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Constraints



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Water Supply and Sanitation Services Sector in Nigeria:

The Policy Trend and Practice Constraints

Emmanuel M. Akpabio

Abstract

Water supply and sanitation provision has been at the core of international attention reflected in various international directives and declarations over the past three decades. How are such international priorities domesticated in the national and local policy agenda? This paper specifically assesses the Nigerian policy trend and practices in relation to water supply and sanitation coverage over the past ten decades. The review observed that the Nigerian water and sanitation policy environment is characterized by: a) too many short-lived policies without corresponding action; b) excessive and opportunistic use of some international policy instruments; c) very many agencies with none effectively in charge; d) unrealistic assumptions of situations and; e) poor implementation practices. Although this trend of observation seems a general problem in developing countries, the paper argues that the Nigerian case looks exceptional, to a large extent, given the peculiarities of ethnic politics, long years of military rule which undermined the evolution and development of necessary institutions in the water and sanitation sector, official corruption, among several other factors. These factors and others contribute to making public water supply and sanitation services inaccessible to the poor. Given the nature of observations, the review concludes with some necessary recommendations.

Keywords: Water supply and Sanitation provision, Policy Practices, Implementation, Nigeria.

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1 Introduction

The importance of the water supply and sanitation¹ system has been a subject of serious attention reflected in the measurement of human development and in their inclusion in the Millennium Development Goals² (MDGs). This priority treatment follows official reports estimating about one billion people in the world living without access to improved drinking water supplies while 2.6 billion people live without adequate sanitation (see Lane, 2012; WHO, 2010; WHO/UNICEF, 2010; UNICEF and WHO, 2004 and UN-Habitat, 2003). Nearly 80% of the people using water from unimproved sources are reportedly concentrated in three regions namely, sub-Saharan Africa, Eastern and Southern Asia. For sanitation, overall levels of use of improved facilities are noted to be far lower than for drinking water (WHO and UNICEF, 2006). These represent serious global health burdens especially when viewed in terms of the consequences associated with a lack of access to drinking water, inadequate sanitation and poor hygiene. Although some countries, especially in the less developed realm, are making significant progress in addressing the challenges of water supply and sanitation, reports on sub-Saharan Africa is particularly not encouraging as only 36% of the population was officially estimated to have access to basic sanitation (UNICEF and WHO, 2004) while 37% of the population still relies on unimproved sources of water (Onabolu et al, 2011).

Nigeria is one of the countries in sub-Saharan Africa whose records on general access to water supply and sanitation facilities by the citizens remain very poor. The Nigerian cities in particular are fraught with inexorable rise of squatter settlements, overcrowding dwellings, breakdown of waste disposal arrangements, air and water pollution and inadequate water and sanitation services. Many problems of mortality, morbidity and poverty have been reported in the literature as consequences of a lack of safe drinking water supplies as well as poor sanitation coverage (Nwankwoala, 2011; WHO, 2010; Nyong and Kanaroglou, 1999; Sodeinde et al, 1997). Given these poor pictures, the question arises of what, probably, could be the main problem of the lack of access³ to safe drinking water and basic sanitation for the population. Many studies seem to agree to the fact that a lack of political will to tackle the problem is one of the most responsible factors (see Mara, 2012; Lane, 2012; Moe and Rheingans, 2006). One way of assessing how, probably, this hypothesis could hold some validity is by attempting an understanding of the various institutional, discursive and practical tools that have been followed in addressing the water and sanitation challenges in the country over some periods of time. As knowledge of the relationship between water and sanitation as well as how it should be managed has dramatically expanded over the past several decades through the various global knowledge channels, it is equally important to understand how various institutional domains at national and local levels are configured to take advantage of such knowledge opportunities in addressing local challenges. This paper, consequently, reviews Nigeria's water supply and sanitation

¹ The author's idea of sanitation relates to all aspects of personal hygiene, waste disposal, and environmental cleanliness which could have impact on health (Black and Talbot, 2005:101). There often exists a lineal connection between dirt, water, and disease - covering personal and domestic hygiene, vector control, food cleanliness, drinking water storage. Most intervention efforts this days conceive of sanitation in a narrow form of toilet construction, rather than a package of environmental and household cleanliness, with water assuming a central position.

² The Millennium Development Goal (MDG) 7 aims to halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation. By WHO/UNICEF (2010) estimates, sub-Saharan Africa faces the greatest challenge in increasing the use of improved drinking water facilities with 37% of the 884 million people that still use unimproved sources living in this region (see Onabolu et.al, 2011).

