HOUSEHOLD WATER ACCESS AND CHALLENGES OF PUBLIC WATER SUPPLY IN IBADAN METROPOLIS, NIGERIA

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ABSTRACT

This study is centred on exploring household water accessibility and challenges of the public water supply system in the Ibadan metropolis. Using qualitative method of data collection, the study elicited information from the Water Corporation of Oyo State, Nigeria Meteorological Agency and Oyo State Rural Water Supply and Sanitation Agency, as well as the relevant stakeholders in selected communities of Ibadan North and Ibadan South-East Local Government Areas. Findings suggested that climate change does not significantly affect water availability in dams. The research areas primarily utilize precipitation, boreholes, and wells as primary water sources, indicating that communities lack access to any public or government water source. Water Corporation faces challenges in providing public water due to intermittent power supplies, poor government funding, and high raw material costs. Other challenges include road construction, population growth, overuse of facilities, vandalism, poor pipeline maintenance, government policies, public ignorance, lack of structural plans, and rusting pipes. The paper concluded that the government should investigate the water corporation and identify community water provision issues. Monitoring the corporation's affairs to ensure the availability of necessary equipment and materials, project implementation, continuity, and sustainability.

Key Words: household, potable water, accessibility, public, supply system

INTRODUCTION

The importance of adequate potable water supply to biotic organisms and humans cannot be overemphasized. Water unarguably plays a tremendous role in the socio-economic development of a nation. Without any doubt, it can be outrightly said that the existence of humans on this planet is premised on the quality and quantity of water consumed. Due to the tremendous role of water in human social endeavour prompted the United Nations in 2015 to declare water as a necessity and human right for every nation (Ohwo, 2016). Even though water plays an imperative role in human endeavour, Progress Update and Millenium Development Goals (MDG) Assessment Progress on Potable Water, between 1990-2015 revealed that sub-Saharan Africa (SSA) still lags behind the current SDG goal number 6, as 663 million people still lack access to potable water as at 2015 (Ohwo, 2016).

Consequently, the year 2014 update to the UNICEF/WHO (2015) Joint Monitoring Programme (JMP) Progress Report on potable water and sanitation affirmed that meaningful achievement was not recorded, as access to potable water in the urban areas of Nigeria barely changed from 78% in 1990 to 79% in 2012. Findings from the JMP report further revealed a sharp reduction in households with access to pipe-borne water from 33% in 1990 to 6% in 2012. While the above dreadful situation may look like a generic problem to all African nations, Akpabio (2012) asserted that this situation constitutes one of the serious global health challenges considering the aftermath effect which lack of access to potable drinking water will have on the populace. Although Nigeria is a signatory to the United Nations of International Drinking Water Supply and Sanitation Decade,

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available evidence from Akpabio (2012) noted that Nigeria is one of the countries in SSA with abysmal records of access to potable water supply by the citizens.
Although the Federal Ministry of Water Resources (FMWR) and River Basin Development Authorities have been saddled with the responsibility of policy advice and formulation, development, operation and management of water resources and reservoirs (Ohwo, 2016), available evidence from FMWR (2000) noted that financial incapacitation and shortage of skilled personnel are some of the major problems limiting the full prowess of the Ministries in discharging its social responsibilities. This invariably accounted for reasons why potable water supply has become erratic in Nigeria's rural and urban areas.

