



**SMALL GRANTS FOR THE AFRICAN  
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**PROJECT TITLE : Water Supply Challenges in low income urban area: a study of agbowo community, ibadan, NIGERIA**  
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**Background & Introduction :**

One of the challenges of urbanization is the increasing vulnerability to quality water supply among households. Low income urban households lack access to portable water and therefore have to supplement their limited supply with water from sources such as Streams/Rivers and Wells. Indeed, whereas when water is available, the quantity is decreasing, and the quality is also compromised mainly due to high population growth accompanied by inadequate infrastructures. The study was conducted in Agbowo Community of Ibadan, Nigeria. Agbowo is located on latitude 7° 26' 39" N and longitude 3° 54' 57" E. The study determined the gap between water supply and demand, examined children and women vulnerability to water supply, investigated the effect of water supply on health outcome of children and economic productivity of women, and suggested options for improved water supply in the area.



**Purpose and Objective :**

The general aim of the study is to examine the causes and impacts of water shortages in low-income urban areas and suggests options for improved water supply in the area. The specific objectives of the study are to:

- I. evaluate gap between water supply and demand
- II. examine women and children vulnerability to water supply
- III. access the effect of water supply on children health and school attendance
- IV. access the effect of water supply on women economic productivity

**Summary of main achieved activities**

Inadequate access to water was reported by 74% of the respondents with 44.1% stating household access to water is poor. 28% attributed water scarcity to seasonal factor such as lack of rainfall during dry season while 38.2% attributed it to over population. Regular water sources were found to be well at 81.5% and 57.9% indicated usual dryness of water. Investigation showed that duration of dryness could be as long two months at 29.1%. Per persons, maximum quantity of water needed was found to be 220 litres and minimum quantity to be 80 litres. 50 litres and 160 litres are the lowest and highest quantity obtainable. Taking 1% probability level, Pearson correlation coefficient,  $r$ , is 0.948, and that is statistically significant ( $p=0.000$ ). This implies that quantity of water needed is not usually met as there is significant difference between individual water demand per day and quantity available. Domestic waste disposal practices were reported to be the highest sources of contamination at 61.4% followed by human waste at 29.5%. Efforts by community leaders showed no hope as 91.7% reported nothing has been done.

Assessments of women and children' vulnerability to water supply showed that 74.4% of respondent stated children and teenagers under 18 years of age are tasked with responsibility of getting water. About 74% reported having to carry water had resulted in physical deformity. About 81.9% reported the best time to get water to be in the morning and low occurrence of using transportation means was recorded at 10.2%

Looking that the number of times children have missed school, a maximum of 9 times was obtained of which 6 of it can be attributed to water supply. Taking 1% probability level, Pearson correlation coefficient,  $r$ , is 0.636, is statistically significant ( $p=0.000$ ). This implies that there is significant difference between number of times children have missed school and how many of these can be attributed to water supply.

Also, all the respondents reported either their wife or mother to be working. Of these, 35.4% were artisans, 10.2% were teachers and 36.2% were traders. 90.2% reported water availability to be crucial to their job productivity while 66.1% reported inadequate water supply have prevented them from working before

On designing water supply blueprint for area, high level of optimism was observed as 90.2% of the respondents believed the community and their household water supply challenges can be solved. About 79.9% perceived public water supply and social program on water as the solution because it will be cheap and have easy access even though 79.5% perceived Government being the best in providing solution and 61.4% want government to be more responsible.

Maximum number of water sources was found to be 5 and 1 for minimum number of water sources. It was obtained that some do not have any water sources and some have as high as 3. Taking 1% probability level, Pearson correlation coefficient,  $r$ , is 0.176, is statistically significant ( $p=0.005$ ). This implies that there is significant difference between number of water sources needed household and the number of sources they currently have.



**Outcomes:**

The threat to water resources has brought into focus the urgent need for planned action to manage water resources effectively as it is widely acknowledged that water is a major limiting factor in the socio-economic development. Improving services in low-income areas is a practical challenge because of their haphazard layout, high density and/or difficult geographical and environmental conditions. As a result poor households are more vulnerable to multiple disease vectors associated with poor environmental health, water and sanitation. The community is a good example of low-income urban settlement. It has high incidence of economic poverty accompanied by poor living conditions and large number of slum settlements, haphazard layout, and/or difficult geographical and environmental conditions, and low and unpredictable incomes (earned daily mainly through informal activities) with a high level of socioeconomic differentiation going hand in hand with high unemployment rates (particularly of the youth) and precarious health conditions. The study illuminated claims by accessing water supply effect on health of children and economic productivity of women, evaluate gap between water supply and demand, investigate socio-economic variables that influence water supply and design a water supply blueprint for the area

**Conclusion:**

From the survey, it was evident that Agbowo community does not have adequate access to water as many rated their household access to water to be poor. The study showed that effect of rainfall on water availability cannot be underestimated and making water available will not record high success if the water isn't of good quality. The study showed the need to address the effect of domestic waste and human waste pollution. The study further enumerated that women and children are most vulnerable to water supply issues as they are the one tasked with responsibility of obtaining water for their household. Effect of water supply challenges on children's health further shows why children are vulnerable as most develop illnesses such as malaria, typhoid, cholera and diarrhea. Majority of the respondent believed in public water supply, social program on water as some of the best ways to tackle this menace.

**Recommendations and future considerations:**

Need for reliable water sources to serve the community is necessary, just as work need to done to examine soil constituents before drilling. There is need to balance the quantity needed and quantity obtainable. The solution need to go beyond quantity to quality, assist those most vulnerable. There is need to state a case for responsibility not only at community levels, but at all levels. Mapping of houses in Agbowo community and examination of water contents in soil is essential before implementing



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**An African Water Association (AfWA) Initiative**



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