³ Access is defined by the National Policy on Water and Sanitation (2000) as the percentage of population that uses drinking water from improved sources. When sanitation is used, it is seen as the percentage of the population that uses improved sanitation facilities. Improved drinking water in Nigeria includes households' connections, public standpipes, boreholes, protected wells, springs while improved sanitation includes public sewer or septic system, pour flush latrines, ventilated improved pit latrines and pit latrines with slaps.

systems over the years, with an attempt to capture past practices and present reality. More emphasis will be paid on policies, policy reforms and implementation practices. The topic is discussed in sections. Immediately following the introductory section, comes the geographical background and the state of water supply and sanitation services. The third section takes a time-sequence look on the institutional perspectives of water supply and sanitation with emphasis on policies and policy reforms. The fourth section discusses the major challenges and institutional problems confronting policy reforms and implementation in the water and sanitation sector. This is followed by the concluding remarks.

2 Nigeria: General Hydro-Physical Background and State of Water Supply and Sanitation Services

Nigeria has six main hydrological basins covering the far low-lying swamp forest south, the flat dense rainforest, hilly shrub lands in the middle belt, relatively flat savannah grasslands in the north, and semi-arid areas in the far north. The central part of the country is dominated by crystalline rock outcroppings and gently rolling hills. Average rainfall for the country varies between about 250mm per year in the north (occurring mostly around April and September) and could be as high as 4000mm per year in the south (occurring mostly around March through October) depending on location. Nigeria has two major river systems namely, the river Niger (entering the country from the northwest) and river Benue (entering from the northeast). The two rivers meet at Lokoja, then move in a southern direction into an extensive delta before discharging into the Atlantic Ocean while other rivers flow directly into the Ocean or lake Chad. Many rivers in the north are intermittent, having water in them only in the rainy season while the greatest number of the rivers in the south are perennial, flowing all year round, and are important sources of drinking and irrigation water.

Given the nature of its hydrogeology (about 60% of the country is believed to be underlain by crystalline rocks, 20% by consolidated sedimentary materials and 20% by unconsolidated sedimentary materials), static water levels in water wells range between zero in parts of the coastal alluvium to 200 metres in some sedimentary areas (FGN, 2000). It is further established that in crystalline rock areas found in many parts of the north, well yields are unpredictable; where sufficient depth of weathering exists the area may be suitable for operation (minimum yield of 10 litres per minute), but only at specific localities where deep weathering and underlying fractures coincide are yields likely to be sufficient for motorized schemes. Based on available documents from the FGN (2000), groundwater quality in Nigeria is good except for some areas where iron, nitrate or fluoride concentrations are recorded above recommended WHO levels. Nigeria's surface water resources is estimated to be about 267 billion m³/annum while its groundwater resource is estimated at about 52 billion m³ of groundwater potential. While only 15% of the surface water has been utilized (ADB, 2007), statistics on the actual amount of groundwater utilization is, however, not available. What is most commonly known is that groundwater resources (which come in the form of boreholes and hand dug wells) have become the most important sources of public and private water in urban and rural areas which attract wide and minimally regulated exploitation.

Demographically, Nigeria currently has a population estimated at over 140 million people (NPC, 2006) and fluctuating yearly at a rate of between 1.935% (The World Fact Book) and 2.7% (UNICEF, 2010). Data from Table 1 indicates a continuously rising population trend over nine decades.

Table 1: Nigeria's Population Trend

Period	Population in Millions
1921	18.72
1951	30.40
1963	55.66
1991	88.06
2000	115.00
2006	140.035

Source: Ayedun et al (2011)

A continuously rising population trend has led to urban expansion and slum formation. Gabriel and Abraham (2009) reported as high as 45% of the population occupying the urban spaces with an average yearly growth rate of 5% of the country's urbanization. Such high growth rate of urbanization constitutes constraining pressure on public infrastructures, important of which include water supply and sanitation services infrastructures. Available records estimate only about 42% of urban and semi-urban population with access to safe water supplies and adequate sanitation compared to about 29% living in rural communities (FGN, 2000). A number of case studies have however reported relatively very low average for urban and rural water and sanitation services (Nyong and Kanaroglou, 1999; Stoveland and Bassey, 2000; Sanusi, 2010).