STATEMENT OF PROBLEM

Urban and rural water supply and sanitation services have always been the government's duty. As part of the general move to promote the effectiveness and efficiency of this core responsibility, public water corporations under the auspices of both federal and state water supply agencies have been saddled with the responsibility of providing bulk water supply to the populace. While tremendous success was recorded in water supply during the early 1970s and 1980s, available evidence (Soliwu and Bilewu, 2021) revealed that the public water supply in Nigeria's urban regions is currently inconsistent, unpredictable, and occasionally unreachable. This has led to increased citizens' reliance on other sources of water, which are most of the time detrimental to their wellbeing.
For decades, studies on public water systems conducted in Nigeria are mainly premised on quantitative data while reports from secondary data obtained from institution websites have also focused on the government's responsibility in providing the public with potable water to maintain a society that is safe, healthy, and sustainable. Akpabio (2012) examined the water supply and sanitation services sector in Nigeria. Using policy trends, the study observed that Nigeria's unique case highlights ethnicity, politics, military rule, corruption, and other factors accounting for public water and sanitation services' inaccessibility to people experiencing poverty. Using secondary sources, Egbinola (2017) revealed the trend in Nigeria's access to safe water supply. The findings showed a decline in water supply capital allocation, increased dependence on groundwater sources, and high variability in urban-rural access to improved water supply. Solihu and Bilewu (2021) worked on "availability, coverage, and access to the potable water supply in Oyo State Nigeria". Using quantitative methods, the findings revealed that the majority of the sources came from the private setups of the people.
Hence, the reliance on quantitative techniques and secondary data of prior investigations on the role of government in the provision of potable water and the effects of climate change on public water supply had methodological flaws that makes it difficult to understand patterns and perspectives. Given the overview of the above problem, this study examines the root cause(s) of the problem subjectively particularly from the perspectives of how it affects household's water accessibility. It explores the impact of climate change on public water supply systems and documents existing infrastructural water projects enacted by the government. In addition to this, it explores the challenges of public water system and proffer measures to ameliorate the problem of intermittent water supply in the study area using available primary data elicited through qualitative data collection methods. This study used qualitative data to investigate inconsistent water supply in Ibadan, focusing on the government's role and climate change challenges in providing potable water for public availability and accessibility.

LITERATURE REVIEW

Impact of climate change on government water supplies to household

The expected duration and timing of the dry and wet seasons have changed due to climate change, and there have been more seasonal variations in water bodies (Alayande *et al,* 2022). Fonjong and Zama (2023) affirmed that global water resources are impacted by climate change, which also modifies precipitation amount, variation, timing, structure, and velocity depending on gender and location. Globally, significant alterations to the hydrological cycle have been brought about by the warming experienced over the years. Alterations such as heat waves, extreme rainfall events and higher sea levels have all increased due to human-caused global warming (Kohlitz, Chong and Willetts, 2020). According to Alayande *et al*, (2022), access to clean water is a rarity in many areas in SSA because of the adverse consequences of climate change, which has led to flooding and drought in different regions. These areas have experienced physical and financial water shortages due to irregular rainfall and temperature patterns, making it difficult for local administrations to managemanage the region's resources effectively (Fonjong and Zama, 2023).

Climate change-induced phenomena such as heavy rainfall, intensified storms, and storm surges have inflicted harm upon water infrastructure. Consequently, these events have diminished the availability of resources, compromised the quality of water sources, and disrupted the distribution of water suitable for human consumption and present significant hurdles for water supply services. (Kohlitz, Chong and Willetts, 2020; Howard, Calow, Macdonald and Bartram, 2016). According to Ayanlade et al. (2022), climate change threatens rain-fed hydrological resources in Nigeria, impacting rural Nigerian communities relying on rivers, rainfall, and stream harvest for water supply despite infrastructure challenges. This implies that climate change is a massive factor in country's water availability. Water supply management presents issues for authorities, especially when dividing water among competing purposes such as dams and public use, harming ecosystems, particularly in Nigeria, where rivers are subject to transient circumstances due to climate change (Ukpai, 2022).

According to a report by Ihezie and Obaniyi (2023), the geology, geography, and coastal regions of Nigeria, along with issues like deforestation, insufficient drainage systems, poor urban planning, land-use changes, and dam construction, all play a role in the occurrence and intensity of floods during the rainy season. For instance, Nigeria had catastrophic floods in 2022 due to insufficient drainage infrastructure, shoddy policymaking, subpar urban design, and subpar water governance, which led to recurrent problems and non-implementation (Michael, 2023). As such, Onuh and Bassey (2021) opined that due to inadequate water management and supply infrastructure in Nigeria, a large number of people are turning to self-help and using subsurface water resources in an unplanned, disorganised, and unsustainable way. In addition to climatic variables, Nigeria's public institutions continue to face challenges with funding, weak structures, a bad data management system, and a poor execution of regulations governing safe water use.

