Water Challenges in Post-Colonial Ikorodu Area of Lagos State, 1967-1999

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Abstract
The fact that much of the global space is covered by water has been established by scientists and hydrologists. However, despite this abundant availability, accessibility to safe drinking water has been a major problem confronting different parts of the world. This study examines the history of water infrastructure and challenges in Ikorodu Local Government Area (LGA) of Lagos State. Although the study endeavours to historicise some of the colonial policies and programmes geared towards water infrastructure in the area, it specifically discusses the issue of water challenges and its impact on the socio-economic development of Ikorodu and environs during the post-colonial period. Adopting the qualitative research method and historical approach to data collection and interpretation, the study reveals that water availability and supply in Ikorodu LGA were inadequate with consequential effects on the socio-economic activities during the period under review. It recommends that government should endeavour to partner with non-governmental institutions to revive and increase the capacity of water-works and repair moribund water infrastructures towards ensuring adequate water supply within the Ikorodu LGA.

***Keywords**: Water and water infrastructures, Water scarcity, Social problem, Ikorodu LGA, Lagos State*

Introduction

The significance of water to human existence and socio-economic sustainability cannot be underestimated. In addition, water is very important to the survival of other earthly beings such as animals and plants. It is in the realisation of this essentiality of water that the Yoruba people of south-western Nigeria says that *omi la bù wẹ̀, omi la bù mu, omi kò ní ọ̀tá*, meaning ‘water is for bathing, water is for

drinking, water has no enemy'. In similar vein, they also say *omí tó oògùn* meaning 'water is medicinal'. The inference from these theoretical adages is that the importance of water to human survival is invaluable. The movement of nutrients, blood, and other substances within the body system is made possible by water and this also substantiates its daily necessity. Water is also very essential for a society's economic growth because virtually every sector of the economy depends on secured and sustainable access to water. In a nutshell, water is life and very important to the survival of every society. Agnew and Woodhouse (2011) asserted that water is essential for general socio-economic development and that lack of accessibility to potable water is tantamount to poverty. The 2006 UNDP report acclaims that inaccessibility to water is a form of deprivation of socio-economic opportunities and undermining of human dignity. In the same vein, the 2019 UN World Water Development Report revealed that "over 2 million people live in countries experiencing high water stress and about 4 million people experiencing severe water scarcity during at least one month of the year." The import of these reports is that despite its essentiality, there is scarcity of safe drinking water in many parts of the world. The people of Ikorodu LGA witnessed water scarcity and inaccessibility between 1967 and 1999.

Ikorodu LGA is one of the twenty LGAs in Lagos State, Nigeria. It is strategically located within the Lagos East Senatorial District (see figure 1 below for a map of the LGA). The area is a rapidly developing residential, commercial, and industrial hub within the economic and commercial capital of Nigeria. Although Ikorodu LGA is endowed with enormous natural water resources (Figure 2 below is a map showing the networks of rivers in the LGA), the rapid process of urbanisation has contributed to the problem of water scarcity within the area. Since the colonial era, governments at the federal, state, and local levels have implemented different policies to enhance water availability and supply within the LGA. Despite these efforts however, availability of potable drinking water was often scarce subjecting residents to wander and stress. The aim of this study therefore is to examine the history of water infrastructure and challenges within the Ikorodu LGA during the post-colonial period. To accomplish this, the paper is divided into five major sections. The first section provides general background to the study. The second

section briefly puts the issues of water demands, availability and scarcity into context. The third section traces the history of water infrastructures and availability in Ikorodu LGA. The forth section is an analysis of the trajectory of water scarcity challenges and the attendant socio-economic consequences within the area during the period under review. The last section is a summary of the basic arguments of the paper and recommendations for improvement on access to potable water within the area.

