marsh, as well as the many activities that are carried out there and their effects on the wetland, and consider the stability of marshes during the past 10 to 15 years. The findings reveal that 50 respondents—or 50% of the sample—had O level certificates, 20 respondents—or 20% of the sample—had findings prove they had finished an A level, 28% of the respondents—or 25% of the sample—had diplomas, and 5 respondents—or 5% of the sample—had results and found they had diplomas and other higher-level qualifications. According to the study's conclusions, industrialization has a negative impact on wetlands preservation in Uganda. The study advises Uganda's legislature to pass stringent legislation to save wetlands. The study also urges the Ugandan government to limit the issuance of land titles for property in wetlands. The study advises the Ugandan government to educate the populace about the risks of intruding on a wetland. The study advises the Ugandan government to install sign posts warning people to preserve marshes.*

Keywords: urbanization and wetlands management

Background of the study

People are currently impacted by 31 issues on a variety of scales, from the global to the local. They are now a widespread issue for people. Global population growth is the biggest danger facing the natural world. Each person takes energy, space, and materials in order to thrive, which strains and deprives the ecosphere resources. If the human species was maintained at reasonable levels, it would be possible to counteract these environmental losses with rejuvenation and renewable technologies. But, the rate of population growth makes it impossible for the earth to recover and provide for man with a decent living wage. The number of humans on the earth has reached its limit. Humans must actively control population growth and promote the use of contraceptives before nature governs the populace through mass starvation, droughts, and plagues. The current population's behaviors will have an impact on the future. On the planet in 2000, there were 6.1 billion people. The United Nations predicts that the world's population in 2050 might range from 7.9 billion to 10.9 billion, depending on the choices made now (Costanza et al, 1997).

Cities have been the major engine for social and economic development since they were founded in ancient civilization. There were snowball effects as cities grew and evolved, and those extended regions sparked additional growth. Despite this, the global economy has expanded as a result of the vicious cycle.

Rapid urbanisation is mostly to blame for the destruction of wetland areas (USEPA, 1994). Direct area loss and wetland degradation are both effects of development. pollution intake rises, modifications to water quantity, purity, and flow velocity, and modifications to species diversity as a result of disturbances and the introduction of alien (non-native) species. The primary pollutants linked to urbanization are sediments, fertilizers, oxygen-demanding substances, road salts, heavy metals, hydrocarbons, microorganisms, and viruses (USEPA 1994). These contaminants may enter wetlands from point sources as well as nonpoint.

Problem Statement

Despite the various ecological and socio - economic advantages of the Lubigi Floodway, the ecosphere ongoing decline puts its significance and existence in danger. The world's massive human population, urbanization efforts, and some unfavorable climatic consequences are endangering the region's traditionally rich diversity and natural variety, both of which are essential for human survival. Yet, compared to other marshes across the country, especially in Wakiso, the wetlands have received less investigation. Prior to this inquiry, nothing was known about how urbanization affected the upkeep of the Lubigi wetlands. It is vital to explain how urbanization has impacted the Lubigi Wetland's maintenance as a wetland in the Wakiso District in relation to this backdrop.

Specific Objectives

1. To examine the integrity of Wetlands for the past 10 to 15 years.
2. To identify the different activities done in Lubigi wetland and how they affect the wetland.
3. To analyze the effect of population growth and urban development on Lubigi Wetland.

Research Questions

1. How is the integrity of Wetlands for the past 10 to 15 years?
2. What are the different activities done in Lubigi Wetland and how they affect the wetland?
3. What is the effect of population growth and urban development on Lubigi Wetland?

Methodology**Research Design**

The Researcher used a quantitative research design because the researcher carried out research in Wakiso District which had a big population. The researcher in this case used quantitative measures like percentages which made it possible to collect data from the respondents.

Study Population

According to Greg Lawrings (2015), population was defined as the inhabitants of a particular place. The study population included the population description and the population sampling design.

The targeted population was on 30 NEMA Staff, 50 Local Government Staff and 70 Residents of Wakiso. The researcher used a sampling technique to get a sample.

