

Assessment of Water Supply Shortages in Zango, Rimi Kebe Area, Ungogo Local Government, Kano State

Abdulkadir Bello¹, *Nura Isyaku Bello², Tajuddin Idris Wawo³,
Ibrahim Kabir Abdullahi⁴

¹Department of Geography,
Kano State College of Art, Science and Remedial Studies

²Department of Geography,
Kano University of Science and Technology, Wudil

³Department of Geography,
Sa'adatu Rimi College of Education, Kano

⁴Department of Environmental Management,
Federal University Dutse

Abstract

The aim of the research is to assess the water supply shortages in Zango, Rimi Kebe area of Ungogo Local Government Kano State. With a view of achieving the objectives of this study. Data from primary and secondary sources were used. A total of 200 households was selected for administration of questionnaire across eight neighbourhoods in Rimi Kebe Area of Ungogo Local Government chosen from stratified random sampling. Data was analysed using descriptive statistic, and the result were presented in the form of table, charts and figures. According to the research finding, it is found that about (80%) of people in within the neighbourhoods under study depend heavily on water vendors for water supply. Findings show that the leading causes of inadequate water supply were rapid population increase which has been exacerbated by the rapid infrastructural developments especially increased residential developments which has strained the available water supply facilities.

Keywords: Water shortage, Water supply, public perception, Rimi Kebe, Kano State

INTRODUCTION

In Africa, water shortages are related to both under-development of potentially available water resources and their uneven distribution. This is coupled up with an unrelenting population growth rate of 3 % per year which is a major factor in on-going water and sanitation problems (UN-Habitat, 2008).

The Kano State Water Board had tried reaching these types of settlements through the extension of its water mains to most of them. But due to the increasing gap between supply and demand in Kano, these water mains are mostly empty. Local Government Councils have provided shallow (lined) open wells in many of these communities but due to the prevailing geological conditions of these areas (Basement Complex Region) the wells dry up during the long dry season. As a result of which most of them are abandoned and in some cases filled up with rubbish thrown in by children. Some families attempted to dig shallow wells in their

*Author for Correspondence

compounds but because of the proximity of these types of wells to pit latrines the water obtainable contain high level of nitrate and there exist high risk of faecal pollution. Therefore, the most hygienic water available is that obtained from far away commercial taps and private boreholes by Hawkers, which is sold to the consumers at 20 Naira to 25 Naira per a 20-litres jerry can.

The united nations consider universal access to clean water a basic human right and an essential step towards improving living standards worldwide. Water poor communities are typically economically poor as well their residents trapped in on-going cycle of poverty. In all access to adequate water supply is better enhance by an efficient distribution system Adebayo and Ifabiyi, (1999) Amori (2009) and Handidu (1990).

A semi urban settlement and some areas of Rimin Kebe where pipe borne dry at the peak of the dry season. During such period of water scarce people often turn to previously abundant well and largest percentage of them depends solidly on water. Which the sale that fetch water from far of the areas of Rimin Kebe quarters in Ungoggo local government and sale it expensive and people have more increase of adequate water supply at Rimin more especially the areas that over population like Bulbila, layin Ali babari, Tsamiya tazarce, and layin Galula of Rimin Kebe Quarter, in Zango, Ungogo Local Government.

Piped water supply is generally scarce or totally non-existent in most low income urban areas due to a number of reasons which include insufficient government attention, unplanned nature of the settlements, lack of accurate record of consumers, inaccessibility for pipe laying, inadequacy of the pipeline (where it is available), the households being too poor to afford pipe line extension and house connection, in adequate funds from government to provide water supply extension to the area and lack of community efforts (Iliyas, 2006).