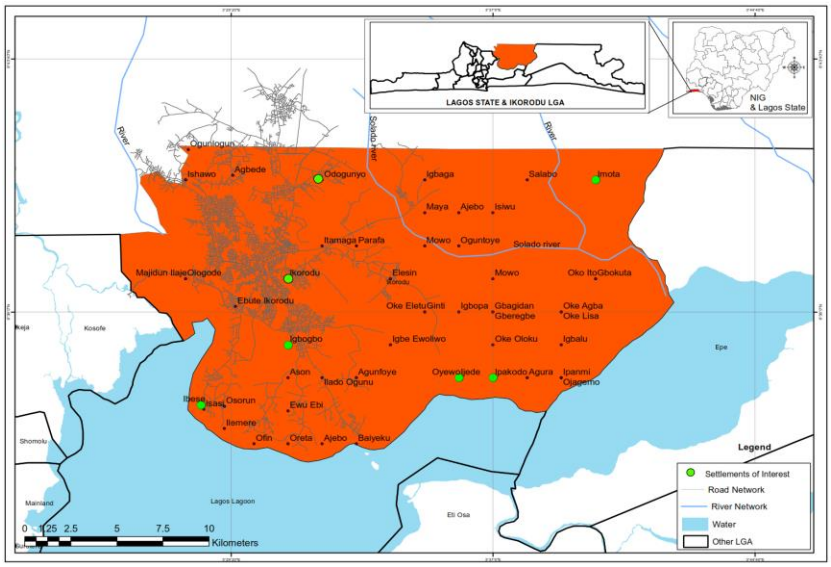

Figure 1: Map showing Ikorodu LGA, Lagos State

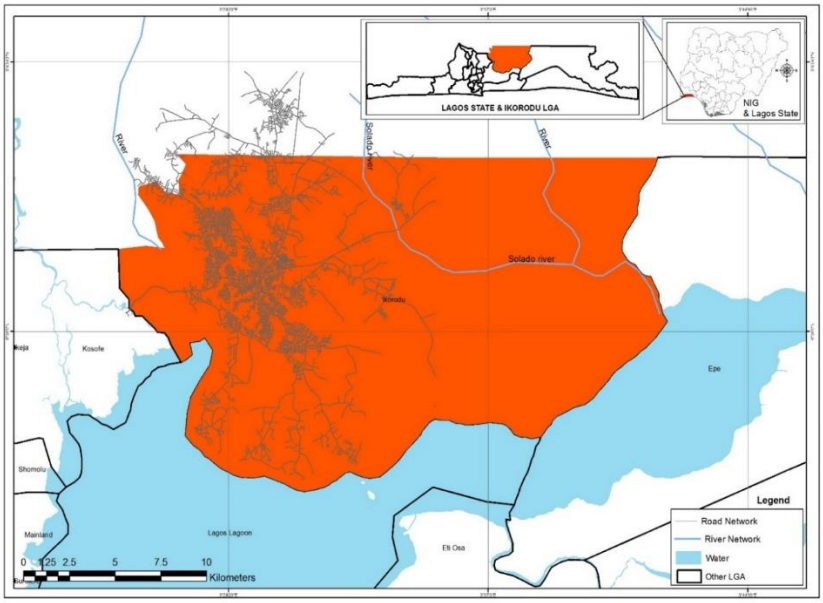

Figure 2: Map showing the networks of rivers in Ikorodu LGA

Water Demands, Availability, and Scarcity in Perspectives

Hydrologists have identified various sectors into which water demands could be categorised (Gatt, 2004). Among these categories are domestic water demand, industrial water demand, commercial water demand, and agricultural water demand. The domestic water demand refers to the quantity of water that is required for household activities such as drinking, recreation, personal hygiene, environmental sanitation, laundry, kitchen, and gardening amongst others (US Geographical Survey, available online). Domestic water demand is also referred to as the residential water demand and constitutes the highest percentage of daily water consumption in most parts of the world. On the other hand, industrial water demand is described as the quantity of water used for fabricating, processing, diluting, cooling, or transporting products (US Geographical Survey, available online). This is the quantity of water required for every stage of production in industrial outlets such as manufacturing, food and beverage, and construction among others. Commercial water demand is the water used in the business environments and for business purposes such as stores, hotels, restaurants, workshops, and transportation among others. Agricultural water demand is the

amount of water used for crops cultivation, livestock keeping, poultry farming, and fish farming. A close observation of the sectorial water demands in Ikorodu LGA overtime would reveal that its water demands reflected the foregoing four categories.