Challenges of Public Water Supply in Nigeria

Access to potable water has been entangled with lots of challenges. According to Balogun, Sojobi, and Galkaye (2017), the challenges of public water supply in Nigeria have social, technical, economic, environmental, legal, and institutional dimensions. According to FMWR (2000), one of the major issues confronting public water utilities and supply in Nigeria is the huge socioeconomic rate of development and population explosion, which outweigh the level of available water supply. Varis (2006) also observed that some of the challenges contributing to the slow pace of water supply in developing countries like Nigeria could not be sidelined from urbanization rates, inadequate investment funds, poor management practices and governance, inappropriate institutional frameworks, and inadequate legal and regulatory frameworks.

Another challenge facing public water supply systems is the limited capacity to charge appropriate rates for water supply. While one could say that every year, the state government fund water supply through specific budgetary allocations to the state water agency (SWA), Ohwo (2016) asserted that the funds provided are only meant to cater for capital projects, payment of salaries, major operations, and maintenance of the water schemes. The SWAs are expected to generate revenue through meagre rate water collection for routine operation and daily maintenance. Apart from the poor budgetary allocation, epileptic power supply restricted the extent to which the public water corporation could deliver its mandate (Yunusa, 2001).

According to Yunusa (2001), the public water corporation requires a minimum of 22.4 hours of electricity per day, however, the electricity supplying corporation only supplies less than 10 hours of light per day. This invariably accounted for the slow pace of water supply to the entire city as the water equipment lay idle. Other challenges faced by public water supply include infrastructural decay, industrial and urban pollution, demographical changes, and bacteriological contamination of water during storage and distribution (Samson, 2013; Balogun, Sojobi and Galkaye, 2017). These, among others, are some of the challenges of accessing potable water in a typical urban setting such as the Ibadan metropolis.

METHODOLOGY

Research Design

This study was an exploratory study which made use of primary method of data collection. The detail of this report sought to investigate household accessibility to water and challenges of public water supply Ibadan metropolis. The qualitative interview sought to explore and document the operational efficiency of the water corporation and how climatic conditions affect the dam water supply. In addition, this study sought to investigate government efforts nd extrapolate the coping mechanism of respondents towardto fostering an effective water supply and extrapolate the coping mechanism of respondents toward an effective water supply.

Study Area

The primary research area was Ibadan North and Southwest Local Government areas. The state capital of Oyo is Ibadan City. It is the third-biggest metropolis in Africa and the biggest in West Africa. It is the most populated city in Nigeria, following Lagos and Kano. The public institutions in charge of water supply in the state are majorly Water Corporation of Oyo State. The public utility Water Corporation of Oyo State is entirely controlled by the state government. It is in charge of supplying water to the state's urban areas. In addition to this, other institutions such as the Nigeria Meteorological Agency (NIMET) and Oyo State Rural Water Supply and Sanitation Agency were also involved in the study to gain a holistic view of the efficiency of public institutions in the state.

Sampling size and techniques

Purposive and snowballing sampling technique was used to select four key-informant interviews (KII) and three focus-group discussions (FGD) from the study areas. The FGD was used to elicit information from the relevant stakeholders in each local government community. For the KII, the top officials in Oyo State Water Corporation (OSWC), Nigeria Meteorological Agency (NIMET) and Oyo State Rural Water Supply and Sanitation Agency (OSRWSSA) were interviewed.

Method of data collection

The study used a semi-constructed interview guide to elicit information from the participants. The FGD was conducted with the residents of Ibadan North and Ibadan Southwest Local Government

areas to elicit their perception of government institutions on water supply in the state and their experience on the availability of watertheir experience on water from these institutions. The KII was conducted with OSWC, Asejire Water Corporation officials, NIMET and OSRWSSA. The information was gathered through audio recording and was transcribed.

Method of Data Analysis

The transcription was coded under different themes and analysed using content analysis and Nvivo. This report is divided into two parts; the first section presents the data derived from the field, while the second section discusses the data obtained from the field. The data gathered are therefore analysed below.