Where water supply mains are available in low income urban areas, the governments provided public stand pipes at strategic locations for free water supply to those who cannot afford house connection. The utilities charge the governments for the public water supply but the bills are hardly ever settled in most states. Although in most cases women and children are the ones that carry water to the household, water “hawkers” are also actively involved at prices negotiated between them and the household owners. Nowadays, due to the failure of governments to settle the bills for public taps water consumption and the increasing pressure on the water utilities to recover operational costs, the provision of free public water points is rapidly diminishing (Nura, 2018)

In some low-income area where there is erratic piped water supply or none at all, a more permanent source of water is the open well dug by individual household owners. These are usually not well protected from external pollution and commonly dry up during the long dry seasons. The local governments also provide deeper concrete lined open wells which are more reliable. These too also dry up during some longer dry seasons. Both the State and Federal Government provided some bore-holes and hand pumps in certain communities, but these are farfetched and rare and have mostly broken down due to poor management. Consequently, philanthropic organisations and well-to-do individuals and private borehole operators came into play by providing boreholes fitted with pumps. Water vendors and hawkers also play a major role by distributing water either on carts, donkeys and even vehicles for sales to the households. In Kano state, particularly the study area for example, public water and privately owned water points are leased to vendors who pay the Authority for the water supplied to such taps on monthly basis and subsequently charge the consumers N20.00 to N25.00 Naira per 20 litre Jerry can delivered to the household premises. All these help to meet the water requirement of the low-income communities (Field survey, 2017).

The aim of the research is to assess water supply shortages in Zango, Rimin Kebe Area of Ungogo local government, Kano state. It can be achieved through the following objectives

1. Identify the major sources of water and time distance cover to the source
2. Identify the causes of water shortages and season with acute shortage in the area
3. Examine Daily water consumption by resident

METHODOLOGY

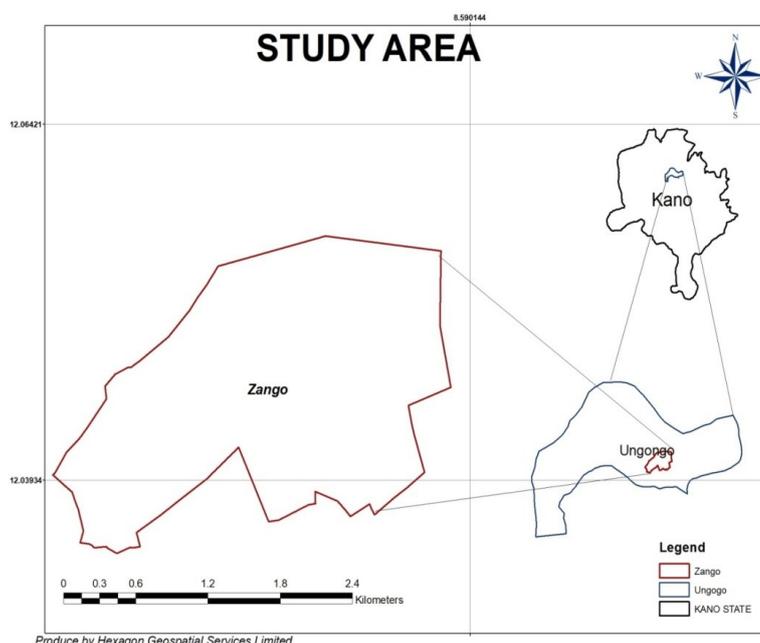
Data from primary sources was used. The primary data consisted of opinions of local residents of Rimin Kebe area. Such data was retrieved from observation and the administration of questionnaires. Major issues discussed included accessibility, reliability, quality and quantity and sustainability of the water services in Rimin Kebe.

The stratified random sampling was employed in the selection of 200 respondents within eight neighbourhoods covering the study area. The study involved 200 respondents consisting of (130 males and 70 females) spread over eight neighbourhoods includes: Bulbula estates, Layin Ali Babur estate, Dorawa estate, Layin 'yan committee estate, Layin Tsamiyar Tazarce estate, Galula estate, Karshen Kwalta estate, and Fakko estate in Rimin Kebe area of Ungogo Local Government. Household head were selected because they are in the better position to give more adequate information on how they perceived the water supply shortage nature in their neighbourhoods in general.

