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Original Article

Water Service Delivery Issues and Challenges for the Urban Poor Zones in Southwestern Uganda

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Keywords:

Water service
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Sanitation.

The article aims to examine the issues and challenges associated with providing water services to urban impoverished areas in Southwestern Uganda. The research methodology employed in this study involved conducting a comprehensive desktop study and literature review, systematically searching, and selecting peer-reviewed journal articles, books, and conference proceedings within a specified scope, using carefully chosen keywords and search criteria. After collating and evaluating the selected literature, a thorough synthesis was done to identify existing knowledge gaps and provide insights into the research questions under investigation. The main findings of the results highlight the need for integrated service models to expand water service delivery for the urban poor zones in southwestern Uganda. The study concludes that the problems addressed in this research and the suggestions presented provide the basis for improving water services to urban impoverished areas in Southwestern Uganda. This research will broaden service models for urban areas while also creating service models for locations with features of impoverished conditions. It is crucial to remember that households in urban cells were more likely to use improved water sources (including piped water on-premises), make regular payments for water, rely on shared sanitation facilities, and use manual sludge emptying services.

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INTRODUCTION

Similar to numerous other places in Africa, Southwestern Uganda is experiencing a significant metamorphosis propelled by swift urbanization and population expansion. Significant migration from rural to urban settings has been spurred by the appeal of urban places, which offer greater living standards, career possibilities, and other benefits. Southwestern Uganda, where cities are growing at an unprecedented rate, is where this demographic shift is most noticeable. According to UN estimates, Southwestern Uganda and other parts of Africa would have twice as many urban residents by 2050. Even if urbanization is a sign of improved access to healthcare, education, and the economy, it also poses significant obstacles, particularly when it comes to developing urban infrastructure, such as water delivery systems.

Southwestern Uganda is suffering greatly from the effects of growing urbanization since there is an exponential increase in the demand for water services. Urban centres struggle with obsolete and insufficient water infrastructure because they are ill-prepared to handle this enormous increase. It is becoming more and more difficult for the current water delivery infrastructure to keep up with the unrelenting urban expansion. Due to their frequent exile to unofficial settlements on the outside of cities, the urban poor are disproportionately impacted by this mismatch between supply and demand. These unofficial towns, which are growing in number concurrently with urbanization, are severely lacking in essential amenities, most notably a steady supply of water.

This dynamic establishes the context for our study, which aims to identify the complex obstacles preventing the provision of water services to these urban poor regions in Southwestern Uganda. Comprehending the subtleties of this intricate situation is essential to formulating focused remedies that cater to the urgent water requirements of susceptible urban communities.

Problem Statement

There is a glaring disparity between the growing demand for water and the inadequate state of the infrastructure due to the rapid urbanization in Southwestern Uganda, especially in disadvantaged urban areas. This mismatch has numerous negative effects, such as unpredictable water supply, dependency on tainted sources, and an increase in waterborne infections among the impoverished urban population. The problem is made worse by a lack of funding, which makes infrastructure upkeep and development more difficult. Moreover, ineffective governance frameworks reinforce the cycle of subpar service delivery by fostering inefficiencies and a lack of responsibility among water service providers.

Unpredictable rainfall patterns and deteriorating terrain pose a threat to water quality and quantity, and climate change and environmental degradation exacerbate these problems. The main issue is that Southwestern Uganda's urban underprivileged neighbourhoods are unable to receive clean, dependable water supplies due to the interconnectedness of growing urbanization, poor infrastructure, deficient governance, and environmental issues.

Objectives

- To evaluate the impact of rapid urbanization on water service infrastructure.
- To investigate the interconnected challenges of governance, funding, and service delivery.
- To analyse the nexus of climate change and environmental factors on water access.

Justification

The present study fills a key knowledge gap about the difficulties associated with providing water services in Southwestern Uganda's disadvantaged urban districts. Through a methodical analysis of the interplay between several elements, including growing urbanization, limited infrastructure, governance challenges, and environmental changes, the study seeks to offer important

insights necessary for developing interventions that are both sustainable and successful.

Comprehending the intricacies of these issues is vital not only for scholarly discussions but, above all, for shaping policy determinations and pragmatic endeavours. The findings of this study are expected to support the creation of integrated service models, direct investment priorities, and encourage cooperation amongst stakeholders in order to guarantee fair and dependable water services for Southwestern Uganda's urban poor. Essentially, the goal of this research is to serve as a catalyst for positive change by establishing the foundation for better water service delivery that adheres to social justice and environmental principles.