Availability of water for human consumption has always been unequally distributed from place to place and from season to season (Hoekstra *et al*, 2012). Water availability is primarily enhanced by water resource. Water resource is regarded as the total collection of natural waters that are found in an environment. Natural water resources include the surface water like streams, oceans, rivers, lakes, and others; groundwater which is water found under the soil, rocks and others including wells and boreholes; and rainwater which is obtained from rainfall. As water resources enhance water availability, water availability also determines water supply and good management ensures water potability. Water supply is the available water provided to satisfy a particular need; need is simply "water demand". However, despite appreciable availability of water in various parts of the world there are series of cases of scarcity. Water scarcity is the situation of insufficient freshwater resources to satisfy the human and environmental demands. Many factors such as population growth, pollution, profligate use, climate change, inadequate water infrastructures, and mismanagement have been attributed as the major causes of water scarcity in different parts of the world (WHO, 2019).

In Nigeria, there has been a great imbalance between water supply and water demand in terms of quality and quantity (NIWASA, 2014:1). It is reported that about 24 million people in the country's urban areas lacked access to improved sources of drinking water in 2006. The report further acclaimed that 50 million Nigerian rural dwellers lacked access to improved sources of drinking water in 2006 (NIWASA, 2014:1). In a more recent report, the UNICEF Evaluation Report on WASH Programme 2014-2017 further emphasised on the issue of lack of accessibility to safe drinking water in Nigeria. It reported that "poor access to improved water and sanitation in Nigeria remains a major contributing factor to high morbidity and mortality rates among children under five. The use of contaminated drinking water and poor sanitary conditions result in increased vulnerability to water-borne diseases, including diarrhoea which leads to deaths of more than 70,000 children under five annually"

(UNICEF, 2017). The report further revealed that only 26.5 of the Nigerian population use improved drinking water sources and sanitation facilities. In addition, Ezenwaji (2014) asserted that all the 774 LGAs in Nigeria were confronted with problems of quality water supply. Lagos State being the epicentre of socio-economic activities in Nigeria had also been faced with water challenges. Though there was an appreciable level of water availability in Ikorodu LGA, the area was challenged by water scarcity and inaccessibility between 1967 and 1999. This situation had serious implications on the socio-economic development of the area. However, it must be pointed out that efforts were made towards making provision for safe drinking water within the LGA.

A History of Water Infrastructure in Ikorodu LGA

Ikorodu LGA is blessed with abundant natural water resources. It is one of the areas that possess enormous and quality water resources within Lagos State. It was for this quality and quantity that the colonial government wanted to secure a source of fresh water supply for the rapidly expanding Lagos city from Ikorodu during the last decade of the nineteenth century (Olukoju, 2003). The attempt was thwarted by the far distance and the presence of various water bodies (such as Odo-Ogun, Owode-Elede, and Majidun) that separated Ikorodu from Lagos. A good number of surface waters such as rivers, streams, spring, and other tributaries existed within Ikorodu LGA during the period under review (Boge, 2021). In Ikorodu Township, for instance, water bodies such as Eturenren, Melegoke, Yewa Kekere, Yewa Nla, Eri-Ijomu, Erikorodo, Odo-Ota, Apeka, Olori, Onisigida, Odo Lakayo, Odo Alagbafo, and Eruwen are located. Other towns within the LGA also house a number of rivers and streams which include the Majidun creek, Oriya stream, Odoro spring in Ijede, Yewa river in Igbogbo, Arobi brook in Isiu, Omitoro river along Ijede road, Agudugbu river in Imota, Agbowa stream in Ibeshe, and the Oluweri lake in Oke-Agbo. There were also rivers in Oreta, Ofin, and Baiyeku areas of the LGA. The southern extreme of the LGA at Ipakodo township houses some parts of the Lagos Lagoon. Traditionally, these bodies served numerous socio-economic purposes including domestic activities, agricultural activities, fishing, transportation, and pottery making activities among others. In addition, some of these water bodies served spiritual and religious

purposes where people attend for spiritual cleansing and perform sacrifices during traditional festivals. Though these tributaries continued to be sources of water supply within the LGA throughout the period under review, some of them became polluted owing to the increasing commercial and industrial activities. Others, such as *Onisigida*, dried up as time went by due to blockage of their sources, draining, and sand-filling for construction activities.