The instrument used in this study for the purpose of obtaining information from local residents (respondents) was through field observation and a questionnaire consist of three sections with section A covering issues on personal background information of respondents such as age, sex, occupation, marital status, educational background and family size. Section B covers issues bordering on the nature of problems affecting the distribution of public water supply in Rimin Kebe while section C dwells on the public perception on the problems affecting the distribution of public water supply in the study area. Before administration on respondents, the instrument was tested, for reliability.

Data was analysed using descriptive statistic, and the result were presented in the form of table, charts and figures.

Figure 1. Map of the Study Area



RESULTS AND DISCUSSION

Daily Water Consumption Level

Figure 2. indicated that about 56% of the households surveyed consumed more than 76 litres of water, and 17% of the households consumed between 51-75 litres per day. Only 16% of the households surveyed consumed less than 25 litres per day in their dwellings. This shows that people in the study area consumed large amount of water despite its shortages because of the large nature of their family size.

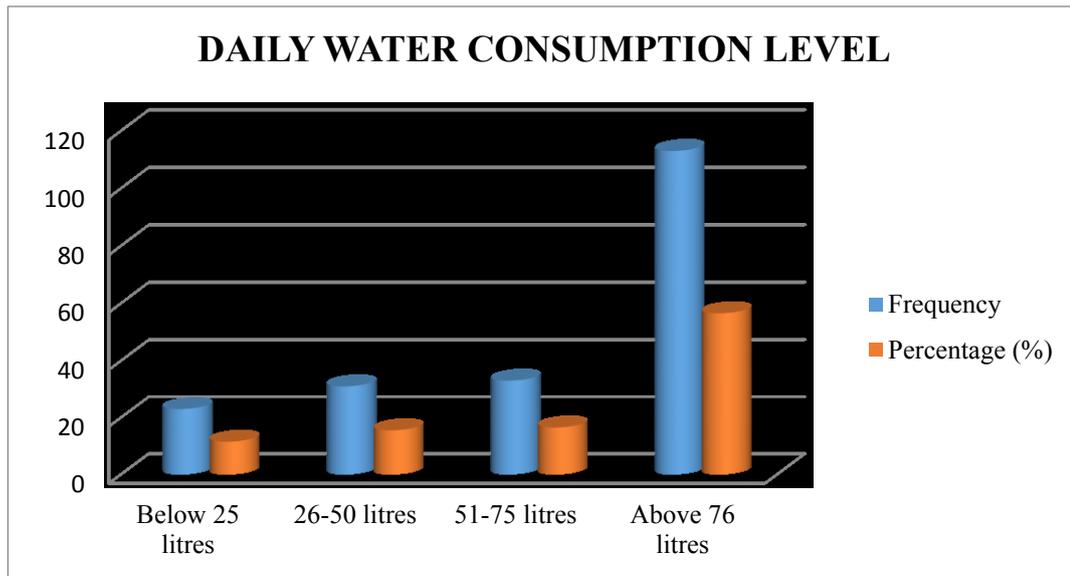


Figure 2: Daily water consumption level of the respondents.

Causes of Inadequate Water Supply

Figure 3, indicated that, about 85 % of the households surveyed have believed that lack of government efforts in proving infrastructural development is the root cause of the inadequacy water in the area, with only about 5% and 6% attributing rapid population growth leading to the high demand of water in the area and low level of income compare to the charges either by water vendors of government stake holders respectively. Therefore, 2% of the people survey believed that unplanned development of new buildings or pattern of the natural terrain were the root cause to the inadequate water supply in the study area. From the survey conducted in the study area, it is concluded that water shortages in the area is indisputable even though there is differs on the causes.