METHODOLOGY

In order to address the issue of water service in urban poverty areas of Southwestern Uganda, a comprehensive two-phase investigative approach was used in this literature research. In order to develop a thorough contextual understanding, the first phase involved desktop research that involved the examination of reports, statistical data, and policy papers. This first phase made it possible to analyse past patterns, current issues with water services in the area, and policy frameworks in a more detailed way.

Subsequently, a constructed systematic literature review was then started. During this step, a large number of peer-reviewed books, conference proceedings, and journal articles had to be sorted through by carefully selecting keywords and search parameters. Finding, choosing, and assessing pertinent literature was the goal, with an emphasis on methodology, the reliability of sources, and their direct connection to the current research issues. The integration of existing material not only identified gaps in knowledge but also highlighted recurrent themes, providing a strong basis for drawing conclusions and creating suggestions in the subsequent publication.

This methodological approach assured the credibility and rigor necessary for significant contributions to the discourse on water service

delivery in urban disadvantaged regions, in addition to ensuring a full study of the difficulties revealed. The methodical approach of the literature study and the incorporation of many sources facilitated a full comprehension, laying the groundwork for an exhaustive investigation of plausible resolutions in the ensuing segments of the research article.

CHALLENGES IDENTIFIED

Rapid Urbanization and Population Growth

Southwestern Uganda, much like numerous regions across the African continent, is currently undergoing a profound transformation characterized by rapid urbanization and population growth (UN-Habitat, 2016). Urbanization is a global phenomenon, with cities expanding at an unprecedented rate, but its effects are particularly pronounced in Africa, where urban populations are projected to double by 2050 (UN-Habitat, 2016). The allure of urban areas, with the promise of employment opportunities and improved living standards, continues to attract a steady stream of migrants from rural areas, further fuelling this trend.

Rapid urbanization has the potential to be both good and bad. On the one hand, it denotes economic advancement, increased access to healthcare and education, and the possibility of a higher quality of life for locals. On the other hand, it presents major difficulties, particularly when constructing urban infrastructure, such as water supply systems.

An exponential rise in the demand for water services is one of the primary effects of fast urbanization (UN-Habitat, 2016). The need for clean, easily available water for drinking, sanitizing, and industrial uses is growing along with the urban population. The current water infrastructure, however, frequently finds it difficult to keep up with this relentless urban growth. Particularly for the urban poor, this mismatch results in acute water shortages and insufficient access to clean and secure water sources.

Water Scarcity and Its Implications

The impact of growing urbanization on water resources is seen in Southwestern Uganda. Numerous issues with the area's water supply infrastructure have led to a severe water shortage catastrophe. Water infrastructure needs have not received adequate funding, which, along with population expansion, has resulted in a dire shortage of water. The difficulties experienced by city dwellers, particularly those who stay in informal settlements, are made worse by this situation. Water shortage has several effects that have a significant impact on the social, economic, and environmental health of the area. Primarily, a lack of access to clean water increases the risk of contracting waterborne illnesses like cholera and dysentery, which raises morbidity and death rates (Nakawunde et al., 2018). This, in turn, adds to the load already placed on the healthcare system. Furthermore, the absence of accessibility to clean water reduces productivity, notably in the agriculture industry, a key driver of the local economy (Nakawunde et al., 2018). Farmers sometimes experience difficulty irrigating their crops and giving cattle enough water, which reduces output and causes financial losses. In essence, a lack of water feeds a cycle of hunger and poverty.

The Urban Poor and Water Access

The urban poor bear the burden of Southwestern Uganda's water issue. On the fringes of cities, informal communities or slums continue to proliferate as fast urbanization continues, frequently lacking in basic necessities like a water supply (UN-Habitat, 2016). Residents in these locations are compelled to use unreliable water sources that are frequently dangerous, including dirty streams and shallow wells, which increases health hazards (Nakawunde et al., 2018).

The struggle of the urban poor to obtain clean water is a symptom of a larger socioeconomic inequality problem. The differences in water availability and quality serve as a sharp reminder that not all inhabitants would necessarily benefit from growing urbanization in terms of better

living circumstances (Marks et al., 2020). To achieve sustainable urban growth and make sure that no one becomes disadvantaged, these inequities must be addressed.

Limited Infrastructure and Resources

There are several problems that make it difficult to deliver dependable water services in Southwestern Uganda, but the region's poor infrastructure and financial resources are the main ones (Okot, 2018). The provision of water services is crucial for the welfare of both urban and rural inhabitants, but the area struggles with investment barriers in water infrastructure, which directly limit its ability to build and maintain water supply networks. In order to shed light on the current problems and potential solutions, this article examines the effects of inadequate infrastructure and resources on the provision of water services in Southwestern Uganda.