Rainwaters constitute another important source of natural water resource within Ikorodu LGA. Rainwater was a major source of agricultural water demand and farmers planned their planting activities along with the rain seasons. Fortunately for the area, appreciable amount of downpour occurred annually. Odumosu asserted that rainfall within the LGA was not less than 2500mm every year (Odumosu, 1991:204-214). In addition, there is hardly any month that is rainless within the area though the downpours are very regular with huge amount during the months between May and July (Boge, 2021). After a little break in August, rainfall within the area became a bit consistent again around September, October, and November. Apart from its contribution to agricultural development, rainwater was also served domestic purposes such as for use in kitchen, laundry, and even drinking. Furthermore, the occasion of the annual rainfalls assisted in clearing the drainages of dirty and germs which could cause ailments such as malaria. Virtually every house had a means of conserving rainwaters for domestic and other uses. Some households ran pipes from the roofs of their buildings to reservoirs or tanks while other used buckets to gather the downpours either directly from the sky or from the roofs of their houses. At construction sites, ground concrete tanks were erected to retain waters during rainfall and later use for construction of buildings, moulding of bricks among others. In addition, the annual rainfall distribution increases the volume of stream flows during that period significantly.

Apart from the presence of over thirty sources of surface waters, groundwaters also constitute another tangible form of water resource within Ikorodu LGA. The people were used to getting their water demands from dug-up wells which were erected in various parts of the LGA. Though the people had devised the techniques of constructing these wells prior to the introduction of colonial rule, the colonial administration regulated how these wells were erected.

Various measures and regulations were issued by the authority to ensure the potability of the waters that were derived from the dug-up wells (Olukoju, 2003). Among these regulations were that wells and sewage should be located far apart (about 150 feet margin), wells should be clay-padded or cemented, cleaning of the wells at close intervals, and using of pumps to draw water from the well rather than buckets and rope, among others. In addition, the colonial authority provided some wells within the Ikorodu District. Through the Rural Water Supply scheme of the colonial government, a number of wells were constructed within Ikorodu township and adjourning communities by the government (NAI CSO, 26/51045; NAI Comcol 1, 739 vol. II). During the post-colonial period, wells were erected in various parts of the area to satisfy the water needs of the people, especially in the rural areas. The use of dug-up wells became old-fashioned and unpopular during the post-colonial, particularly with the increasing number of borehole constructions.

Provision of potable waters is actually a capital-intensive adventure and this made governments across the world to introduce series of programmes to ensure adequate supply of waters. The Ikorodu Area was not an exception and the government began to provide water supply within area from the colonial period. In 1949 therefore, the government initiated the Ikorodu Water Supply Scheme. The scheme was meant to provide pipe-borne water for Ikorodu township and had the Apeka stream as the source of the scheme (NAI. IKE DIV 5, LD 864). The Western Region government which took over the administration of Ikorodu and its environs effective from 1954 also embarked on the Rural Water Supply Scheme which the Ikorodu Area also benefited from (Western Region Government, 1967). From inception, the Lagos State government initiated some policy programmes towards the provision of potable water within the state. Ikorodu Division benefited from the Lagos State water supply schemes. In August 1969, for instance, the State government initiated the Ikorodu Division Water Scheme where a borehole water scheme was completed for the division (Lagos State Government, A, n.d.:88). Through this scheme, three boreholes were constructed to supply water to a 100,000 gallons capacity elevated concreted reservoir. A treatment plant was also provided to ensure hygienic water supply.

