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Corresponding Author's Email: kulongbuom@gmail.com

WATER DEFICIENCY: A CASE STUDY OF LONGA IN JUBA, SOUTH SUDAN

Kulong Buom Chan

Starford International University Department of Journalism and Mass communication Juba, South Sudan

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In Juba, South Sudan, water scarcity endangers economic growth and livelihoods, with greater implications for the welfare of the local populace. A UNICEF report states that only 11% of South Sudanese have access to basic sanitation, and 59% do not have access to clean water (Gupta, H., August 29, 2025). Furthermore, according to Oxfam International (2022), just 55% of people have access to clean drinking water. Understanding the root reasons of Longa's water shortage critically is the goal of this study. Data collection for the study included both primary and secondary sources. Surveys have been developed to gather new, independent data from the public, and quantitative information utilising pre-existing statistics was analyzed and compared to current data. 61% of Longa's population does not have access to safe and clean drinking water, according to the findings. Previous water studies are extensively discussed in the literature review. Water treatment facilities were not present in Longa's unofficially delineated habitation areas, according to assessments. The widespread water crisis is deeply rooted in political, social, economic, and environmental factors, with inadequate internal road infrastructure for private water vendors posing significant challenges in reaching some communities. In 2023, the South Sudanese government initiated the construction of a water pipeline in Juba, implemented by the Japanese government (JICA). The installation of water pipelines in certain blocks marks a significant step forward in improving access to clean drinking water. However, challenges persist, particularly in areas lacking adequate water infrastructure, such as pipelines and water stations or boreholes on each block.

Keywords:Water scarcity ,South Sudan, Juba, Water accessibility, Public health, Humanitarian crisis and Urban water security

INTRODUCTION

Access to safe, clean drinking water in Juba, South Sudan, poses a crisis that represents a dire humanitarian crisis. According to Radio Tamazuj (2023, March 23), it was revealed that "Residents in various Juba neighborhoods, such as Munuki, Kator, Gumbo-Sherikat, and Gudele, face difficulties in obtaining clean water." The limited water availability intensifies the vulnerability of populations already facing multiple hardships. Following significant urban expansion after 2020, water availability became a critical issue in central Juba. The expansion affected numerous areas, including Longa, where the community struggled to survive on a single borehole in Suku Harrideb. This study aims to understand the factors driving water insufficiency in Longa, as the challenges provide clear evidence that demand an urgent effort to improve water accessibility from the government or WASH partners. Approximately three out of every five residents lacked access to potable water of acceptable quality, as the water crisis severely impacted the localities that experienced growth. According to a report published by the World Bank Group on (2023 May 2), "A substantial part of the population, which includes both urban and rural communities, depends on an unimproved water source that may be contaminated. South Sudanese have long dealt with such water-related risks." The escalation of the water crisis becomes a critical issue, posing a substantial threat to the population's overall welfare. Nevertheless, the denial of clean, safe drinking water endangers health, nutrition, and gender equality and causes conflict among locals due to limited water availability. These water-related threats tend to disproportionately impact women and girls due to their lack of access to water. Development Aid publication, Guyson, N. (2024, July 11), revealed that "South Sudan is grappling with a profound water crisis that significantly impedes its developmental progress and exacerbates widespread health and sanitation challenges."

BACKGROUND AND CONTEXT

Local Context

Longa, settled in 2020, is a rapidly expanding neighborhood in northern Juba, South Sudan, home to over 200,000

residents. It comprises more than four blocks: Suku Hurranab, Suk Darfur, Suku Harrideb, and Goroyio. All are facing an acute water crisis, making access to clean and safe water a daily struggle.

Geographical Context

South Sudan, the world's youngest nation, gained independence from Sudan on July 9, 2011, following a devastating civil war that culminated in the Comprehensive Peace Agreement (CPA) of 2005. Since then, the nation has grappled with persistent internal conflicts rooted in ethnic tensions, economic disparities, humanitarian crises, and political power struggles. The fragile peace established by September 12, 2018, agreement remains threatened, significantly hindering the development of essential infrastructure, particularly water supply systems. This ongoing instability severely limits access to clean water, exacerbating the humanitarian situation and impeding overall development.

Problem Statement

In Juba, the absence of a reliable water resource management system has forced many communities to rely on unsanitary practices. Residents of Longa are experiencing acute water shortages due to the civil war, which destroyed much of the region's water infrastructure. This statistic underscores the urgent need for targeted interventions and innovative strategies to address the water crisis and improve the quality of life for those affected.

Justification of Research

This research aims to understand the factors contributing to water sufficiency in Longa, to understand persistent issues related to water accessibility. A comprehensive analysis was carried out to identify the gap between this study and existing research. The objective was to identify factors influencing water access and impacts, paving the way for effective exploration. The study will also reassess the broader implications of water scarcity, particularly regarding public health, economic constraints, safety risks, and gender inequality.