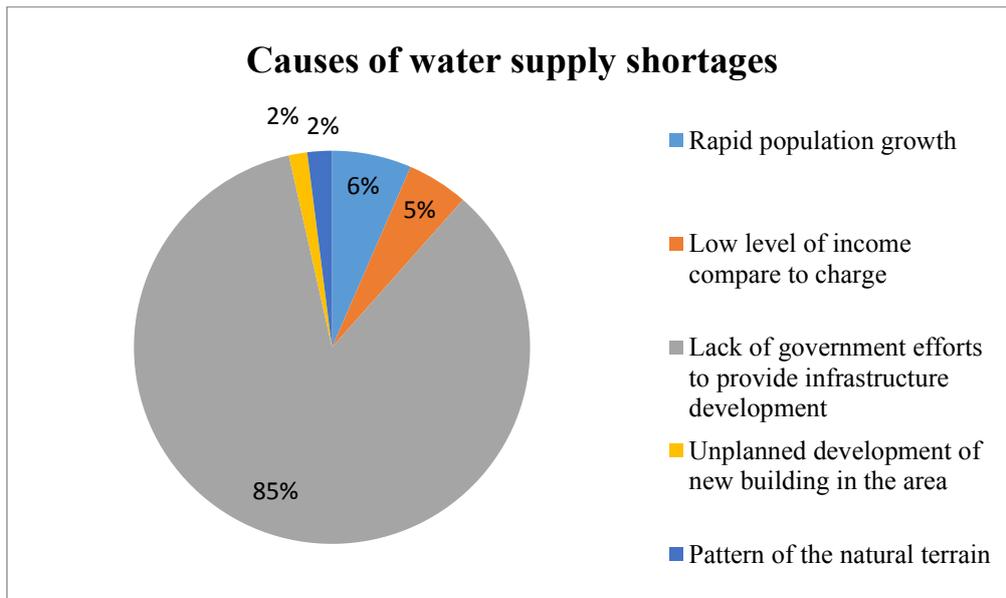


Figure 3: showing causes of water shortages in the study area

Seasons with Acute Water Shortage

Water shortages differ with seasons, Figure 3 indicated that, majority of the households surveyed (about 80%) perceived that, water stress in the study area is more during 'Hot and Dry seanson (Bazara)'. Also, only less than 20% of the households surveyed indicated 'Dry and Cool Season (Kaka)' 13% and Wet and Warm Season' 7%. Even with the common sense one can understand that in dry season rain water is not available for people to harvest for their various domestic activities, and similarly, it is it same rain water that recharge domestic wells. Hence, water stress is more pronounce is dry season which posed serious water shotage in the study area.