Ethical Consideration

This research was based on human activities; therefore, ethical codes and conducts that guide human behaviour were employed. All ethical regulations, principles and guidelines, such as informed consent, anonymity, confidentiality, autonomy, voluntary participation and non-maleficence, were strictly adhered to.

DATA PRESENTATION AND INTERPRETATION

Challenges of public/government supply of potable water to household

The overarching section of this theme looks at how people have devised alternative sources of water supply due to the various challenges confronting the public water system. Findings from the study revealed that the poor attitude of the government towards public water supply accounted for why citizens lost hope in the public water supply systems. One of the participants from Water Corporation noted this:

> *It is the way the government handles the thing that makes you people look for an alternative. If the government is responding in their responsibility people will not look for alternatives. but the real fact is that water corporation water still remains the best for human consumption because there is a borehole, and there are wells that are not potable at all. It is just a secrete when some of the households bring their water samples for testing you will see so many things that you will be surprised that the water is not a hundred per cent fit for human consumption. So that is why water corporation water, is well-treated water, assured, quality assured before it will be sent out for human consumption whereas all other personally provided water in your household they are not examined, nobody examining, nobody confirming it that it is suitable for consumption you just take it. (KII/ Water corporation skill manager)*

Another participant lamented the current situation of the water corporation and the underlying reasons why there are negative perceptions of the corporation:

> *It would have been advisable that everybody will buy from water corporation water that would solve a lot of problems of diseases whether personal or outbreak of water-borne diseases it would have solved it apparently because we ensure the quality of water we are producing but the problem is, is the water available, when the water is not available, water is unit of life, we need water not even on daily basis, every minute, every second, we need water. So we don't see the one that you are so sure of the quality then you go for what you see so that your life will continue (KII/ Water corporation skill manager)*

Exploring the situation of the two dams in Ibadan and the reason for the poor supply of water, one of the KII participants iterated that:

> *In Ibadan, we have Eleyele and Asejire, but Asejire supposed to provide seventy percent of the water needed by population. Eleyele supposed to produce 30 percent. Asejire provides 70 percent, Eleyele provide 30 percent, but currently, we don't have the capacity. Why because of the problem that me and you know that is facing Nigeria. Not that water will not dry in the north, but the process of turning into human consumption that is where the problem lies. Eleyele is sending out water to people, as far as I am concerned Eleyele is producing, so people are getting water through Eleyele but can it serve population? No, it can only serve some people. the perspective people are having concerning our water is it should be free because it is God given, water should be free and that is, you know we are in Yoruba land, Yoruba believe that you do not starve people with water. So, it should be free, so that mentality of being free, does not give us room to generate adequate revenue but they are paying, they are paying per cubic metre, cubic metre of water, we are charging them per cubic metre, but it is a very low ridiculous amount, legislated amount from the house of assembly. N200 per cubic metre, a cubic metre of water is N1000 litre, N1000 litre of water you pay N200 so now you multiply by the cubic metre you use, per month, that is, if you use 10 cubic metres that means you multiply N200 by 10 that is N2000, and an average household should not use 30. An average household should not use more than three or four cubic metres. (KII/ Water corporation skill manager)*

The majority of the participants noted the construction of new roads, increase in population, and overused water amenities as some of the dominant factors responsible for the inadequate water supply to the communities. A community head in one of the communities observed that:

> *In my understanding, the roads that were newly constructed caused it because they had to reroute the taps from the normal places In my own understanding, the increase in population caused it. then Secondly, the pumping machines that the water corporations are using now are not as powerful as they used to be. Before now, public tap water was not much, and Oke-Ado used to be very small and I can mention at least 3 public taps that are here all the way to Oke-Ado. Anytime you get there you will always find the water running and we weren't much. But now, our population has increased by over 250% so the machinery that the water corporations are using is not as powerful as it used to be because Ibadan is a Hill top. Then they laid some pipes at some point to Asejire and the pipes were very tall and they served as main pipes that they connected the pipes to and portioned for each part. Those pipes were too big for the flow of water and the pumping machine is not as effective to force the water up. That's it in my own understanding. (FGD/Oke-Ado Community Heads)*

One of the participants noted the problem they face while discharging their social responsibilities as it relates to the approval of funds for equipment maintenance.