Table 1: Target Population

Respondents	Target Population
NEMA Staff	30
Local government Staff	50
Residents of Wakiso	70
Total	150

Population and Sampling technique

The population from which the sample was taken involved the NEMA Staff, Local Government Staff and Residents of Wakiso. The respondents were got from various respondents in the District in order to come up with accurate data which helped the researcher get all that was needed.

Table 2: Sample Size

Respondents	Target Population	Sample Size	Percentage
NEMA Staff	30	25	83%
Local government Staff	50	40	90%
Local Communities	70	60	90%
Total	150	125	

Source: Field data (2021)

The researcher used a sample size of 25 respondents from the 30 NEMA Staff which is 83% of the target population, 40 local government staff which is 90% of the target population and finally 60 Residents of Wakiso.

Research Instruments

The researcher produced both primary and secondary sources of data and information. When collecting primary data, the investigator utilized surveys as a data collection technique. To obtain the required secondary data, the researcher turned to works by well-known authors in this field, including magazines, essays, novels, and papers.

Questionnaires

This choice of method was decided since the targeted audience was well-educated and capable of completing the questions. The respondents had adequate time to consider their answers. Questionnaires, which can also be self-administered, offer a simple way to gather data from a representative sample of a huge population.

Data Collection Procedure

In order to facilitate and ensure correct collection of data from participants, the researchers selected sure to obtain their consent for the study. In order to develop surveys without having too many or too few, the investigator moved ahead and requested interviews from the school administrators, parents, and kids. The investigator then contacted the participants at the predetermined times to gather data.

Statistical Treatment and Processing

The researchers proceeded on and collected the surveys from participants in order to determine the total number of people who answered to the surveys from the sample size that was employed. The data was analyzed from the questions that were delivered to the participants.

The researcher then used Microsoft excel to analyze data and present them into percentages on graphs and pie charts to be easily understood.

RESULTS

Demographic profile of respondents

Gender composition of respondents

Table 3: Gender Composition of respondents

Response	Frequency	Percentage
Male	70	70
Female	30	30
Total	100	100

Source: Primary Data 2020

From table 3, it can be seen that the majority of respondents were males that was (180) representing 69% of the total number of respondents, 80 respondents were female representing 31% of the respondents. This is an indication that gender sensitivity was taken care off so the findings therefore cannot be doubted on gender grounds; they can be relied for decision making.

Education level of the respondents

Table 4: Education level of respondents

Education level	Frequency	Percentage
O Level	50	50
A Level	20	20

Diploma	25	25
Degree and above	5	5
Total	100	100

Source: primary data 2020

Table 4 above clearly indicated that 50 respondents were O level certificate holders with a percentage of (50%) of the sample size followed by 20 respondents who presented results showing that they finished A level and they had (20%) of the sample size, 25 respondents had diplomas and they had a percentage of (25%) of the sample size and finally 5 respondents presented results indicating that they had Degrees and other qualifications which were above and they had a percentage of (5%) of the sample size.

Age distribution of respondents

Table 5: Age distribution of respondents

Respondents age	Frequency	Percentages
15-19	10	10
20-29	40	40
30-39	30	30
40+	20	20
Total	100	100