A greater majority of the Nigerian population depends on self-efforts in meeting their daily water and sanitation needs. Daily water supplies either come from the natural sources (rivers/streams, ponds, rain and hand-dug wells) or modern supply sources (public sector supplies or private and commercial borehole businesses). While relatively over 80% of the rural population depends on the natural sources of supplies, the urban residents are mostly served with supplies whose regularity vary depending on residential areas and other socio-economic characteristics, mostly related with ability to pay as well as the relative influence of certain individuals and groups. Consequently, a combination of high cost of accessing public supply network, service irregularity of public supplies and discriminatory service practices in favour of the influential members of the society has led to the rise and popularity of commercial water operators as well as a preference for private borehole in individual compounds by the rich. In terms of sanitation, two systems of defecation are very prominent namely, 'controlled' and 'open' defecation. In the rural areas, most people depend either on open defecation (bushes, rivers and gutters) or pit latrine. This sharply contrasts with urban dwellers whose system of defecation is becoming increasingly circumscribed (pits, flush toilet) because of the absence of open bushes and other conditions that prevailed in the rural areas (see a related work by Jenkins and Curtis, 2005). Even with the tendency for 'controlled' defecation, instances of human excrements on urban roads, gutters and waste dumpsites reflect inadequacy of available sanitation system and infrastructures to cope with an expanding demographic reality. Although statistics of access to water supply and sanitation vary between places and cities (Nyong and Kanaroglou, 1999; Stoveland and Bassey, 2000; Sanusi, 2010), a report from Water Supply and Sanitation Interim Strategy note (2000) observed that no urban community in Nigeria has a sewerage system except for Abuja and limited areas of Lagos. This means that sewage and sullage in urban areas either lie stagnant or are disposed through the storm water drainage system and in nearby roadside gutters. Sanitation and water coverage in public institutions are equally very low in Nigeria. A UNICEF- sponsored study in 2003 (cited in Amakom, 2009) indicates that, on average, there is only one toilet for every 500 students in schools. Most other public places such as market square, worship centres, local health care centres, etc. do not have public water

supplies and sanitation. The implication, according to Akpabio (2012) is that individuals are left to make their own choices of where to fall back on when they are pressed at such places.

Improving access to water supply and sanitation in Nigeria is hampered by geographical, socio-economic and institutional factors. Geographically, there is a huge regional and local disparity between the north and south as well as urban and rural areas as presented from different sources. Figures estimated by WHO/UNICEF (2010), NBS (2007), and reported by Onabolu et al (2011) indicate that 72% of urban dwellers to 47% of the rural population have access to improved water sources; while the ratio of water access to sanitation is only 2: 1-that is 58% water supply access to 26% sanitation (WHO/UNICEF, 2010). Regionally, the north central (NC), north eastern (NE), and north western (NW) zones of Nigeria have improved drinking water access of 52.2%, 27.3%, 42.5% respectively compared to 72.7% and 54.1% in the south western (SW) and south eastern (SE) zones respectively. On the other hand, 29%, 34.4%, 34.1% representing the NC, NE, NW respectively use improved sanitation in comparison to 55.5% and 55.0% in SE and SW zones respectively (NBS, 2007). Data in Table 2 (as presented by Amakom, 2009), apart from giving more insight into the details of other socio-environmental health and economic problems of the various regions equally serves to emphasize the level of regional disparity in access to basic social needs related to water and sanitation in Nigeria.

Table 2: Evaluation of Regional Indicators and Access to Water and Sanitation Related Services

Indicators	NE	NW	NC	SE	SW	SS	National	Rural	Urban
Safe water source (%)	30.7	50.64	48.9	40.8	73.5	45.9	51.4	40.4	73.4
Safe sanitation (%)	45.4	61.6	46.6	69.5	62.1	55.0	57.6	47.6	77.0
Improved waste disposal (%)	6.2	10.7	8.8	9.0	36.0	13.2	16.1	4.8	37.9
Incidence of diarrhea (%)	5.5	4.8	5.5	5.7	4.1	4.1	4.9	5.1	4.3
Water treatment before drinking (%)	4.6	7.5	14.1	11.4	20.4	5.8	11.3	14.5	9.7
Health access (%)	48.4	55.3	61.1	37.1	73.1	45.9	55.1	47.8	70.9
Poverty incidence (%)	72.2	71.2	67.0	26.7	43.0	35.1	54.4	63.3	43.2

Source: Extracted from Amakom (2009) which cites the National Bureau of Statistics Annual Abstract of Statistics, 2007; N/B: NE-North East, NW- North West, NC- North Central, SE- South East, SW- South West, SS- South South