> *Our responsibility is to provide potable water and we are semi-autonomous agencies. Semi-autonomous in the sense that though owned by the government we should be able to stand on our own. We have been given the capacity now by law to generate revenue, and that revenue is not remitted into the coffer of*

> *the state government, but domiciled with us, we decide what we do with it by our own, so, that is why we can step up to be self-sustainable. In another part of the world, it is working even though it is best for us to stand alone. That means, no democracy in government, you do not have to run to them to treat file before you request for something and before you get approval which will take up to a month or more. So, that means immediately you sense a problem you fix it yourself immediately, so that it does not interrupt your production. In other parts of the world, well it is working, but the way and manner you and I were brought up in this nation it is our problem, government is not our problem we are the problem of ourselves. In other countries around the world, people don't have the type of mentality that we have that this thing is the government rather they see this utility as their own utility. They see people that will use water as their people as their brothers and sisters and mothers that must get water, so 100 percent of their sincerity they put into the work, and it is working, it is working. (KII/Water Corporation Skill Manager)*

One of the workers in Asejire Water Cooperation noted thus:

> *We have not been producing water since last year November, so there is no way we can supply potable water to the community because we are having issues with the power supply. There is no power supply and if there is, there is no way our machine can work. There is water at Asejire, Egbeda but there is no light to pump water to where it would be treated. (KII/Male/50 years/Asejire water treatment and sanitation unit)*

Exploring the various factors responsible for lack of potable water in the study area, the location of the borehole was listed as one of the major factors affecting effective water supply. One of the community heads confirmed that:

> *The government and those in office do try but the engineers they contact whenever they want to construct or those that give them the site are those that do not know where the borehole is supposed to be dug because the water in the ground has a line and when it comes to the time where there is water on the line, it will dry up. (FGD/Oke-Ado Community heads)*

Another factor noted by participants was the epileptic power supply. It was further reiterated that incessant power outages affect the provision of water from the source to the populace. One of the participants noted this:

> *Power supply is the major challenge. Apart from human activity, light does not even blink at all. There is a difference between it is not regular and there is no light at all. (KII/Male/50years/ Asejire water treatment and sanitation unit)*

Also, the vandalization of water pipelines and lack of maintenance to repair broken water pipes limit the extent to which people can access potable water. The study revealed that whenever there is a fault in the channelization of water from the source to the distribution, there is no proper repair or management of the issue. According to a public worker in NIMET:

> *Another thing is that when the pipeline was actually active, there is this "I don't care" attitude from the citizen. Ideally when the pipe burst the only thing is for you to fix it properly but most of them don't fix it properly. They tie nylon around it, yet water will still be leaking, and spoiling the road. Sometimes, some*

> *people will decide to vandalize it probably to hurt others, do you understand now? Such problem has been in existence for a long time has been and even the organization itself are not doing proper monitoring to know which has been vandalized and what I noticed is that probably they don't have the linkage to estimate the volume of water that goes out. if you know the volume of water that goes out every point in time then the water that is increasing unnecessarily per day will be reduced. First of all, it is been vandalized. Secondly lackadaisical attitude of the end users even the people distributing it. The major challenge that this public water supply is not taken care of is just the challenge on the part of the populace the part of the official, the populace's water cooperation. No proper monitoring. (KII/Male/50 years/NIMET)*

Another factor is population explosion. Population explosion in the communities is a huge factor in water management. A state worker reported it verbatim that:

> *You know the attitude of people is very bad, but most time people damage the source. Lack of maintenance culture, our behaviour has not been positive toward government infrastructure. In Oyo State, we have 7000 sources of water, but hardly will you get 70% potable water suitable for drinking due to vandalization, lack of rehabilitation and most often it is a minor damage but negative behavioural change, and lack of maintenance culture debar access to potable water for communities in Ibadan. Expansion of communities also contributed immensely to this problem. If a community of 5000 is given a water source before you know it there will be an explosion of water source due to population explosion. That is the major problem affecting the water cooperation is budget problem as what is mostly budget for water supply contravenes what is been used by the population. (KII/Male/Oyo State RUWASSA)*