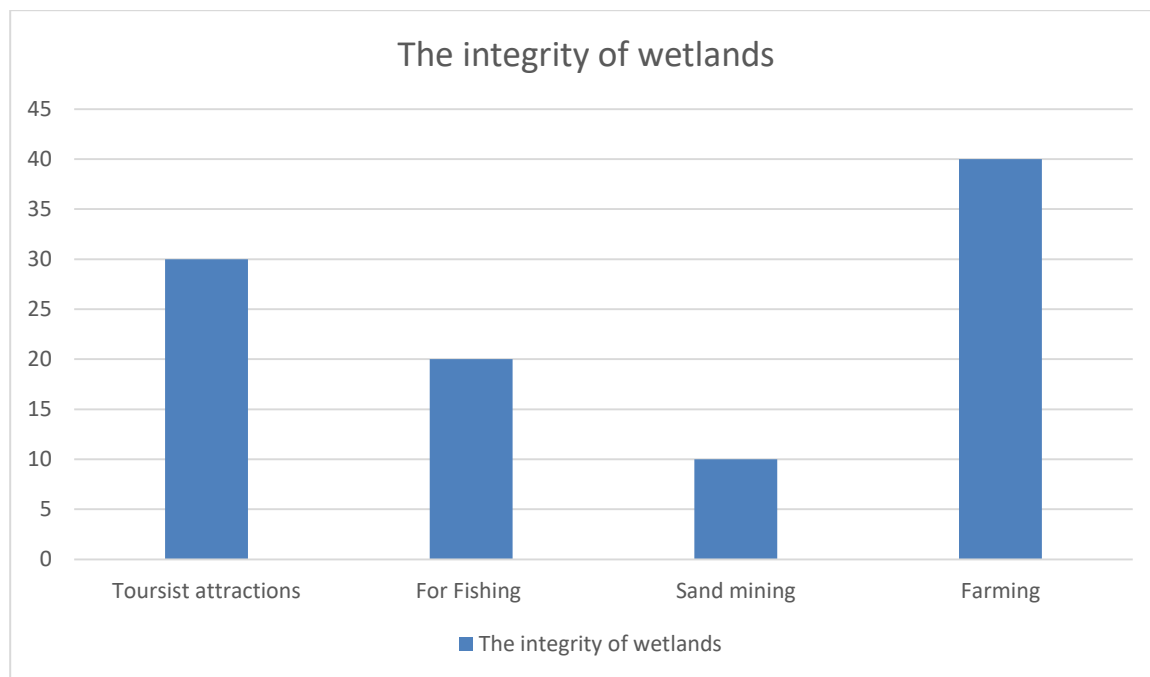
Source: Primary Data 2020

According to table 5 above, 30 were the large percentage and their age fell within the spectrum of (30-39) with a proportion of (30%) of the survey participants, followed by survey participants who had their era tend to range from (20-29) with a proportion of (40%), and participants who had the age group of 40+ years were 20 with a percentage of (20%) of the survey participants.

Data Presentation, Analysis and Interpretation of findings

Activities done in wetlands

Figure 1: Activities done in wetlands



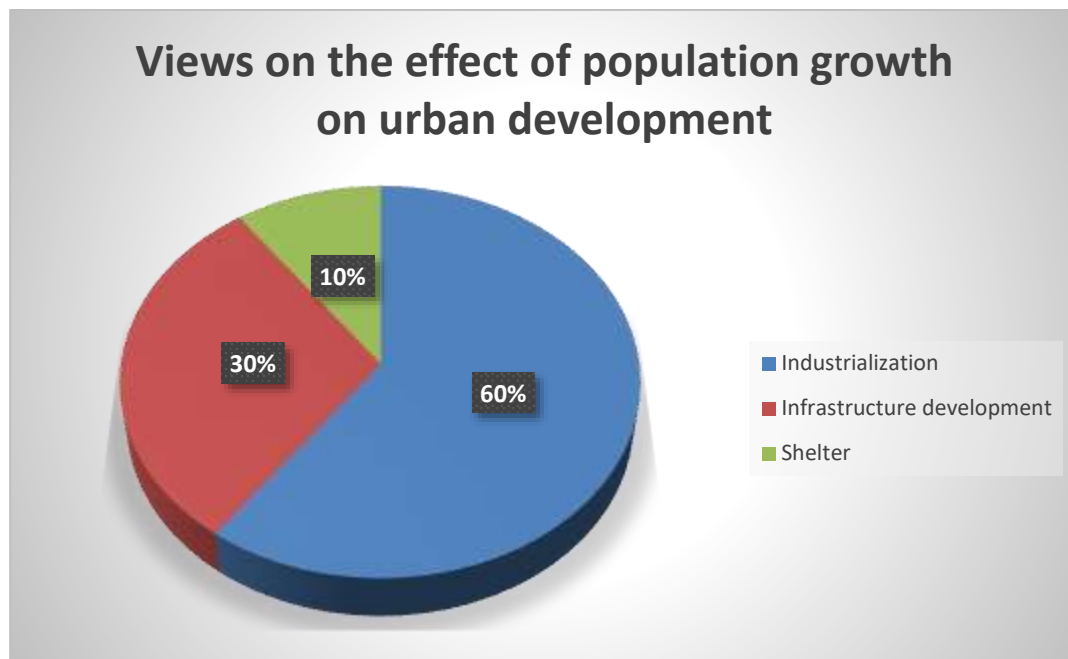
Research Data: 2021

According to the findings of the study, 40 respondents presented results indicating that wetlands were always used for farming in followed by 30 respondents who presented results to the researcher indicating that wetlands were used for tourist attraction most