The data from all the various sources agree to the fact that some regions and areas (SW, NW and urban areas) are relatively better off than others in access to water supply and sanitation. On the other hand, some regions (SE and SS) curiously fare relatively better in sanitation over water supplies than others. Such regional variations partly reflect regional hydrological and climatic variability which translate into relatively abundant water resources availability in the south over huge deficits in the north, and target policy differences of respective governments. In actual fact, the south and south west stand in good chance of gaining access to sufficient water supply than the north. However, this may not be so in practice owing to a number of factors ranging from the phenomenon of ethnic politics at policy implementation stage (which tends to work in favour of a particular region with long-term access to power) to the problem of water pollution arising from petroleum oil exploration in the south, and which tends to limit the availability of freshwater resources from the natural sources. On the other hand, the urban areas have enjoyed long-standing policy bias and priority in water and sanitation services over the rural counterparts.

Institutionally, the rapid rate of socio-economic and demographic expansion in Nigeria over the years is not matched by public investments in the water and sanitation sectors. Financial commitment to water and sanitation from relevant governments has not been very regular and clear. Available statistics (2001-2008) shows a lack of consistency in public financial commitment to water and sanitation at various levels (Table 3).

Table 3: Expenditure on Water, Sanitation and Hygiene (WASH) (in millions of US\$)

	2001	2002	2003	2004	2005	2006	2007	2008
FGN ⁴	76.04	80.02	52.54	46.47	71.01	70.08	76.27	57.86
State	16.05	19.42	19.27	29.92	33.71	40.19	46.30	42.70
LGA ⁵	3.59	4.23	11.30	11.65	14.87	18.89	21.91	21.02
Consolidated	95.59	103.68	83.11	88.04	119.60	129.23	144.48	121.58
% growth rate of WASH consolidated	-	8.46	19.84	5.93	35.85	8.05	19.54	-14.82
% consolidated WASH to total consolidated expenditure	5.97	6.53	4.28	3.89	4.26	1.96	1.03	1.29
Required for WASH MDG achievement	-	-	-	-	-	189.87	191.82	173.82
Shortfall to MDG WASH projection	-	-	-	-	-	60.64	47.32	52.17

Source: Amakom (2009) cited CBN Annual Reports (un dated) and NBS Sources (un dated)

Although the statistics in Table 3 cover a broad theme of water, sanitation and hygiene, the general irregularity and low financial investment in water supply and sanitation services is clearly emphasized. While the growth rate of consolidated expenditure was highest in 2005 at 35.85, the year 2008 witnessed a negative growth rate in public financial investment. Beyond the high irregularities in the funding trend for the period under review, the general expenditure of all the three levels of government on water and sanitation fell far short of what was required to meet the Millennium Development Goal (MDG) by US\$60.64, US\$37.34 and US\$42.17 in 2006, 2007 and 2008 respectively. The water and sanitation sector equally faces the challenge of management efficiency most especially at the State and local levels. A report by the FGN (2000) noted very low operational efficiency of State water and sanitation management agencies. For instance, many of the states have not been able to provide clear and reliable statistics on coverage and service levels, besides the high level of unaccountability in their financial service operations. The report further observed other problems such as insufficient financial commitment, unmotivated staff, highly politicized tariff setting regime, ageing and dilapidated infrastructures, high irregularities in service provision, among several others. These make the expectation of meeting existing demand for safe water and sanitation at State and local levels a practically impossible prospect.

⁴ Federal Government of Nigeria

⁵ Local Government Areas

3 Nigeria's Water Supply and Sanitation Services: the Institutional Perspective

The institutional rationale for water supplies and sanitation services in Nigeria arises from the following needs: a) to protect available sources of water; b) to ensure wider urban and rural water supply and sanitation coverage; c) to respond to and fit in with a wider global initiatives and goals; d) as emergency response to the water and health needs of the population; e) to regulate activities in the sector, among several others.

The need to protect available sources of water guided the various colonial and post-colonial policies and regulations in the water sector. Consequently, what could be regarded as water and sanitation policies were subsumed under wide-ranging regulatory instruments scattered in various documents as detailed in Table No. 4.