One of the infrastructural legacies of the colonial administration in Lagos State was the construction of the Iju Waterworks in 1915. But right from the colonial epoch, the water project became inadequate to cater for the entire Lagos and environs. The post-colonial governments then embarked on a number of schemes to provide potable water for the people and industries in Lagos. Mini waterworks were therefore constructed under the Lagos State government's Rapid Development of Water Supply programme (Odewunmi, 1991:91-93). In the course of the 1980s, two mini waterworks were constructed for the Ikorodu LGA by the State government. These waterworks were located along Obafemi Awolowo Road in Ota-Ona area and along the Ikorodu-Lagos Road area of Ikorodu township. The mini-waterworks at Ota-Ona was commissioned in 1983 with the capacity to provide three million gallons of potable water per day (Lagos State Government, B, n.d.:27). The second mini waterworks along Ikorodu-Lagos Road was upgraded in 1986 to cater for the expansion that the township was witnessing (Lagos State Government, C, n.d.:13). After the completion of the expansion, the waterworks' capacity was increased to the production of three million gallons of water per day. The two mini waterworks were based on borehole supplies which were driven by submersible pumps. The raw waters from the boreholes were treated by the addition of lime to correct acidity and chlorine in order to destroy the bacteria, and other living organism (Boge, 2021). From these mini waterworks, water pipelines were connected across the lengths of Ikorodu township and twelve other surrounding communities whereby people were served either through the private taps or through the street fountains. Supply of water to these pipes was regulated from the waterworks. Through the regulation, supplies were only provided in the morning hours and evening hours but seldomly during the afternoon hours (Discussion with Alhaji Dosumu, September 2018). The essence of the regulation was to prevent wastage on the part of the populace.

Apart from the mini waterworks, there was also the presence of a number of micro waterworks within the LGA. The micro waterworks include the Ijede micro waterworks, the Imota micro waterworks, and the Isiu micro waterworks (Boge, 2021). These micro waterworks were based on the borehole system with the collective capacity of supplying 2.5 million litres of water per day

within the surroundings at which they were constructed. Through the Rural Water Supply scheme of the 1980s, the State government was able to make provision of water for the rural populace within Lagos State. The objectives of the scheme included the provision of potable water for rural populace, eradication of water borne diseases, increase in personal hygiene of the rural dwellers, and provision of opportunities for forward linkages such as setting up of small-scale industries. A number of rural communities in Ikorodu LGA benefited from this scheme (Lagos State Government, 1986:28-32). Some of these communities included Ewu-Elepe, Ibeshe, Baiyeku, Ewu-Olowu, and Maya among others. An agency of the Federal Government of Nigeria known as the Directorate of Food, Roads, and Rural, Infrastructure (DFRRI) which was created for grassroots socio-economic development also contributed to the development of water infrastructure within Ikorodu LGA (Akingbade, 1997:66). Through the agency, a number of water projects were carried out within the LGA. These projects included the Bayeiku micro water scheme, the Ofin-Oreta micro water scheme, the Araromi micro water scheme, the Ewu-Elepe micro water scheme, the Igbokuta micro water scheme, and the Ipakodo micro water scheme. In addition, was the provision of hand-pump boreholes at Igbokuta, Isiu, Bayeiku, Ofin-Oreta, and the Ikorodu General Hospital by the Raji Rasaki's administration (Lagos State Government, D, n.d.:18-19). As industrial activities increased within the area, the big industries began to drill private boreholes to supply their water needs.

Water Challenges in Ikorodu and the Socio-Economic Consequences

The challenge of water scarcity is a global phenomenon, though it seems to be more prevalent in developing countries. Two general forms of water scarcity have been identified amongst developing African states and these include physical water scarcity and economic water scarcity (Mellissa, available online). Physical water scarcity is a situation where water demands in an area outpace the available water resources within it. The Food and Agricultural Organisation (FAO) averred that physical water scarcity can be seasonal and that an estimated two-third of the world's population lives in areas which are affected by seasonal water scarcity of at least an estimate of one month in a year (Mellissa, available online). On

the other hand, economic water scarcity occurs as a result of lack of or inadequate availability of water infrastructures (Oyebande *et al*, 1999:21-40). Economic water scarcity could also occur as a result of poor management of water resources and infrastructures or as a result of unregulated uses of water arising from industrial, agricultural, and domestic activities. The FAO asserts that many of the areas of economic water scarcity actually have sufficient water availability to meet various needs but with limited accessibility (Mellissa, available online). A close observation of the situation at Ikorodu LGA during the period under review would reveal that the nature of water challenges within the area was that of economic water scarcity owing largely to poor management of water resources.