The last factor responsible for the lack of potable water is centred on poor leadership. The inability of the government to maintain and manage the utility is a big issue for the corporation. A worker reported that:

> *The problem we are having majorly is problem centres on the owner of the utility, that is government. If the government, make electricity available, they will make it sure it is available to produce this water. We cannot produce anything without energy and that is a major challenge we are having. Then in terms of the material needed to produce, that is another thing, but it has not been like this in other parts of the world because they attach value to life, they attach value to potable water so they make it available for the public. But the fact that it is not an organisation or a company that individual can just venture into also account for this problem. Maybe it would have been better because the situation keeps on degrading and degrading year in year out. (KII/Male/47years/Water Corporation Skill Manager)*

Impact of climate change on public water supplies to household

Some views obtained from the Ibadan Water Corporation and Nigeria Meteorological Agency (NIMET) also affirmed that climate change has never affected the amount of water as the dam never gets dry due to the availability of rainfall. However, the only time climate-related event

affected the water level at the dam was in 2011, which was caused by a heavy downpour of rain which led to flood. Much of the equipment at the dam was destroyed, and this affected the community's water supply for a while. Beyond damage to equipment, as aptly noted by the participants, water scarcity for that period also exposed the populace to many water-borne diseases such as cholera and typhoid. To support this claim, one of the workers opined that:

> *I can say no. If you extend it to maybe 15 years, I would have captured the flooding of 2011 as the only effect, because it deprived people's access to water for some months after the flood. People cannot get water and all our equipments were partly damaged we have to resuscitate them, and that took like 8 months for us to come back again that is the effect. But in the case of the availability of water, I have said before that in this part of the world, God still blesses us with rainwater, river water, water will just be available year in and year out. No our bank can never get dry, it has never dried up, I did not say it cannot get dry anyway, but it has never dried up. So, water has always been available during dry season and wet season. Over those 10 years period, we did not have any problem of lack or insufficient water to take or something like that. (KII/Male/47years/Water Corporation Skill Manager)*

One of the workers from the Nigeria Meteorological Agency (NIMET) also added thus;

> *Climate change has not affected water supply to the populace. There is no vacuum anywhere, there is nothing like a vacuum. It is water that evaporates at the surface and goes into the atmosphere. The only thing is that maybe some impurities entered into the water, but we still have the stream water, that people bore. (KII/Male/50years/NIMET)*

one of the participants noted that for the past 10 years, there has not been any form of climatic impact on water supply in the state. Premised on the data obtained, it was revealed that the capacity of the dam is very large for water reserve even during the dry season. Although during the rainy season, the dam is always overfilled with water from different places within and across the state, climatic change has less impact on the water supply in the study area. The participants submitted thus:

> *We deal with surface water here, if there is drought; Asejire is able to supply water to the town, for 3 years because the capacity of Asejire dam is nothing less than 30 million ml. That is the capacity of the reserved water, and we can still supply water to the market, and that doesn't stop us from producing water. But for the past 10 years now, we have never experienced any drought. During raining season as per the peak, we used to open the dam to allow excess water to flow away because it is not really rainwater that fell at Asejire dam. It is the rainwater from Osun, Ekiti, like Odo-Oba from Ogbomoso, then Osun, Osogbo, Iwo, Ede and other places where the water comes from. (KII/Male/50years/Asejire water treatment and sanitation unit)*

While majority of the participants noted the absence of climate change effect on dam water supply, a divergent opinion from the Oyo State Rural Water Supply and Sanitation Agency revealed that the major weather-related challenges/changes that seem to affect water supply in recent times are the level of heat. This has impeded the depth at which water has been discovered in the aquifer zone. A verbatim response from one staff of the Agency to support the above claim is as follows:

> *There has been a major climatic change. You see, the heat is somehow these days, the penetration of the sun on the ground and rock affects water supply. In the last 20 years, we have constructed water successfully 40 meters without stress, but now climate change has affected the depth at which water is been discovered. The aquifer zone has been depleted due to community activity and excessive heat from the sun which has depleted the zone making the depth of water difficult to achieve. (KII/Male/Oyo State RUWASSA)*