Table 4: Relevant Colonial and Post-colonial Regulatory Instruments in the Water and Sanitation Sector

Relevant Statutes	Main provisions
The Waterworks Act of 1915.	Specifically to keep water from being polluted by obnoxious or harmful matters.
The Minerals Act of 1917.	The law vests the Head of State of Nigeria with power to make regulations for the prevention of pollution of any watercourse.
The Public Health Act of 1917.	It prohibits the fouling of water and vitiation of the atmosphere by harmful human activities.
The oil in Navigable Waters Act, 1968.	It prohibits water pollution by oil spillage.
The Petroleum Act, 1969.	It covers prevention of pollution by inland waters, rivers, lakes and watercourses.
The Land use Act of 1978.	Ownership of Land linked to ownership of groundwater resources.
The River Basin Development (RBDA) decree/Act of 1976, 1987 & 2004.	To ensure a Pan-Nigerian programme for comprehensive and integrated water resources development.
The Environmental Impact Assessment (EIA) decree/Act 1992 & 2004.	The law seeks to protect the physical and aquatic environment.
Water Resources decree/Act of 1993 & 2004.	Nigeria's water resources now exclusively in the control of the Federal Government of Nigeria.
The 1999 Constitution.	Guarantees the Right of access of every citizens to water.
National Policy on Environment 1989.	Protection of the environment.
National Guidelines and standards for Environmental pollution control (1991).	Pollution control in watercourses as part of the environment.
National Effluent Limitation Regulation 1991.	Control of discharge of industrial waste and sewage into watercourses.

Pollution Abatement in Industries and Facilities Generating wastes Regulation 1991.	Control of industrial pollution.
Waste Management Regulation, 1991	Waste Management.
Nigerian Industrial Standards for potable Water and Natural Mineral Water, 1992.	For public health protection.
National Environmental Standards and Regulations Enforcement Agency Act, 2007.	Captures a wide range of environmental protection, coordination and enforcement functions.
Nigerian Standard for Drinking Water Quality, 2007.	For public health protection.

Source: Author's compilation

Such protectionist regulatory instruments revolved around: a) 'right of ownership' legislation and; b) 'measures to integrate and regulate standard practices'. The Land Use Act of 1978 and the Water Resources decree of 1993 (updated as Water resources Act of 2004) in such context could best qualify as a right-based approach for protecting available water resources. Realizing that the Land Use Act (which linked ownership of land resources to water resources) could not help achieve the aim of protecting water resources especially from powerful interest groups of resource users and Corporation, the Federal government of Nigeria came up with the Water Resources Management decree of 1993 and Water Resources Act of 2004. The law vested in the federal government the right to use and control available surface and groundwater and all water in any water-course affecting more than one state, for the purpose of promoting the planning, development, and regulation in the water resources sector. The Water Resources Act becomes only enforceable where: a) conflict of interests over right of water resources poses a manifest threat to a particular water resource; b) large-scale developmental and infrastructural needs are envisaged for the wider and larger interest of the citizens and the State. In Nigeria, inter-state and inter-community conflicts over shared water resources are common and often threaten the effective utilization of such resources. Resolving this is important in a multi-ethnic country such as Nigeria.

Establishing and clarifying rights of ownership was an important first and primary step (though lately realized) in evolving management, legislative instruments and regulatory policies in the water sector. The second and secondary step was the emergence of national level legislations such as the Water Works Act (1915), the Minerals Act (1917), the Oil in Navigable Water Act (1968), National Guideline and Standard for Environmental Pollution (1991), the Environmental Impact Assessment (1991), among several other legislations to protect water sources from pollution of any form as well as other activities that will be seen to be inimical to public health. In essence, it is here argued that the first generation regulatory instruments (1915-1969) were more interested in protecting sources of available water resources. Such regulatory instruments were mostly colonial-based public health protection plans arising from the awareness of rising human impact on available sources of drinking water supplies. Nwaka (1990) argued that the British colonial rule neither anticipated nor approved of the growth of large African urban populations possibly to avoid political subversion and social disorganization. However, the spontaneous growth of population and the rise of cities and towns presented new challenge of environmental health which probably accounted for the emergence of related public health regulations basically targeted at protecting the small colonial population resident in the cities.

The subsequent generation of regulatory instruments (1978-date) were more pan-Nigerian, at least on paper, as they took a more holistic look at the protection of available sources of water. Important highlight about that period was the establishment and clear definition of ownership