The inadequate water infrastructure in Southwestern Uganda is one of the most obvious barriers to providing water services. Urban cities in the region sometimes do not have well-established water delivery infrastructure that can keep up with the rising demand. The current infrastructure finds it difficult to keep up with the relentless urbanization and population expansion (Okot, 2018). The results are clear: inadequate access to clean water, erratic availability, and an increased reliance on unreliable alternate water sources.

In peri-urban and informal communities, the condition of the water infrastructure is very bad. These neighbourhoods, which exhibit haphazard construction and a dearth of essential facilities, are frequently disadvantaged and underserved (Okot, 2018). Their living conditions are made worse by the absence of a steady supply of water, which feeds the cycle of inequality and poverty.

FINANCIAL CONSTRAINTS

The problems with providing water services in Southwestern Uganda are made worse by a lack of funding. To increase capacity, maintain systems, and guarantee water quality, enough

investment in water infrastructure is required. However, the area encounters major difficulties in obtaining the required funding (Okot, 2018).

The financial limits are a result of a number of issues, including budgetary restrictions at the municipal and federal levels, conflicting funding priorities, and the significant expenses involved in infrastructure construction and upkeep. As a result, Southwestern Uganda finds it difficult to keep up with the growing demand for water services, especially in areas that are quickly urbanizing.

Impact on Water Access and Quality

The citizens of the area suffer greatly as a result of the region's low infrastructure and financial resources. Although many people in Southwestern Uganda are deprived of this essential need, access to clean and safe drinking water is a fundamental human right (Okot, 2018). Long lines at water stations, inconsistent supply, and, in certain circumstances, acute water shortages are all caused by inadequate water infrastructure, which makes it difficult to fulfil the expanding demand.

In addition, poor infrastructure compromises water quality. Lack of adequate distribution and treatment systems increases the danger of pollution and the development of waterborne illnesses (Okot, 2018). This poses a serious health risk to the populace, especially to weaker demographics like children and the elderly.

QUALITY AND RELIABILITY OF WATER SOURCES

Not only is access to dependable and clean water sources a fundamental human right, but it is also the basis for effective water service delivery. Like many other regions, Southwestern Uganda depends heavily on the quality and dependability of its water supplies to maintain the welfare of its citizens. However, in impoverished urban sections of the region, these essential elements are jeopardized because of pollution brought on by inadequate sanitation practices and a lack of thorough sewage systems (Amadi, 2017). This essay investigates potential solutions to these

urgent problems as it digs into the wide-ranging effects of deteriorated water quality and dependability on the socioeconomic growth of Southwestern Uganda.

Water Source Contamination

Water supplies in many impoverished urban regions of southwestern Uganda are contaminated, making them unfit for human consumption and everyday usage. According to Amadi (2017), the absence of efficient sewage infrastructure and poor sanitation practices, such as open defecation, are the main causes of pollution. These elements lead to the contamination of groundwater, rivers, and lakes, which are frequently the main water supplies for nearby towns.

The populace is seriously at risk for health due to water pollution. Residents who rely on contaminated water sources have a higher risk of developing waterborne illnesses, including cholera, typhoid, and dysentery (Amadi, 2017). As families struggle with medical costs and lost income as a result of disease, the burden of illness puts extra strain on the already overburdened healthcare system and worsens the poverty cycle.

Unreliability of Water Sources

In addition to water quality, a crucial component of providing water services is the dependability of the water sources. Southwestern Uganda's poor urban neighbourhoods frequently experience irregular water delivery, leaving inhabitants without water for protracted periods of time (Amadi, 2017). Because of the unreliability of water supplies, it is difficult for vulnerable populations, such as women and children, who must gather water, to go about their daily lives and conduct business.

Additionally, the region's economy greatly depends on agriculture, which is why the unpredictable water supply has far-reaching effects on it. Food security and the way of life of rural communities are threatened by inconsistent access to water for irrigation and livestock

(Amadi, 2017). The region's socioeconomic growth suffers when agriculture fails.

IMPACT ON SOCIOECONOMIC DEVELOPMENT

The socioeconomic growth of southwestern Uganda is significantly impacted by the deterioration in the quality and dependability of water supplies. For people to be healthy, educated, and productive economically, they need access to clean water (Marks et al., 2020). Waterborne infections brought on by tainted water, however, raise healthcare costs, decrease labour force participation, and diminish educational attainment (Amadi, 2017).

The effects on women's finances are particularly severe since they frequently have to take care of ill family members and travel great distances to gather water. The time and effort invested in these duties takes away from work that generates revenue and reduces prospects for women to become economically independent (Amadi, 2017).