Scope of Research

The goal of this study focuses on residents of Longa, covering four blocks that are facing significant water inaccessibility and heavily relying on insufficient water tanks. Sybing, R. (February 11, 2025) noted that "the scope of the study explains what the researchers are examining and the environment they are studying." This research aims to uncover realities considering various demographic and socio-economic factors, providing valuable insights tailored to their distinct contexts. The study will explore and define the necessary boundaries and focus for a comprehensive examination of relevant and actionable aspects.

Research Objectives

Every successful study requires SMART objectives to guide its implementation, ensuring a systematic approach aligns with planned purposes.

General objectives

This study investigates the factors contributing to water deficiency in Longa, focusing on its impact on public health and economic burden. The primary objective is to identify barriers to clean and safe water access for households and to explore sustainable solutions for future improvements.

Main specific objectives

1. To assess the factors contributing to water inaccessibility in Longa, Juba, South Sudan
2. To evaluate the impact of factors on the health and socio-economic conditions of the local community.
3. To assess response strategies by reviewing and evaluating existing government and NGO programs aimed at improving water accessibility in Juba.

Research questions

Three research questions were developed to help explore this study within the Longa block in Juba, South Sudan. A further analysis is carried out on water deficiency, both independent and dependent variables, to highlight the impact.

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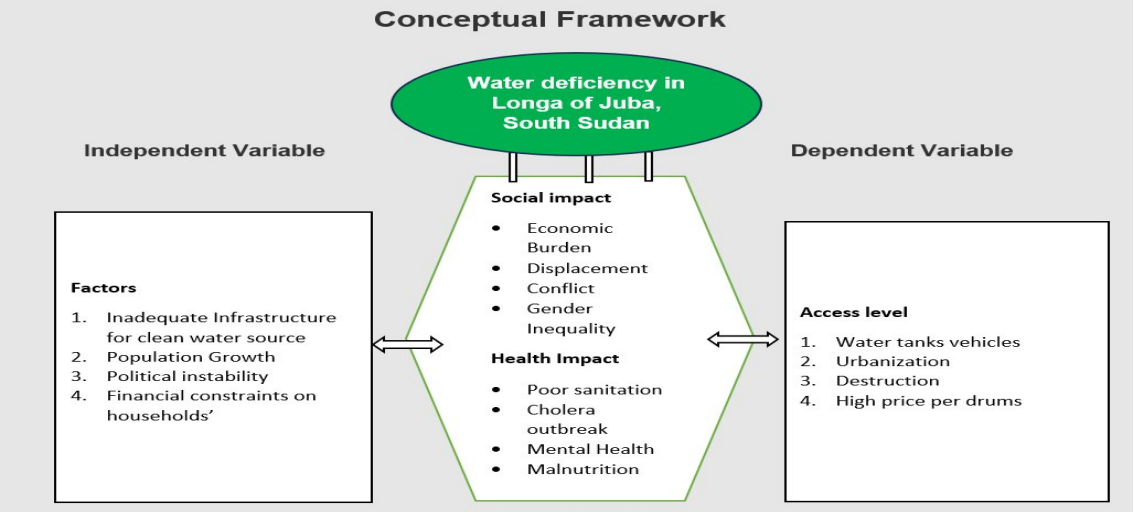

Figure. 1: **What are the challenges in accessing clean and safe water faced by residents in Longa?**

Residents in Longa, Juba, face significant challenges in accessing clean and safe water. A survey conducted on 2025 Sep 28, highlighted that areas such as Suk Hurranib, Suk Darfur, Suku Harrideb, and Goroyio are severely impacted by water shortages. The community relies on a single borehole and occasional rainwater, while inadequate infrastructure is a major contributing factor. Poor road access prevents private vendors from supplying sufficient water, forcing some families to fetch water from tank drivers along the roadside, while those farther away depend solely on untreated sources. This situation disproportionately affects women and girls, who often walk long distances to collect water for household use, perpetuating gender inequality and limiting their opportunities. Water scarcity has significant consequences for residents' lives, with potential health-related issues arising from inadequate supplies. Sapa (2025) noted that "communities are forced to rely on inadequate and dangerous water supplies, which lead to waterborne diseases and perpetuate the cycle of poverty." Funk (2025) emphasized that as the population grows, so does the water demand, straining urban areas where infrastructure struggles to keep pace. In South Sudan, effective water resource management has not been established due to internal conflict and ongoing political instability, hindering the development of a sustainable water ecosystem. Rapid population growth, climate change, and the need for safe drinking water in remote areas pose considerable threats to residents' social welfare. There is an urgent need for protection against waterborne diseases by drilling boreholes or establishing water stations to ensure communities have sustainable access to clean water, in line with Sustainable Development Goal (SDG) 6, which aims for clean water and sanitation for all by 2030. Economic hardship further exacerbates access to adequate water, particularly with the rise in foreign currency and the depreciation of the local currency. The COVID-19 pandemic in 2020 highlighted these challenges, as insufficient water made it difficult to maintain hygiene and sanitation, exposing residents to health risks. The water deficiency in Longa represents a critical issue that significantly impacts access to safe water. Reports indicate that "access to clean water and sanitation is one of the sustainable development goals (SDG), and securing the availability of drinking water is essential for urban water security" (Assefa, Babel, Susnik, & Shinde, 2018).