especially people who would come from abroad. 20 respondents presented results indicating wetlands were used for fishing. 10% of the respondents presented results indicating some people would use wetlands for sand mining.

Effect of population growth on urban development

Figure 2: Views on the effect of population growth on urban development



Research data: 2021

According to the report's results, the primary consequence of population expansion on urban development was economic progress, which also included establishing new businesses in the neighborhood. Then, 30% of participants answered results to the research scientist indicating that infrastructure investment was a second effect of population increase on urban development, and finally, the findings of the study presented results indicating that looking for housing was another impact of population growth on urban development

Conclusions

In conclusion, the research's findings revealed that some survey respondents told the investigator that wetlands were always used for farming, followed by some who told the investigator that marshes served as a tourist destination, especially for tourists from overseas. Several responses offered data demonstrating that marshes were used for fishing. Some of the participants' results suggested that some individuals would mine sand from wetlands. Mechanization, which involved the formation of new industry sectors in the community, was the main impact of population increase on urban development. Then, results from some of the participants answered that infrastructure spending was another impact of population expansion on urban development. Eventually, the latest results revealed that the requirement for accommodation was another effect of increasing population on urban development.

Recommendations

According to the study's conclusions, urbanization has a negative impact on marshes preservation in Uganda. The study advises Uganda's legislature to pass stringent legislation to save wetlands. The study also urges the Ugandan government to restrict the issuance of land titles for property located in wetlands. The study advises the Ugandan government to educate the populace about the risks of intruding on a wetland. The study advises the Ugandan authorities to install sign posts warning people to preserve wetlands.

REFERENCES

Alana, H. (2006). Soil degradation and population growth in Uganda, Eye on Earth, a joint project of the World watch Institute and the blue moon fund.

Anonymous (1996). The Mediterranean Wetland Strategy: 1996-2006. Venice. 16pp

Archibold, O.W. & Thompson, S. (1984). Natural seed input as a factor in the reclamation of limestone quarry wastes at Marulan, New South Wales, Australia. *Apple Geogr* (Sevenoaks) 4:201-14.

Bacon, P.R. (1993). Wetland restoration and rehabilitation in the Insular Caribbean. In Moser, Prentice & van Vessem (1992), pp. 206-9

Booth & Reinelt, (1993). Consequences of urbanization on aquatic systems-measured effects, degradation thresholds

Conservation Foundation. (1988). Protecting America's wetlands: An action agenda final report of the National Wetlands Policy Forum. Washington, DC.

Cowardin, L.M., Carter, V., Golet, F.C. & Laroe, E.T. (1979). *Classification of wetlands and deep-water habitats of the United States*. US Fish and Wildlife Service, Washington DC.

Dahl, T.E. & Allord, G.J. Undated. Technical Aspects of Wetlands. History of Wetlands in the Conterminous United States. National Water Summary: Wetland Resources. US Geological Survey Water-Supply Paper 2425.

Davis, T. J. (1993). Towards the wise use of Wetlands: Report of the Ramsar Convention; wise use Project. *The Ramsar Convention Bureau*.

Government of Uganda; (GOU, 1999), the land act. Kampala, Uganda.

Hollis, G.E. (1992). The causes of wetland loss and degradation in the Mediterranean. In Finlayson, C.M., Hollis, G.E. and Davis, T.J. (Eds.). *Managing Mediterranean Wetlands and Their Birds*. Proc. Symp, Grado, Italy, 1991. IWRB Spec. Publ. No. 20, Slim bridge, UK, 285pp.