Despite the presence of huge amount of water resources and the provision of water infrastructures, there were scenarios of water scarcity within the Ikorodu LGA. The situation of water scarcity and challenges with the LGA became prevalent from the mid-1980s. The efficiency and sufficiency of the available water infrastructures collapsed during this period with some impacts on the socio-economic history of the LGA. Prominent among the factors that have been identified by scholars as causing water scarcity in many parts of the world is the issue about mismanagement and lack of sustainability of water projects (NIWASA, 2014:1). This factor also constrained availability of potable water in Ikorodu LGA where many of the water infrastructures were not completed, developed faults, and/or became dilapidated. Like what happened to the Isiu borehole project, some of the water projects embarked upon by the government and/or their agencies were abandoned twenty percent into completion leading to waste of money and decay of machines (Oriwu Sun Newspaper, January 1986:11). The same scenario occurred at Imota township of the LGA where pipelines for water connections into various parts of the town were laid in 1985 and the connections were not completed some months after, leading to the collapse of the project (Oriwu Sun Newspaper, January 1986:6). Furthermore, many of the hand-pumps that were erected by the government in some villages at huge cost suddenly packed up. Towards the end of 1987, six out of eight pumping machines at the Ikorodu mini waterworks along Lagos-Ikorodu Road had packed up without any concrete attention given to them for several months, leading to consistent shortages of water within the vicinity the

infrastructure was meant to serve (Oriwu Sun Newspaper, November 1987:18). Most often, damaged taps, burst pipelines, leaky pipes, damaged standpipes, ageing pipes remained in their bad situations for months without prompt attempts from the regulators. In some cases, the communities after initial palliatives must have been exhausted, were forced to raise money in order to repair the damaged infrastructures (Discussion with Alhaji Dosumu). Apart from perpetuating water wastage and scarcity, this scenario also compromised the potability of the available water because the leaked pipes always gave room for the penetration of dirt and germs.

Another factor that has been identified by scholars as contributing to the issue of potable water scarcity is the issue of profligate use of water resources by residents and industries. The situation of water scarcity and challenge within Ikorodu LGA was also caused by the factor of wastage from the populace. Despite the control measures put in place to regulate the usage of public water dispensers, the populace was fond of allowing water to wastefully gush through the private taps and street fountains carelessly (Oriwu Sun Newspaper, March 1987:2). In some cases, street fountains were kept unclosed to the extent that when the waterworks released supplies they gushed wastefully. In some areas, when the control of public taps got spoilt the only means of locking became when supplies were closed from the waterworks. As part of water wastage, the people constituted the habit of turning the locations of the public taps into their bathrooms where they took their baths and launder their clothes. Related to this issue is the fact that most of the populace were averse to the payment of water rates (Discussion with Alhaji Dosumu), just like what was obtainable within the Lagos metropolis during the colonial period. Some sections of the society were of the believe that the provision of water infrastructures should be part of the social responsibilities of the government and there was no need for resting the burden on the people. Attempts by the Water Corporation to meter households in order to monitor usage and issue appropriate rate did not achieve desired result as only few houses complied with the payment.

Intermittent and insufficient power supply constituted another factor towards the situation of scarcity of potable water within Ikorodu LGA during the period under review (Oriwu Sun Newspaper, April 1988:10 &11). Power supply was not only

irregularly supplied; the voltage became drastically reduced despite the presence of the Egbin thermal station within the vicinity. The situation caused damages on the submersible pump machines and also prevented sufficient availability of water because it was practically impossible to pump water into the reservoirs without adequate power supply. The increasing rate of urbanisation which generated expansion in the number of industries, houses, and people living within the LGA constituted another factor that culminated into obtuse water supply during the period under review. The implication of exponential process of urbanisation was that more pipelines were laid for the distribution of limited available water.

Prominent among the factors that resulted into the incessant water scarcity within Ikorodu LGA was the sabotage from water dealers/hawkers. These people were alleged of using African *juju* to frustrate every effort at providing adequate water supply within the LGA (Oriwu Sun Newspaper, March 1989:8 & 24). This was in order to force people to patronise them and thereby maximise profit. At some periods of serious water scarcity which were occasioned by situations such as damaged pumps and prolonged electric power outage, the authority of the waterworks used tankers to distribute water to different parts of the LGA as palliative. This provision was discovered to be insufficient as many households were not adequately served or not served at all.