interest in the water resources sector as a measure to ensure effective control and coordinated management. Policies and programmes that subsequently emerged within the context of 'right of ownership' over water resources were basically designed to help attain agricultural productivity. For a country that was aiming at guaranteeing food security to its rapid population, giving priority to the productive uses of water was important first step in the development process. With a rising population growth and socio-economic activities as well as the emergence of urban centres, the interest of government and public agencies to guarantee adequate water supplies and ensure efficient management and disposal of human and related waste materials became another urgent challenge. In the colonial period, such challenge was responsible for the emergence of segregative public water supply services to serve few towns including Lagos, Calabar, Kano, Ibadan, Abeokuta, Ijebu Ode and Enugu with substantial British population. The schemes were maintained with revenue from water rate collection with virtually no operational subvention from government. With the creation of regional governments in the early 1950s the water supply undertakings continued to maintain the schemes but the financial and technical responsibilities for developing new water schemes were taken over by the regional governments who also assigned supervisory high level manpower (Water Engineers and Superintendents) to the water supply undertakings. For the period of the assignment, all the allowances and part of the salaries of these officers were from revenue generated from their water rate, while they still retained their employment and seniority in the regional service (FGN, 2000). With rising demands and increasing costs, there was a necessity for external loans as well as further decentralization of management arrangements. Consequently, the regions were requested to set up independent bodies i.e. Water Corporations/Boards to develop, operate and manage the water supply undertakings. This led to the formation of the first Water Corporation in 1966 by the then western region with all the public water supply undertakings in the region, including their staff, assets and liabilities taken over by the Water Corporation. At the moment, all the thirty-six (36) States of the federation and the Federal Capital Territory have Water Boards/Corporations or Public Utilities Boards managing their public water supply undertakings. These efforts are supplemented by Local Governments authorities who supply water to small villages in their areas of jurisdiction. The Federal Government is also involved in water supply through the Federal Ministry of Water Resources and the River Basin Development Authorities (RBDAs). Although the colonial water and sanitation policies have been criticized for their discriminatory and segregative contents and practices (Nwaka, 1990), studies have equally shown that the post-colonial policies on water and sanitation did not significantly differ from their colonial counterparts given that available regulatory instruments and practices with service priorities focused on the rich over the poor and urban over the rural areas (Udom, 2011; Dung-Gwon, 2004; and Gabriel and Abraham, 2009).

Given that access to water is a universal and constitutionally guaranteed right, providing adequate water supplies and sanitation services has always been at the core of public duty and responsibility to the population. In consequence, numerous versions of public water supply and sanitation policies have been evolved by the government of Nigeria over the years (Table 5).

Table 5: Relevant Water and Sanitation Policies

Policy Title	Key Provision
National Policy on Environment, 1989	Focuses on water quality regulation and standard as well as pollution control.
National Rural Water Supply and Sanitation Policy, 2000	Focuses specifically on rural water and sanitation through community participation. The programme targets were to increase water coverage from 43% to 80% by 2010 and 100% by 2015. The sanitation coverage was to be increased from 32% to 60% by 2010 and 90% by 2015.
National Water Resources Management Policy, 2003	This recognizes water as an economic good, opted for integrated and demand-driven services.
National Water and Sanitation Policy, 2004	This operated strictly in line with the demand-driven approach of the National Water Resources Policy.
National Environmental Sanitation Policy (NESP), 2005	A bit comprehensive as it touched on a range of issues including solid waste, medical waste, excreta waste, sewage management, food sanitation and hygiene, sanitation at public places, adequate potable water supply, urban drainage management and hygiene education etc.
National Economic Empowerment and Development Strategy- NEEDS (2003-2007)	This attempted to address water and sanitation issues in clearly defined spatial units namely, urban areas, small towns, rural areas. NEEDS placed high priority on the development of safe and adequate water supply and sanitation services as a key instrument for fighting poverty and accelerating socio-economic development.
National Development Plan (NDP), 2007	As one of the seven point development agenda of the Late Yar a dua's administration, targeted subsidies on water and sanitation facilities were planned for the poor.

Source: Author's compilation

At the Federal level, water supply and sanitation provisions fall within the responsibility of the Federal Ministry of Water Resources. Other federal agencies with related responsibilities include the Federal Ministries of Environment and the Federal Ministry of Health. While the Federal Ministry of Environment has responsibilities in the area of environmental quality, the Federal Ministry of Health is involved in responding to challenges in sanitation related diseases such as controlling vector borne diseases, malaria, guinea worm, schistosomiasis, promotion of sound food hygiene, building capacity through awareness creation and training environmental health practitioners. Other sector ministries with some direct or indirect responsibilities include the Federal Ministries of Education, Science and Technology, Women Affairs, Inter-governmental Affairs, Youth Development and Special Duties. These sector ministries by their various programmes, are involved directly or indirectly in promoting sustainable development of water supply and sanitation services in Nigeria. For instance, the Federal Ministry of Science and Technology becomes an important advisory and procurement ministry when technological solutions to water supply and sanitation provisions are emphasized. The above ministries are, to a large extent, duplicated at the State level structure with responsibilities of regulation, legislation, policies, development, management, etc. at the respective State domain. In most cases, Water Boards or Water Corporations are used at the State level for urban water services while rural water supply and sanitation (RWSS) is used for rural water supply and sanitation. All the 774 local government authorities are further involved in the provision and management of rural water supply and sanitation within their respective domains, mostly through various community organization including water and sanitation committees (WASCOMS). Private sector participation in