Since water supply has become a major issue for the ministries concerned to achieve, this study probed further to investigate the factor responsible for this problem. Available data derived from the field revealed that poor exposure and noncompliance of the populace to water regulations, lack of a structural plan, rusty underground water pipes and poor government policies are some of the factors responsible for poor water supply as noted by the majority of the participants. Some of the verbatim responses to corroborate this claim are as follows:

> *I will say our level of exposure has not gotten to that stage. Those people who initially designed the public water supply before, that is, talking about The Awolowo era, They had a plan for the country. But it got to a time where they said they would be billing each household for the water they were using. You know they are servicing their system too. Preparation of water is to purify it, store it, all those stuffs now. They are spending money so you have to give in return for that, but people are not willing to comply with such bills. So from the beginning they started disengaging from every other area or should I say the pipeline was not functional anymore. Another thing is that this pipeline was galvanized If water is not running through the pipe for some time, it will get rusty so by the time they feel like using it again, the water that will be coming out will not be pure. So, it has generated to that level that even if they want to come back to it that means they will need to run a new set of pipelines, those big ones that have been in existence before (KII/Male/50years/NIMET).*

As part of the need to explore the role of government and external agencies in shaping coping mechanisms of community members and financing projects related to the provision of potable water. The study revealed that there has been a series of projects funded by the government and foreign institutions. The financed project includes constructing wells, pipe-borne water, and the rehabilitation of dams.

One of the KII participants noted that:

> *Government collaborates with the Federal Ministry of Water Resources in constructing well, pipe borne. Currently, Oyo State has facilitated 49 boreholes under PWASH (Partnership Expanded Water Sanitation and Hygiene) in partnership with the Federal Ministry of Water Resources to provide 49 boreholes to 49 communities in 2022. (KII/Male/Oyo state RUWASSA)*

Foregrounding the above view, one of the participants asserted thus:

> *The African Development Bank funded us, World Bank funded us, at that same time you know I told you that the flood of 2011 affected our dam in Eleyele, and the World Bank funded us, that dam has been rehabilitated, and very stable now, very ok, so is another finance, we got finance from Oyo State government board. (KII/Male/47years/Water Corporation Skill manager)*

One of the participants further noted that:

> *The state government provided water for the communities, and UNICEF, NGOs, and international agencies assist in providing water for communities. Presently, we are working at Ona Ara Egbeda to provide water for the community. In each local government, we have a local area mechanism saddled with the responsibility of repairing broken pipes. They are being supplied with repairing material/equipment to be used for repairing broken pipes. You know we have different types of pumps; these sets of people are capable of maintaining the water source. We also have village-level operational maintenance (VLOM), which assists the LAM in maintaining the water source for effective water supply. In the community, we have what we call the WASH committee which comprises both males and females (WASHCOM), they look after the borehole, they decide what each household will be paying (a certain amount) for infrastructure maintenance. They ensure that the project community create a bank account which every household pays the service maintenance into; the money is then used to finance water projects/broken pipes. (KII/Male/55years/Director/Oyostate RUWASSA)*

Therefore, it could be deduced from the above findings that lack of project sustainability is one of the major issues affecting programs and projects either initiated by the government or external agencies to curb the shortage of water supply. Beyond project finances, this study probed further to inquire when the government last initiated a water provision project. Available findings derived from this study revealed that **i**n Ibadan South-West, it was reported that there are projects enacted within the past years. In some communities in the study area, the government officials did some beneficial projects during their tenure. One of the summits of a community head affirmed that:

> *In Ajala here, when you go and come across the junction, you will find the borehole there. It was constructed in the year 2007 or no because it was constructed by Lanleyin. He was in the Senate between 2011 and 2015. He constructed it within that time. Then if you get to the road and you go down, there is a borehole beside one of the Oke-Ado mosques, they are reconstructing it. There is also a borehole there. We are in ward 10; the councillor of this ward constructed the borehole there so here in this community those are the two boreholes that are working. (FGD/Male/Oke-Ado Community Heads/P4)*