Due to the perennial scarcity in the late 1980s and 1990s, people began to run helter-skelter for their daily water needs (Oriwu Sun Newspaper, November 1987:18). Children, ladies, lads, and elderly women were daily sited carrying different types of containers such as kegs, buckets, and pails hunting for water as far as many kilometres from their homes. Apart from the stresses and agony this situation caused the people, a fraction of their incomes was expended on purchasing water for their various needs. By implication, people had to spend a chunk of their incomes for water supply after the rejection and refusal to pay water rates. Apart from cost implications of the scarcity, the situation paved the way for the outbreak of diseases within the LGA. Typhoid and other water borne diseases were reported almost daily at various hospitals within the LGA (Oriwu Sun Newspaper, March 1994:1). To this extent, a staff of the Ikorodu General Hospital was quoted as saying that "we record[ed] an average of thirty cases of typhoid fever and cholera almost every

day since September last year" (Oriwu Sun Newspaper, March 1994:1). The toilets in many public schools became untidy, messy, and often littered with faeces due to shortages of water to keep them clean. During the peak of water scarcity, people were forced to return to the traditional streams and rivers to source for their water needs. It must be noted that some of these sources of water had become contaminated owing to industrial, commercial, and agricultural activities and the urbanisation process. Even at that some of the custodians of the streams like Eturenren demanded that people should pay before getting access to the streams (Oriwu Sun Newspaper, March 1994:1). Though there were claims that it was only the people who needed the water for spiritual purposes, such as the members of Celestial Church Christ that were charged from getting water from the stream. In March 1994, thousands of people thereby converged at the Ikorodu waterworks at Ota-Ona to protest about the continuing shortage of water supplies from the waterworks (Oriwu Sun Newspaper, March 1994:1).

The scenario of extreme water scarcity increased the tempo for alternative water sources such as commercial water tanker operators who retailed water from streets to streets, private borehole owners who sold water to consumers in numerous parts of the LGA, the Hausa water hawkers who supplied water to people across the LGA, and then introduction of packaged water which became very popular and christened "pure water". With the intervention of these private bodies, commercialisation of water supply within the LGA was boosted (Discussion with Alhaji Dosumu). From the mid-1980s, operators of private water tankers began to distribute water to various parts of the LGA. Their tankers were usually parked at different strategic locations where consumers always come for their services (Discussion with Alhaji Dosumu). They supplied private homes, restaurants, construction sites, among others. Prominent among these operators were Alhaji Nosiru Ajenifuja, Mr. Bolaji Oke, and Josi Opone of the Ajewora Mobile Water Supply (Discussion with Alhaji Dosumu).

Another alternatives water supply within Ikorodu LGA during the period under review was through the activities of private borehole owners. This set of people drilled private boreholes within their compounds and allowed people to fetch water at pump-prices. Instrument of measurement were usually the buckets and other

containers. In the late 1980s and early 1990s, a small bucket pump went for 10kobo while a big bucket went for 50kobo (Oriwu Sun Newspaper, April 1987:2). Prices though varied from areas and individual operators rose according to general economic situation of the country such as increase in the pump price of petroleum, prolonged electric power outage, among others. People (children and women especially) from surrounding usually trekked to these water stations carrying different sizes of containers to fetch water. In a period of serious scarcity, school children and workers usually got into their schools and duty posts very late because of inability to get water for domestic us (Discussion with Mr. Ajetunmobi, January 2019). Apart from the fact that this avenue provided succour to the populace in terms of water supply, it constituted another form of commercial activities and livelihood for some people within the LGA. There was a case of arbitrary increase in the pump price by the alternative water providers to the extent that it was even suspected that they connived with the staff of the waterworks to perpetuate water scarcity within the LGA.

On the other hand, some concerned indigenes constructed a number of boreholes in their premises for the use of the public, people fetched from these pumps free-of-charge. The sites of these free-of-charge water stations were always filled with people and chaos, ostensibly because of the huge crowd of people that usually thronged the locations because they were ran free-of-charge (Discussion with Mr. Ajetunmobi). There was a place along the popular Ayangburen Road, where Hausa migrants usually gathered on daily basis to engage in different forms of commercial activities ranging from shoe repairs, barbing, labourers, kola merchants, and other petty trade (Discussion with Mr. Ajetunmobi). This place was called *Sago* (meaning mini-market in Hausa language). Some of these Hausa migrants engaged in hawking of water on the streets of the Ikorodu LGA. These hawkers (called *mai sondai* i.e. wooden-rod-carrier by the local residents) used long wooden rod and ropes to carry two 50 litres gallons of water on each shoulder; each gallon was sold for a price which was determined by the distance and prevailing economic situations such as periods of complete electric outage and water scarcity. Most middle-class families and restaurants constituted the chunk of the customers for these hawkers while the well-to-do in the society constructed private boreholes. As time went by, some of