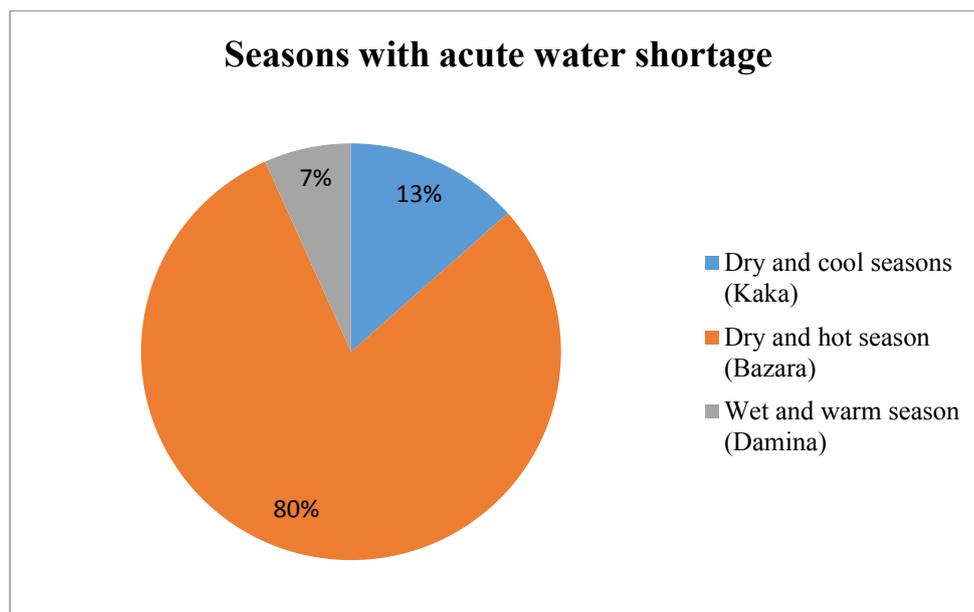


Figure 4 . Seasons of acute water shortage in the study area

Sources of Water

Table 1. Clearly explain the source of water supply, about 70% of the people fall in the study source water from vendors while 13% and 11% depend on drilled borehole and hand dug well respectively as the source of their water. Also, less than 6% have access to the pipe born water as their source, with only 2% depending on river as the source of their water especially those at periperi of the area. Water vendor is the main sources of water in the area despite the fact that is not hygienic. This agree with (Nura, 2014) in research conducted in Kano metropolitant. Due to the fact that pipeborne water is not sufficiently availbale and contruction of borehole is not affordable due to the economic recession only few individual can afford. Domestic wells are not reliable since its only recharge in rainy season and get discharge in the dry season.

Table 1: Sources of water in the study area

Sources of water	Frequency	Percentage (%)
Boreholes	25	12.5
Pipe born water	11	5.5
Hand dug water	21	10.5
Water vendor	139	69.5
River	4	2
Total	200	100%

Source: Fieldwork, 2017

Time Travel to the Water Source

Figure 4. shows that, almost 36% of the households surveyed spent about 30 minutes to get to water source, and 31% have to take atleast 30 minutes to 1 hour before getting to the water source. However, less than 34% of the households (23 and 10.5%) surveyed spent up to 1 hour and above to get to the water source. Therefore, majority of the respondents trek least to the source of water which account about 36% and 34% respectively. This is so because water kios or borehole are constructed within the core of the settlement so as to ease the suffering and increase accessibility.