The water corporation affirmed that there was a major water project in the state in recent years; however, it became ineffective due to corruption and insincerity discovered during the implementation stage. One of the workers averred:

> *A major project was carried out, a major project anyway in this institution; the last time a major project was carried out was the time of the last administration. That was around 2019. Not effective because, the government, when they came, said there was some insincerity and fraud in the way and manner the project was approved, and they suspended the project later they cancelled it. The project started around 2016 with the redesigning, you know they had to first of all contract consultant services, so after that redesigning was done, after the redesigning, then the real project award in 2018, so that 2018 the real project rehabilitation started and ended around 2020. (KII/Male/47yearsWater Corporation Skill Manager)*

DISCUSSION OF FINDINGS

Many participants noted how efficient and effective Ibadan Water Cooperation has benefited them during the early 90s. They also affirmed their loyalty and trust in the water provided by the ministries saddled with this responsibility. However, the present predicament of the nation has created mixed feelings among the majority of the participants, who question the efficiency and efficacy of these ministries relative to urban water supply, particularly in this present dispensation. However, this seems undoable in the study area as many community members observed that the early and late 90s accounted for those years when regular water supply was efficient. Although this view, as succinctly noted in the above presentation, contradicted some of the views espoused by the workers of Ibadan Water Corporation (Asejire and Eleyele), one of the intersection views that were captured in the course of this fieldwork was that this Water Corporation (Asejire and Eleyele) faced a huge challenge, and this seems to limit their production capacity.

Unlike other regions like the south-south, north-east, and north-west Nigeria which experienced extreme impacts of climate change such as flooding, drought, and water shortages as noted by Fonjong and Zama (2023) and Alayande et al. (2022). Findings from this study revealed that the changing climate has less impact on water availability in the dam. This cannot be sidelined from the fact that Ibadan is a tropical rainforest region that experiences double maximum yearly rainfall. While we could also say that flooding may have been an issue, available reconnaissance from the fieldwork revealed that aside from 2011 flood event, which claimed lots of lives and properties, the Oyo State government has been spending huge amounts of money yearly on erosion control and expansion of riverbanks. This specific curtailment justifies why Ibadan may not experience severe climate change like any other state in Nigeria.

Also, among the various challenges noted by the participants as responsible for poor water supply are; population explosion, government policies, power outages, limited funds, poor infrastructural supply, and vandalization of water pipelines during road construction. This view as aptly noted corresponds with the views shared by FMWR (2000), Varis (2006), and Ohwo (2016). Premised on the problems above with little trust in public water supply systems by the populace, it is worthy of note that this situation calls for greater concern as to what extent the Millennium Development Goal (MDG now SDG) on water access and resources has been achieved and will be achieved in the year 2030.

CONCLUSION AND RECOMMENDATION

The paper assessed the role of government in the availability, supply and sustainability of potable water to the public. Additionally, it made an affinity between Nigeria's public water agencies' difficulties and climate change's impact. From the findings, climate change does not significantly affect water availability in dams. However, the three primary water sources in the research areas are precipitation, boreholes, and wells. This suggests that the communities do not have access to any kind of public or government water source. Water Corporation's biggest obstacles in providing water to the public include intermittent power supplies, poor government funding, and the high cost of procuring raw materials. Aside from the fact that communities were cut off from the source due to pipelines that were dismantled during significant road construction, the main causes of this inaccessibility issue are, population growth, overuse of basic water facilities, erratic power supplies, vandalism, and poor pipeline maintenance. In addition, there are issues with government policies and leadership, public ignorance of water regulations, a lack of a structural plan, and rusting subterranean water pipes. Government-financed water projects, including good construction, pipe-borne water, and dam rehabilitation, often fail to meet their intended purpose due to a lack of sustainability and continuity. To address these difficulties, based on the findings, the following recommendations were made:

1. The government should look into the water corporation and map out the problems hindering the provision of water to communities.
2. Also, the affairs of the water corporation must be monitored by the government and relevant stakeholders to ensure that necessary equipment, chemicals, and other materials to produce potable water are available and in good condition.
3. Finally, the relevant stakeholders must ensure the implementation, continuity and sustainability of any project that will be enacted.

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