How does the shortage of water supply impact the health of the community living in Longa of Juba?

On October 2, 2025, a final assessment was conducted in Longa. The lack of access to clean water and sanitation has become a daily burden for residents, significantly increasing the risk of disease outbreaks. Most households in Longa depend on water vendors, but rainy weather creates challenges in accessing road infrastructure for water supplies. South Sudan is severely affected by water insecurity, conflict, and population growth, which further exacerbates the welfare of the local population. Observational analysis indicates that 60% of individuals consume unimproved water, posing health risks due to unhygienic practices in Longa. The UNICEF Director of Emergency Programs has stated that "for malnourished children, contaminated water can hinder recovery, regardless of food intake. In Longa, residents face significant survival challenges, often resorting to untreated water. While this may seem straightforward, the absence of safe and clean water poses serious public health threats. According to UNICEF, 59% of South Sudan's population lacks access to safe drinking water, and only 10% have improved sanitation facilities. The inadequate water infrastructure in Juba exposes most residents to contaminated sources, directly contributing to waterborne diseases, including cholera and other related illnesses. Research by Info-Nile revealed that "water and sanitation hygiene (WASH) presents a major public health challenge in South Sudan, with many households lacking access to safe drinking water, severely impacting numerous families." Furthermore, the continuous emergence of cholera outbreaks, fueled by the scarcity of safe water and sanitation, represents a critical aspect of the water crisis, leading to fatalities and pushing already vulnerable

communities to their limits, according to CARE International and the World Health Organization.

What is the economic impact of water inaccessibility on households in Longa of Juba?

Accessing clean water in Longa, Juba, is hindered by various factors, particularly the country's economic instability. The water prices have increased significantly, with 20 litres costing 1000 South Sudanese pounds, more than residents can afford. However, this economic strain is compounded by rising costs of goods and services and delays in civil servants' salaries, further limiting residents' ability to afford water. The ongoing conflict and political unrest have created a cycle of economic hardship, disproportionately affecting low-income households that bear the financial burden of purchasing water from private vendors. According to research published at Stanford University (2023, January 19), "a low-income household often has a different response to curtailment measures and surcharges based on their previous water usage." The conflict has entrenched poverty, leading to macroeconomic challenges, including the rapid depreciation of the local currency against foreign currencies. Ruth O'Neill (2023, March 22) revealed that "inadequate water access imposes a significant financial burden on individuals and families, contributing to higher illness rates and lost work time associated with water collection." The costs associated with health treatment are also rising, while increased fuel prices due to currency devaluation further elevate delivery costs to consumers. Additionally, the growing population in Longa has led to higher water consumption. Women are highly exposed to risk; they collect water from a far distance and spend hours each day travelling to distant vendors. The United Nations International Children's Agency (2016, August 29) reported that "the economic and social impacts of inadequate water access predominantly fall on women." Access to safe and clean drinking water becomes a considerable economic drain, especially for women and children, who often bear the responsibility of fetching water.

Significance of research

The research impact, as articulated by Rose, F. (2023, December 11), emphasizes the significance of research findings in enhancing knowledge and addressing societal issues. This study aims to provide an insightful analysis concerning the Longa people's challenges stemming from inadequate water access. It highlights the intricate interplay among various political, social, and economic factors that impact the water conditions of the Longa community. By exploring these dynamics, the study intends to deepen the understanding of water scarcity and its profound effects on community access to water.

LITERATURE REVIEW

This literature review examines existing scholarship on water insecurity, with particular attention to conflict-affected urban settings. The local community heavily relies on water tanks as their primary means of accessing water, largely due to the inadequate water infrastructure in their areas. A critical aspect of this review is the concept of the water footprint, which quantifies the volume of freshwater used to produce the goods and services consumed by individuals and communities (Hoekstra et al., 2011), which stated that "Water is insufficient, with an alarming demand for drilling more water pipelines for the community to access clean drinking water for their needs or use." Beyond consumption patterns, a significant consideration in water scarcity assessments is the issue of return flow. Understanding water return flow is critical for sustainable water management (Hoekstra et al., 2012), particularly in contexts where infrastructure damage limits water recycling capabilities. Water is essential for human physiological functioning and survival. Reports (Millennium Ecosystem Assessment, 2005) further stated that "water and watershed governance has emerged as a critical policy area globally, particularly as scientists and policymakers recognize the importance of protecting ecosystem services to generate public goods." Despite extensive research on water scarcity in conflict zones, limited empirical data exist on the specific challenges facing rapidly urbanizing informal settlements in South Sudan, particularly regarding the intersection of infrastructure deficits, economic barriers, and gender inequality. There is an anticipated global water crisis (UNWWD, 2015), specifically in areas where commercial, industrial, and agricultural water consumers are excessive. A high global demand for water is expected to rise by 55% in the years to come, as reported by Maryam Salehi (2022), Vollmer and Harrison (2021), and Mishra et al. (2021)