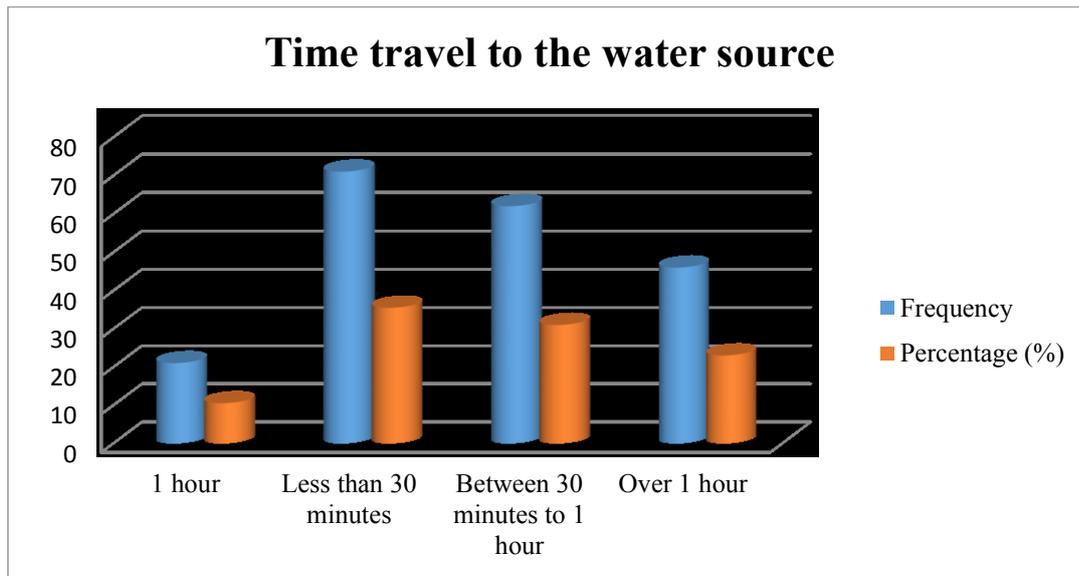


Figure 4: time travel to the water source in the study area

Role of Government on Provision of Water

Figure 5. revealed that, 56% of the households have dissatisfied with government effort in water provision in the study area, with 20% also who very dissatisfied, about 11% whose shows neutrality in their perception. However, only 9% of the households surveyed were self-reliance who were able to drill boreholes in the dwellings, whereas the remaining less than 10% appreciated the government efforts in tackling the problem of water supply in the area. Large percentage of the respondents are not serve with pipeborne water that is why they are not satisfy with government effort in water supply, despite the fact that nature of the terrain in the area cannot hamper water water supply project.

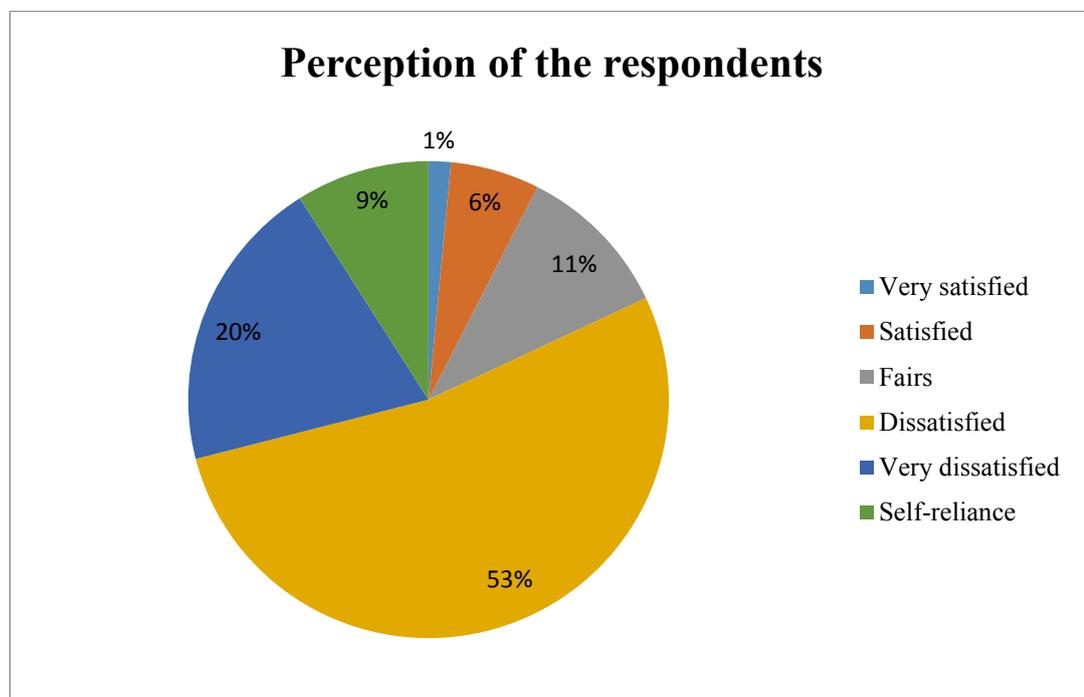


Figure 6. Level of perceptions of the respondents in the study area

CONCLUSION

The research conducted in the study area shows that there is an acute shortage of water in the entire study area, almost throughout the year with exception of rainy/wet season where rains fall in less than five months. This clearly indicates the persistent water shortage can only be solved when all stakeholders on water supply (government, philanthropist, community leaders and residents) put hand on deck to salvage the area. The government should construct more boreholes, hand dug Wells and also improve pipe borne water supply. Water vendors activities need to be managed and controlled so as to effectively improve water supply in the area. The residents should also minimise the uses of water and harvest more water in rainy season for future uses.

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