GOVERNANCE AND INSTITUTIONAL CHALLENGES

A vital prerequisite for each community's well-being is the provision of trustworthy and equitable water services. However, a lacklustre institutional framework and inadequate governance systems in Southwestern Uganda make it difficult to accomplish this aim. Water resource distribution is negatively impacted by problems including corruption, poor management, and a lack of responsibility among water service providers (Nabugoomu et al., 2019). The deep effects of institutional and governance concerns on the provision of water services in Southwestern Uganda are examined in this essay, along with possible solutions.

Weak Governance Structures

Effective water service delivery in the area is severely hampered by weak governance systems. Water service providers are plagued by corruption and poor management, which takes money away from necessary infrastructure development and

upkeep (Nabugoomu et al., 2019). These actions undermine public confidence in the organizations in charge of water services and impede efforts to provide all citizens with safe and dependable water.

Inefficiencies and unfairness are also caused by corruption in the water industry. Due to this, certain people or groups receive preferential treatment, while others are left without enough access to water resources (Nabugoomu et al., 2019). This worsens socioeconomic inequality and feeds a vicious cycle of poverty, especially for urban poor people.

Lack of Accountability

The lack of accountability systems makes it much harder for Southwestern Uganda's water service delivery industry to meet its problems. Without transparency and control, there are few options for dealing with problems, including poor management, theft, and subpar service delivery (Nabugoomu et al., 2019). As a result, despite their flaws, water service companies may continue to operate with impunity.

The absence of accountability hinders community participation in decision-making procedures as well. Communities, particularly those living in impoverished metropolitan areas, are frequently left out of the planning and execution of water projects (Nabugoomu et al., 2019). This leads to solutions that could not adequately meet their particular requirements and difficulties.

Impact on Water Service Delivery

Water service delivery is significantly impacted by the institutional and governance problems in Southwestern Uganda. Inadequate infrastructure development and upkeep are the result of resource misallocation and poor management of water service providers. Residents thus encounter inconsistent water supply, poor water quality, and restricted access to clean water sources (Nabugoomu et al., 2019).

Additionally, a lack of accountability and transparency undermines public confidence in water service providers, making it challenging to

win over the community for water projects and conservation initiatives. The discovery of regional solutions to water-related problems is further hampered by insufficient community engagement, which worsens the situation for vulnerable communities and feeds the loop of insufficient service delivery (Nabugoomu et al., 2019).

CLIMATE CHANGE AND ENVIRONMENTAL FACTORS

Like many other areas of the world, Southwestern Uganda is struggling with the severe consequences of climate change, which compound the region's already pressing problems with water provision. There is a greater need for water due to irregular rainfall patterns, protracted droughts, and environmental degradation (World Bank, 2018). The varied effects of environmental conditions and climate change on the provision of water services in Southwestern Uganda are examined in this essay, along with possible solutions to these pressing problems.

Climate Change and Water Scarcity

Changes in weather patterns are one manifestation of climate change in Southwestern Uganda. The region's water supplies are now frequently affected by erratic and unexpected rainfall. The replenishment of water sources has been disturbed, and the capacity of current water delivery systems has been stretched by protracted droughts followed by high rainfall events (World Bank, 2018). As a result, water shortages have increased in severity and frequency, especially during dry seasons.

The populace of the area suffers greatly as a result of the lack of water. When access to clean water for drinking, sanitation, and agriculture is hampered, health hazards, food shortages, and financial difficulties result. Due to their frequent lack of means to make necessary climate adaptations, vulnerable people, such as the urban poor and rural farmers, are disproportionately impacted by these changes (World Bank, 2018).

Environmental Degradation

The problems with water provision in Southwestern Uganda are made worse by environmental deterioration. Siltation of rivers and streams lowers their capacity to store and deliver water due to land degradation, soil erosion, and deforestation (World Bank, 2018). It is now much more difficult to supply the increasing demand for water services due to the lower water quality and quantity caused by these environmental changes.

Additionally, the delicate balance of water cycles is disturbed when natural habitats are destroyed. Human activities like urban growth and agriculture are endangering wetlands, which are essential for controlling water flow and quality (World Bank, 2018). The problems of water shortage and environmental deterioration are exacerbated by this.

Impact on Water Service Delivery

In Southwestern Uganda, water service delivery is significantly impacted by environmental conditions and climate change. Inconsistent water access and unreliable services are the results of the rising frequency of water shortages, which also affects the dependability of water delivery systems (World Bank, 2018). Communities are compelled to use alternate, frequently contaminated water sources, which increases the hazards to their health.