RESEARCH METHODOLOGY

The study used a mixed-methods approach to assess the underlying factors and effects of water scarcity in Longa. As a systematic step, before developing the questionnaire, a detailed process in literature review and structured analysis on water studies, particularly the Humanitarian report, was used to determine the research objectives, techniques, and relevant questions. A lack of existing academic literature made it difficult to gain insights from past water research, especially in conflict-affected areas with insufficient empirical data. The framed questionnaire survey was developed and intended to collect qualitative data from 100 households in Longa, Juba. In addition, secondary data was obtained from published sources. Qualitative data gathered from respondents enabled this study to capitalize on findings from the survey conducted on September 28, 2025. Participants shared their experiences with water shortages, improving the quality and detail of the material presented. Perceived barriers to water insufficiency were evaluated using an open ended enquiry,
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which was essential for understanding the underlying water accessibility issues in the targeted location. The study focused on South Sudan, specifically the Longa block in Juba, which has been severely impacted by water scarcity since 2020. The findings revealed that continuous conflicts, political unrest, and inadequate infrastructure, especially poor internal road conditions and limited water pipelines, has a significant influence on water security.

Research ethics

Ethical standards were maintained throughout the research process. A consent form ensuring voluntary participation was used, and respondents were informed about research objectives. Meanwhile, their responses will be kept confidential and will protect participant privacy." Fonseca (2023) characterized research ethics as directives for conducting and reporting research devoid of deception or intentional harm to participants or society.

Research sample

To ensure the proper selection of the target population, a methodical sampling technique was developed. Enago Academy publication (Jul 19, 2019) argues that “research sample is a subset of a population, and its sample size refers to the number of individuals in it.” The study, based on previous research on water scarcity in South Sudan, specifically in Longa, targeted approximately 100 homes. As part of this investigation, a table frame was created to display the data. Each sample collected consisted of demographic information such as gender, household size, and income level, designed for illustrative data presentation. The sampling population represented 100 families chosen to reflect the overall population affected by water shortages. However, since the neighborhood is served by a single borehole that supplies four blocks, this sample size did not accurately represent the entire population. There is potential to expand the sample size, considering the area's ongoing and inconsistent water supply shortages. A representative sample was drawn from each block to better understand the circumstances.

Data Collection

The questions for this study were designed based on the local context for easy comprehension. The goal was to assess the level of water availability to determine outcomes. Four local enumerators were recruited and trained to act as field data collectors and administer the data to ensure adherence to protocols during data collection across four blocks. Due to financial constraints, the timeframe was limited, and the training was done in less than two days, from 25 to 27 September 2025. The launch was carried out in four different locations. Suku Hurranab, Suk Darfur, Suku Harrideb, and Goroyio in Longa of Juba, South Sudan. The second assessment was carried out, using the methods of households visited to obtain additional data, resulting in a total of two days to enhance the quality of data collected. Conversely, in studies conducted, water consumption is high due to extended family members living together, alongside concerns about water availability and the difficulties created by inadequate road access for water vendors.

Data Analysis

Participants' answers to particular questions were the focus of this study's comprehensive data evaluation strategies. While monitoring the physical water infrastructure through observational methods during data collection, the primary goal was to comprehend the elements influencing water quality. Excel software was used for analytics, and a presentation with area charts labeled the percentage of people who were impacted by water scarcity. The area charts display alarming data, showing that many people in the target area, like Longa, struggle with unsafe and insufficient drinking water. Comparing the specific existing studies and evidence-based targets data in this research was the main agenda to determine the level of water insecurity outcome. The gathered first-hand data was organized for examination by classifying respondents as having limited access to water, those without access, and those with access.

Secondary Data

A thorough literature study was conducted to investigate the effects of water crises on social and health conditions in conflict-affected areas. Key sources included papers and journals from the World Health Organization (WHO), UNICEF, and Oxfam, as well as academic publications including Water Research, the Journal of Water and Health, and Environmental Health Perspectives. The review concentrated on peer-reviewed papers published in the last decade, choosing those that provided quantitative data or pertinent case studies that added important insights to the research objectives. To collect relevant material, a systematic search was undertaken on databases like Google Scholar, emphasizing topics such as "water crisis" and its consequences on social and health outcomes in conflict-affected regions.