the Hausa migrants used trucks to hawk water from place to place. A single truck may carry as much as ten 50 litre gallons of water which were sold from household to household. Initially, wooden trucks were used but as time went by iron trucks were adopted for this activity (Discussion with Mr. Ajetunmobi). Again, this system also added to the spate of commercialisation of water supply within the LGA.

Towards the end of the twentieth century, virtually all the nooks and crannies of Lagos State had become used to packaged water which was popularly referred as "pure water" (Olukoju, 2003:82-88). Ikorodu LGA was adequately involved in this socio-economic innovation. The basis for this innovation initially however was how to make water available to the people who were perpetually on the roads such as traders in the markets/motor parks, drivers and commuters on the busy roads, and people at social functions and gatherings. Before the introduction of the packaged water, "cold water" was hawked at markets and on the streets of the LGA (Discussion with Mr. Ajetunmobi). These hawkers carried out trading activities by putting iced-block inside different sizes of water containers. This process translates to what was popularly called "iced water" which was sold to consumer at different prices depending on the size of the cup. This method of dispensing water seems to be very unhygienic because virtually every customer drank from the only cup that was provided by the seller. Later on, traders began to put this water inside small-sized nylon. At social functions and restaurants, people were served water from big kettles and buckets with cups. These methods were grossly unhygienic and insufficient for the emerging socio-economic developments. Therefore, when the innovation of packaged water came, it wiped out the initial methods of selling water out of existence. Thus, the people began to get acculturated with the package waters (inside nylon or plastic bottles). Interestingly, the Ragolis Spring Waters was established within the LGA during the early 1980s. The products of the company were sold massively both within the Ikorodu LGA and some major cities in Nigeria and neighbouring countries. The products were massively sold in virtually every social function within the LGA, especially among the elites. Production of sachet water became very rampant within the LGA and added to the increasing socio-economic activities within the LGA. In essence, the production of the packaged

water became a huge contributor to the commercial and general economic activities within the area during the period under review. Apart from the revenues that the local government authority generated from the pure water companies, the companies were directly and indirectly employers of labour such as factory workers, drivers, motor-boys, retailers, and wholesalers.

Conclusion

This study has revealed that though Ikorodu Local Government Area was blessed with abundant water resources, it was confronted with the challenge of serious scarcity of potable water. The scarcity was as a result of mismanagement of water infrastructures, growing number of social and economic activities, increasing level of urbanisation without commensurate infrastructural development, population increase, and sometimes climatic variability, among others. Basically, potable water supply became insufficient leading to a strong competition for available water, growing per capital use of water, and socio-economic implications. The situation paved the way for alternative water supplies which had some impacts on the socio-economic development of the Local Government Area. The introduction of water metering and water rate was an avenue to assist in the effective maintenance of available water resources and expansion of available water infrastructures within the LGA, but for the lukewarm-ness on the part of the populace and absence of appropriate political will from the government. In order to rejuvenate the capacity of the waterworks, and repair the moribund water infrastructures, particularly in an emerging commercial and industrial hub such as the Ikorodu LGA, the government is expected to partner with non-government institutions and the big industrial outlets. The reduced cost of drilling boreholes paved the way for the erection of more private boreholes within the LGA. This assisted in the availability and supply of water, particularly domestic water demand, but the spate must be controlled to prevent environmental repercussion. The introduction and emergence of packaged water industries was another effective alternative solution to water demand within the LGA. Although the outlets added to the socio-economic and commercial activities within the LGA, the need to regulate their activities with respect to sanitary practices cannot be underestimated. There is the need for the government to intensify efforts on building

more mini-waterworks which would be placed under the community development associations (CDAs) for close monitoring. Alternative sources of electric power should also be provided for the mini-waterworks to forestall the problems associated with intermittent power supply.

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