the Rural Water and Sanitation (RWSS) sub-sector has been in the form of consultants, suppliers, manufacturers, artisans etc. Non-Governmental Organizations (NGOs) are even becoming equally relevant and more interested in the RWSS through collaboration with relevant authorities, communities and donor organizations.

While urban areas have enjoyed a fairly long policy and administrative attention in water supply and sanitation services, its rural counterparts came to the picture in relatively recent times (from the late 1970s). Beyond the River Basin Development Authorities (RBDAs) which came with the aim of ensuring comprehensive pan-Nigerian water resources development, serious efforts at addressing rural water supply and sanitation concerns emerged as a response to the standard of universal coverage of water and sanitation set by the International Drinking Water Supply and Sanitation Decade (IDWSSD, 1981 to 1990) as well as the recommendation of the World Summit for Children (1990) which equally set targets of universal access to safe water and sanitation (see Nwankwoala, 2011). Since then there have been many international declarations and agenda on public health issues including the Millennium Development Goals (MDG). Such international declarations and directives probably contributed to engendering policy and programme interventions in the water and sanitation sector in Nigeria. However, some of the initiatives that emerged were more general in orientation for which water supply and sanitation services were subsumed. One of such initiatives was the Directorate for Food, Roads and Rural Infrastructure (DFRRI) which was initiated in 1985 for the purpose of providing rural infrastructures, for which rural water and sanitation (RUWATSAN) programme emerged.

Beyond mere declarations and directives, regional and international agencies and organizations have been actively involved at various scales and levels in water and sanitation programmes in Nigeria. For instance the African Development Bank Group had been around in the sector for over 40 years in Nigeria (since in 1971). Many other agencies and organizations are also involved at various levels in addressing issues bordering on rural water supply and sanitation including but not limited to the following (see Nwankwoala, 2011):

- a. UNICEF assisted State Water and Sanitation Projects (1981-2010).
- b. Japanese International Cooperation Agency's (JICA) rural water supply projects (1992-1994)
- c. United Nations Development Project (UNDP)-Rural Water supply (1988-1993).
- d. European Union (EU) water and sanitation programme (2002-2009)
- e. Department for International Development's (DFID) water and sanitation pilot project (2002-2008)
- f. Water Aid's rural water supply and sanitation programme (1996-2010)
- g. United State Agency for International Development
- h. World Health Organization
- i. World Bank
- j. Among several others.

Involvements of these bodies have been restricted to financing, infrastructural provisions (e.g. boreholes, hand-dug wells, latrines of different types) in urban, rural areas and public spaces (e.g. markets, worship places, schools, health clinics etc); as well as capacity building on public health through education and awareness creation. Current reforms in the water and sanitation sector beginning from 1999 to date have been premised mostly on the conditional loans or its expectation from multilateral financial institutional (mostly the World Bank, International Monetary Fund, African Development Bank, etc) as well as foreign direct investments. All current reforms in the water and sanitation service sector in the past 13 years are national translation of international neo-liberal discourses and policies, mostly dominated by demand responsive service principle, full pricing, involvement of the private sector as well as cost recovery practices in water and sanitation service.

A look at the chronology of the policies and programmes on water and sanitation so far discussed underscores the fact that the Nigerian government has, over the years, seen the need for providing adequate water supplies and sanitation services to its population. While policies and programmes emphasize 'water supply and sanitation services', actual implementation, in most cases, narrows to drinking water supplies. This is always achieved by sinking boreholes, beefing up urban water services network in addition to occasional monitoring of private and commercial borehole operators for water quality while sanitation services are little considered. In effect, while little improvement is recorded for drinking water (literature indicate an average of about half of the Nigerian population having access to improved drinking water), the sanitation sector remains poorly covered (Onabolu et.al, 2011; Nyong and Kanaroglou, 1999; Sanusi, 2010; WHO, 2007; NBS, 2007; Adekunle et.al, 2004; Nwankwoala, 2011). Most efforts at addressing the sanitation challenges are fragmentary and ad hoc mostly dictated by emergencies and pressures from water-borne, water-washed, water-based and water related problems and catastrophes. Such responses are coordinated sectorially or completely independent of any specialized ministries or relevant government agency. Many of such intervention programmes adorn public governance spaces including the Nigerian Guinea Worm Eradication Programme (NIGEP) supported by many international and local partners and institutions; National Committee on Certification for Guinea Worm Diseases Eradication; as well as some intervention programmes on diarrhea, dysenteries, cholera and malaria, among several others.