Limitations

In the research study, a significant limitation was experienced, particularly in covering the whole target location, which hindered the collection of comprehensive data. Local conditions, logistical challenges, and geographic insecurity hindered

enumerators from reaching the areas that are far, especially Goroyio has not been fully covered. Thus, the closer houses were visited. Financial constraints further restricted available resources for the study, precluding follow-up research, the expansion of the sample size, and the use of more reliable data collection methods, all of which could have enhanced the study's findings. Nevertheless, the research utilized a survey method combined with a random sample strategy to gather participants' insights, aiming to provide a holistic understanding of the community's concerns regarding water issues. Despite the challenges, at least the target 100-household sample was reached in Longa. The limitations encountered in this study are considerable for the anticipated research.

Results

Factors contributing to water deficiency in Longa, Juba

The political impact on water resources is assessed by surveys and the examination of organization reports about water management; the factors were determined and quantified. Since there is no water in places that were not formally delineated, the degree of water inaccessibility is assessed by evaluation. However, thorough surveys are used to determine population increase. The purpose of the conversation was to illustrate the factors that led to Juba's water scarcity. Numerous components that have been anticipated thus far are described in this form and identified through this study.

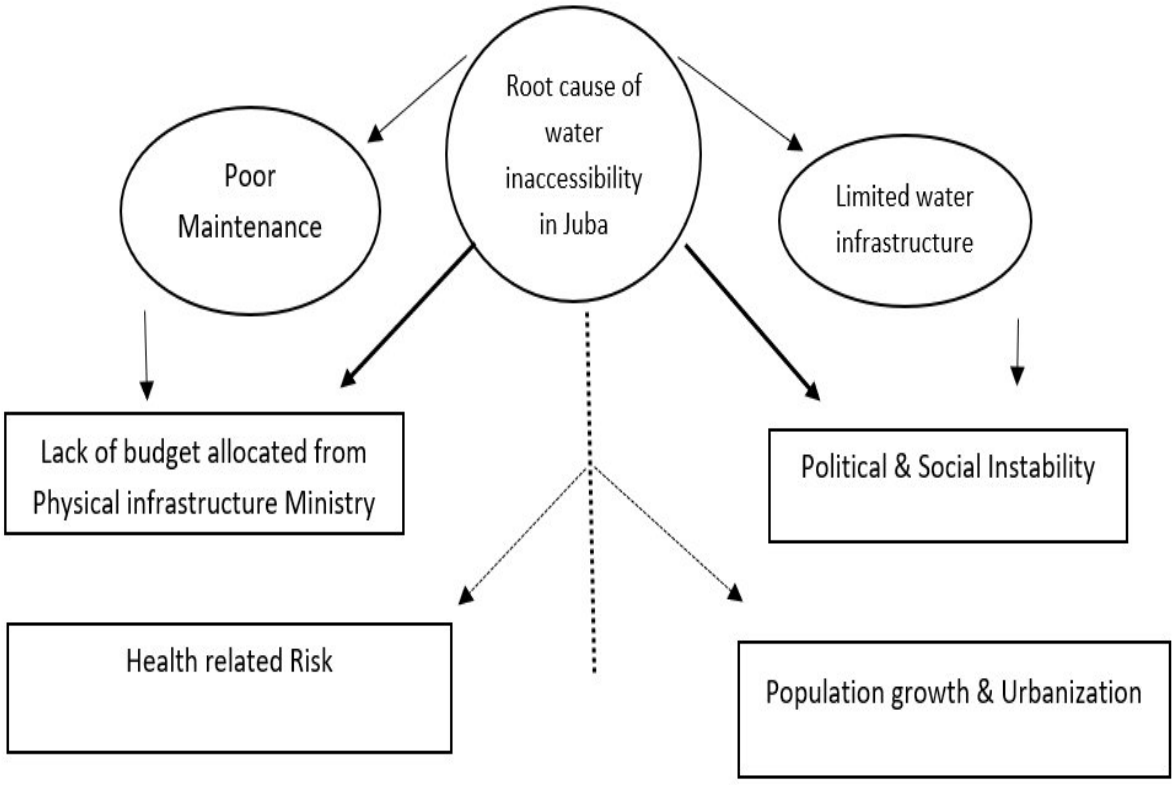

Figure .2

Social impact

Qualitative data from survey feedback indicates that water inadequacy significantly affects social dynamics, particularly emphasizing gender inequality, conflict, and financial burdens. The observation method was employed during the review of raw data, highlighting that the lack of water availability disproportionately impacts girls and women, forcing them to fetch water. A smart-Art Process tool was used to present social impact, displaying women's roles in water management. The conflict over water resources derived from respondents' feedback was used to understand the frequency of water-related disputes, which sometimes cause displacement or migration. Meanwhile, a financial burden index that measures household income and expenses linked to water was analyzed. Household surveys further reveal the financial pressures faced by different demographics in relation to water access Figure 2 visualizes measured social impact outcomes, as gathered through surveys and direct observation.

Figure 3 presents potential health impacts associated with inadequate water access, as identified by survey respondents.