An important health risk is posed by the degradation of water quality brought on by siltation and pollution. Healthcare systems are already under strain, and contaminated water sources make waterborne infections more prevalent (World Bank, 2018). Because of this, medical costs go up, and productivity suffers as a result of being sick, which feeds the poverty cycle.

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SOCIO-ECONOMIC DISPARITIES

The prevalence of stark socioeconomic gaps is one of the many difficulties facing the supply of water services in Southwestern Uganda, and it is also one of the most worrisome. Uneven distribution of access to clean water, a fundamental human right, usually results in underserved populations (GOK, 2019). This persistent discrepancy exacerbates already existing risks and impedes the region's efforts to achieve water equity (GOK, 2019). An in-depth analysis of the severe effects of socioeconomic inequalities on the provision of water services in Southwestern Uganda is provided in this article, along with an examination of potential solutions.

Unequal Access to Clean Water

Uneven access to clean water is the most glaring example of socioeconomic differences in water service delivery. Wealthier urban and suburban communities frequently have more advanced water supply infrastructure, guaranteeing dependable access to sources of safe water (GOK, 2019). On the other hand, disadvantaged people, such as those in rural or informal settlements, frequently rely on unimproved water sources or have inconsistent water supply, which causes recurrent shortages and waterborne illnesses.

The cycle of poverty and bad health among disadvantaged communities is sustained by the uneven distribution of water supplies. Families in disadvantaged regions spend a considerable percentage of their money on obtaining water from vendors or using alternate, sometimes dangerous sources (GOK, 2019). In addition, women and children bear a disproportionate share of the responsibility of gathering water, which restricts their access to economic and educational possibilities.

Health and Well-being Disparities

Significant negative effects on health and well-being result from socioeconomic inequities in water availability. Because they consume polluted

water, people living in disadvantaged groups are more likely to contract waterborne infections (GOK, 2019). The economic gap is further widened by these illnesses' higher healthcare costs, lost workdays, and decreased productivity.

Additionally, communities' general well-being is impacted by a lack of access to facilities for sanitation and clean water. There is a greater frequency of avoidable illnesses and malnutrition, especially among children, in communities with poor water supplies due to poor hygiene and sanitation practices (GOK, 2019). The region's efforts to advance socioeconomic development and public health are hampered by this.

Barriers to Education

Education is impacted by socioeconomic differences in the distribution of water services. Children in disadvantaged areas frequently spend lengthy periods of time gathering water, which keeps them from attending school (GOK, 2019). Absenteeism, less focus, and worse academic achievement might result from a lack of dependability and availability of clean water at schools.

Girls have a disproportionate share of the burden of collecting water, and they may also experience additional difficulties with menstrual hygiene. Girls may be dissuaded from attending school during their periods due to a lack of gender-sensitive sanitary facilities and clean water sources, which perpetuates gender inequities in education (GOK, 2019).

CONCLUSION

In conclusion, the problems with providing water services to urban poor regions in Southwestern Uganda are complicated and intricately entwined. These difficulties are caused by a number of variables, including growing urbanization, a lack of resources, problems with governance, environmental conditions, and social inequalities. Government agencies, international aid agencies, and civil society groups must work together in a comprehensive manner to resolve these complex problems. The best way to guarantee that every

person has equal access to safe and dependable water services is to invest in infrastructure, improve governance, and take climate-resilient actions.

Addressing the Multifaceted Challenges

It takes a comprehensive effort from everyone involved to solve these complicated problems. To increase capacity and enhance the effectiveness of water delivery systems, government officials must give infrastructure development and maintenance first priority. To increase the amount of funding available for water projects, creative financing strategies, including public-private partnerships and foreign help, should be considered. For the administration of water service providers to be transparent and efficient, it is essential to improve governance structures and accountability procedures. In order to ensure that locals' particular needs are taken into account, it is important to encourage community involvement and empowerment.

Furthermore, policies and initiatives pertaining to water service must incorporate climate-resilient practices and environmental protection techniques. The consequences of climate change and environmental degradation can be lessened with the use of sustainable land and water resource management techniques and disaster preparedness strategies. Resolving socioeconomic gaps in access to clean water necessitates equitable resource distribution, cost-effective tariff systems, and education and awareness efforts targeted at underserved groups. To reduce poverty and provide access to essential services, gender-sensitive facilities and income-generating possibilities should also be encouraged.

In conclusion, while complicated and linked, the problems with providing water services in Southwestern Uganda are not insurmountable. In order to improve the quality of life and promote sustainable development in the area, it is important to guarantee that every citizen has fair access to clean and dependable water services with the help of a concerted and cooperative effort.

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