Health Impact

In this study, health impacts associated with water deficiency were found during surveys, which may require future epidemiological study. This process entails a detailed analysis of statistical health data documented, particularly the prevalence of waterborne diseases, including cholera and malnutrition, which are directly tied to poor water quality in accordance with WHO and UNICEF reports. The response identifies causes related the malnutrition and respiratory disease, as indicated in the data. Therefore, the stress of insufficient water was revealed in the survey to present a considerable intervention for epidemiological studies within Longa.

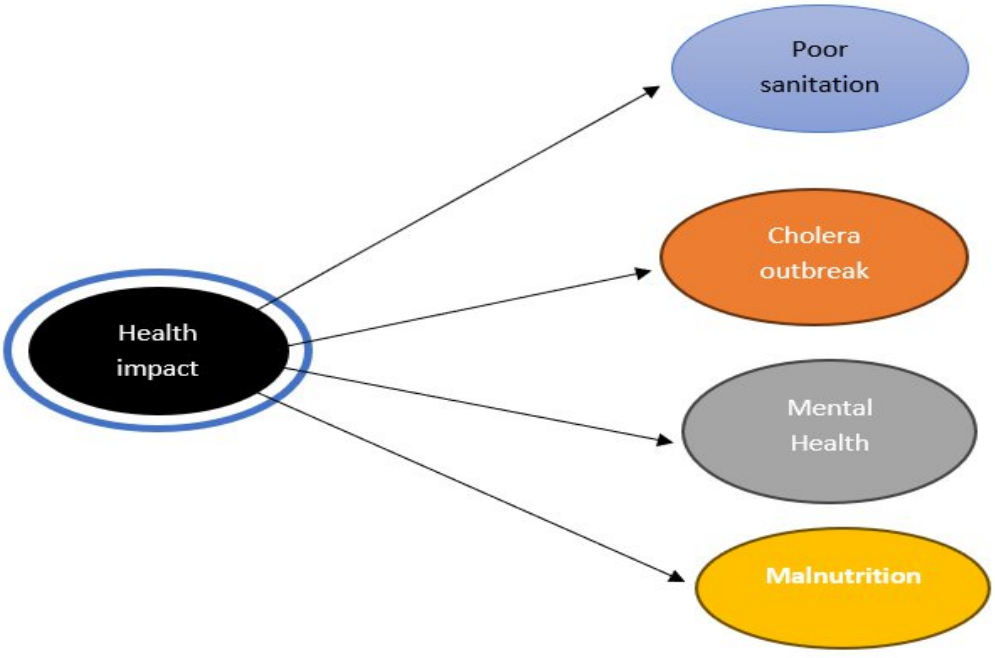

Figure. 4

DATA PRESENTATION

Raw data collected in longa offers valuable insights into the efficacy of the study, and as respondents top the water deficiency column. According to 100 households' responses in the survey, 61% lack adequate water, while 25% have access to clean water from private vendors, and 14% have low access to water depending on rain.

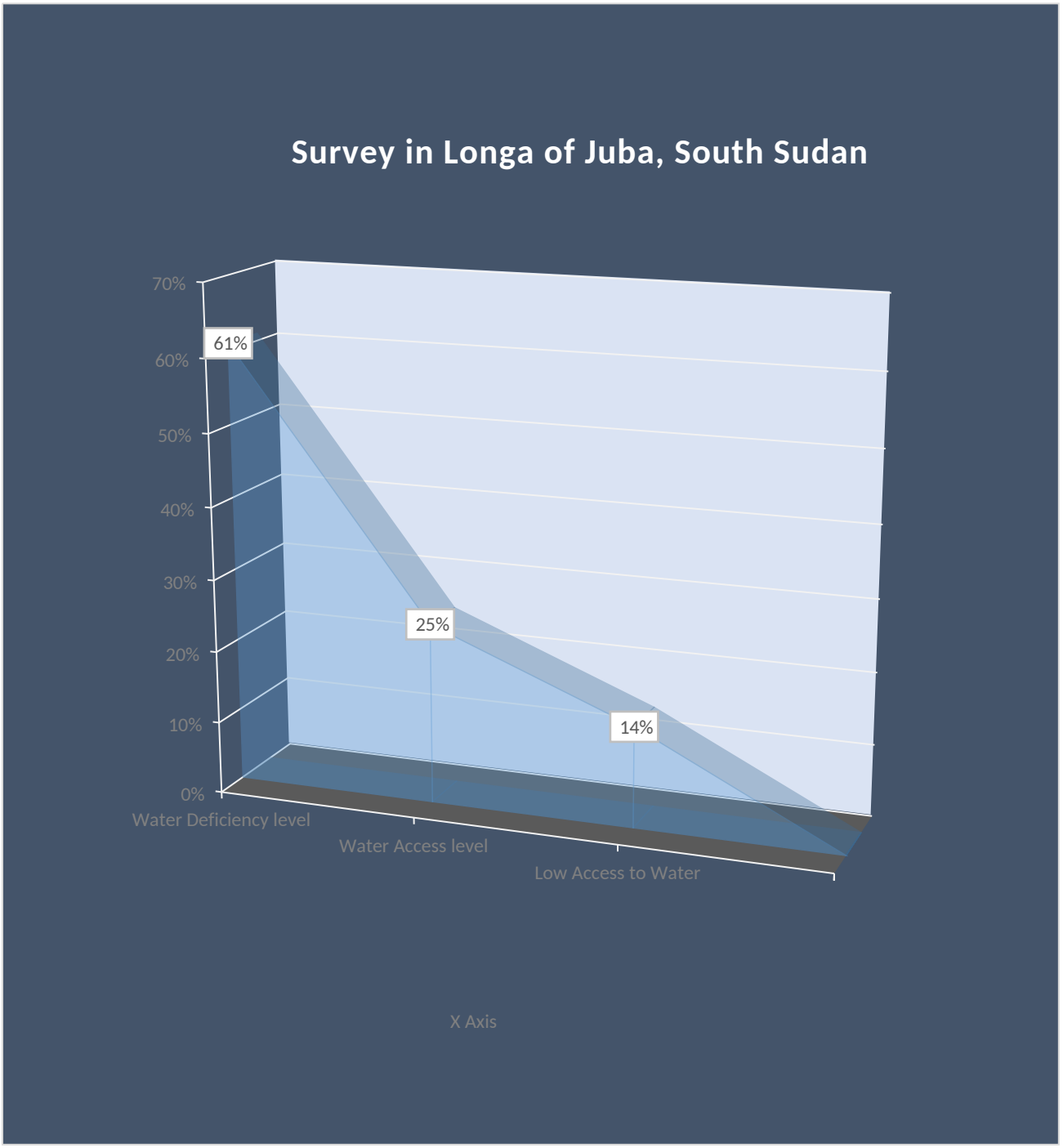

Figure. 5

Statistical Presentation

An Excel table containing the participants' data, such as gender, age, number of household members, and income level, was used to analyze the demographic information gathered from the survey. Their functions in water management can be better understood with the help of this visualisation. Various age groups that shared their experiences with Longa's water-related problems are shown in the age column. Both male and female participants are highlighted as a representative sample in the gender column. One significant component is the number of household members, which shows how many litres of water are used each day. Bigger families could have distinct problems than smaller ones, especially when it comes to getting and using water. Evidently, income levels are included to assess the potential effects of economic stress on water quality and accessibility. It is impossible to determine that for people with limited finances, acquiring safe drinking water is frequently more challenging. A table is a tool for visualizing data and makes it easier to compare analyses across various demographic groups.
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Table 1

	S/N	Age	Participants	Gender	Household Sizes	Income Levels in SSP	
	1.	15-18	15	F	5 Members	10,000	
	2.	20-25	16	M	7 Members	15,000	
	3.	25-34	33	F	4 Members	50,000	
	4.	45-54	25	M	8 Members	80,000	
	5.	55-65	11	M	12 Members	120,000	
Target Population							
• **100 Households**							
• **48 Females**		Total	100				
• **52 Males**							

DISCUSSION

This study explored the various factors driving water scarcity in Juba, with a special emphasis on the impact on livelihoods in places with insufficient water, such as Longa, located north of Juba, South Sudan. According to the data, 61% of Longa people are affected by water scarcity, which is slightly higher than the percentages recorded in prior Oxfam and UNICEF surveys (55% and 59% respectively). This shows that Longa's water scarcity is deteriorating with time, as more residents are presently affected than in previous assessments. The increase from 55% and 59% to 61% could be attributed to a multitude of factors. The most recent evaluation, conducted on October 2, 2025, revealed significant shocks in the data, particularly the extent of the impact on gender burden. Women frequently go great distances to gather water. An hour was thought to be spent collecting water from the roadside each day, with 30 minutes spent in the morning and another 30 minutes in the evening, according to respondents. Therefore, the lack of water infrastructure, such as a limited water pipeline in Longa, became a severe crisis as one borehole in Suku Harrideb cannot meet the current demand. Water shortages across the area worsen tensions and disputes within communities despite being close to the Nile River. The inadequate water supply or filling station in the newly demarcated area of Juba exacerbates the problem, raising economic concerns among the residents. The daily budget for water is much beyond, with 20 liters costing 1,000 South Sudanese pounds. Given the weakening of the pound, prices are likely to rise, particularly in places far from the roadside. In Juba, water scarcity has become a pressing issue, significantly impacting the livelihoods of residents. A critical factor contributing to this situation is the ongoing political unrest in South Sudan. Corruption and lack of budget, particularly in the Ministry of Physical Infrastructure, have hindered the development of necessary water projects. This political influence has compounded the water issue, with many areas unable to obtain clean and sufficient water. As the situation grows, community comments identified unexpected issues that people deal with, which were not documented, specifically the water crisis in Longa. Prior to beginning this research, a thorough evaluation of the literature was completed, including both primary and secondary sources. This comprised qualitative and quantitative data from publications, community comments gathered through survey interviews, and field evaluations, all of which served as the evidence base for this study. The data collection focused on the availability of water sources, which is described and analyzed. The study discusses some methodological limitations as some concerns remain unsolved, notably about the long-term effects of water scarcity on community health. A need for future research to re-examine epidemiological studies on the health impact, as well as potential remedies and interventions to Longa's water crisis. Access to some faraway places for field evaluations and obtaining sufficient survey data remains a challenge. The study's findings aim to contribute to a better understanding of the complex dynamics causing water scarcity and provide critical insights for fast intervention.

CONCLUSION

Statistical evidence and multiple studies demonstrate that there is no established water distribution system in Juba , South Sudan. The research indicates that 61% of the population in Longa lacks access to clean and adequate water, while only 25% have access to a water supply, primarily near the roadside. This situation reflects a severe crisis, highlighting critical barriers to quality, affordability, and sufficient water in Longa. Inadequate water availability significantly impacts community welfare and poses serious health risks. Key issues include limited water infrastructure, poor maintenance, political and social instability, and population growth, which lead residents to rely on unreliable and contaminated sources. The inadequacy of road infrastructure complicates access, especially during the rainy season. Economic instability exacerbates affordability issues, making it difficult for households to secure sufficient water supplies. Water quality is compromised throughout the supply and storage chain, resulting in prevalent health concerns. The scarcity of water resources fuels conflicts, as evidenced by a single borehole serving multiple blocks, forcing residents to purchase water from informal vendors. Additionally, long distances to water points disproportionately burden women and children, who often undertake arduous journeys to collect water from difficult-to-reach sources. A survey targeting 100 households in

Longa indicates that equitable access to safe and affordable drinking water is undermined by these multiple factors.

RECOMMENDATIONS

Water is indispensable for life, and the scarcity of this resource is a global issue, not limited to Juba, South Sudan. It is essential for both government and private sectors to adopt a comprehensive water infrastructure delivery system to alleviate the stress of water deficiency, in line with UN-Water's Sustainable Development Goal number six, which aims for "clean water and sanitation for all by 2030." Given that 61% of the population lacks access to clean and safe drinking water, urgent intervention is needed. The following recommendations are proposed:

1. Establish at least four boreholes per 25,000 residents in each block.
2. Construct all-weather roads to enable year-round water delivery for private vendors to remote areas lacking complete water access.
3. Implement subsidized water tariffs for low-income households.
4. Develop public-private partnerships for water kiosk management.

The installation of boreholes and other water infrastructure, such as pipelines and water filling stations, is crucial for economic growth and addressing the water crisis in Longa, South Sudan.

Feasibility of Addressing Water Deficiency

There are drawbacks to implementing a water supply proposal in conflict-affected zones such as Juba, South Sudan, which create significant barriers. Indeed, political upheaval, security concerns, a limited budget, and a lack of infrastructure are all elements that necessitate considering practical actions that can be adapted to the local situation.

Short-term Interventions

In Longa, urgent water shortages are particularly pressing in blocks such as Suk Hurranib, Suk Darfur, Suku Harrideb, and Goroyio. Rapid intervention is required for immediate relief to the community's needs, at least to reduce economic hardship and social tensions related to water resources.

1. Setting up a temporary water distribution system, such as water tinkering or community water stations, to ensure quick availability of clean water.
2. Provides water purification points in each block, enhancing the safety of accessible water sources.
3. Raise awareness about water conservation and cleanliness practices to utilize resources and minimize health threats.
4. The government should prioritize repairing existing boreholes and water stations to improve access to clean water.

Long-Term Interventions:

Even though long-term interventions are crucial, their implementation frequently takes a long time. But to guarantee sustainable water management in Longa, Juba, South Sudan. Quick long-term action is required.

1. Invest in permanent water supply systems, such as boreholes, pipelines, and treatment facilities, to provide continuous availability of clean water.
2. Train local people in water management and maintenance to promote ownership and sustainability of water projects.
3. Establish a strong government framework to ensure fair access to water resources and involve diverse stakeholders, including local communities and the corporate sector.
4. Establish a comprehensive strategy for sustainable water usage, conservation, and infrastructure development, considering population growth and environmental factors.

Call to Action

The government, Community-Based Organizations, and international organizations involved in water projects must broaden their focus to include urban areas, particularly Juba. Many towns within Juba lack an adequate water supply. Inadequate access to clean water poses significant health risks to the population. Installing water plants in each area will alleviate the burden on the community, ensuring that all residents have access to sufficient, safe, and clean drinking water and sanitation. This initiative will help reduce high costs, health risks, and gender inequality associated with water scarcity.

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