The inability of the numerous programmes and related ones to deliver the targeted results of comprehensively addressing the problems arising from water supply and sanitation may probably have been responsible for the emergence of such focused reforms and initiatives such as the National Rural Water and Sanitation Policy (launched in 2000); the Presidential water initiative⁶ (water for people, water for life) (launched in 2003); the urban water sector reform⁷ programme (2000); the National Environmental Sanitation Policy (2005); and the national water and sanitation policy (2004). These policies and programmes not only set a clear time frame and number of citizens to be covered for specific periods, they were clearly framed to address urban and rural water and sanitation needs. Some of these policies carried the prospect of engaging the private sector as partners in the water supply and sanitation provision agenda. The National Rural Water and Sanitation policy placed much emphasis on rural water supply over sanitation. Its programme targets were to increase water coverage from 43% to 80% by 2010 and 100% by 2015 while the sanitation coverage was to be increased from 32% to 60% by 2010 and 90% by 2015. Placing high priority on rural water supply coverage over sanitation was understandable given the role of water as the first entry point for addressing the challenges of sanitation. By using the rural areas as the target, the National Rural Water Supply and Sanitation policy set out to address the long-standing infrastructural neglects that Nigeria's rural areas have historically been subjected to. Despite the lofty goals of the policy, progress in delivering its ambitious targets could not be tracked. Its oblivion probably led to the emergence of the National Water and Sanitation policy in 2004 and the National Environmental Sanitation Policy in 2005. While the National Water and Sanitation Policy introduced the demand-driven approach into water and sanitation services, the National Environmental Sanitation policy focused more on public environmental cleanliness and waste management. For instance, the national environmental sanitation policy (developed by the Federal Ministry of Environment, 2005) has as its goal to ensure a clean and healthy environment by adopting efficient, sustainable and cost-effective strategies, to safeguard public health and wellbeing in line with the national development

⁶ The Presidential Water Initiative (PWI) aimed to increase access to water and sanitation services to 100 percent in State Capitals; 75 percent in other urban areas; and 66 percent in rural areas.

⁷ The National Urban Water Sector Reform Project (introduced in 2000 and relaunched in 2005 in its second phase) aimed at increasing access to piped-water networks in urban areas. It has four main components namely, system rehabilitation and expansion, public-private partnership, capacity building and project management; and policy reform and institutional development.

objectives. The Policy was also to ensure sustainable environment and poverty reduction. It sets specific targets as follows:

- a. Enact all relevant legislation required for policy implementation by 2005.
- b. Increase access to toilet facilities by 25% in public places and 50% in households by 2006; and 75% and 100% respectively by 2010.
- c. Increase sanitary management of sewage and excreta by 25% in 2006 and 75% in 2010.
- d. Institute School Sanitation Programmes in 50% of schools by 2006 and 100% by 2010.
- e. Extend present water supply and wastewater services coverage to 80% of the population by 2007, 100% by 2011 and to sustain full coverage beyond 2011.
- f. Increase private sector participation in Environmental Sanitation services delivery by 20% in 2006 and 75% by 2010. Section (e) of the national environmental sanitation policy specifically border on water supply and wastewater management without any clear mechanism of achieving the target.

On the other hand, the National Water and Sanitation Policy (developed by the Federal Ministry of Water Resources, 2004) set the following specific targets:

- a. Review and improve coverage of sanitation to 60% of the population by 2007;
- b. Extension of sanitation coverage to 65% by 2010;
- c. Extension of sanitation coverage to 80% by 2015;
- d. Extension of sanitation coverage to 90% by 2020;
- e. Achieve 100% sanitation coverage by 2025;
- f. Sustain 100% sanitation coverage beyond 2025

There is obvious contradiction between the initial governmental commitment to full coverage of water and sanitation services in 2015, and the emergence of new policies (especially the National Water and Sanitation policy of 2004) which emphasized full pricing and cost-recovery on public water and sanitation services. The initial atmosphere of enthusiasm that heralded Nigeria's transition to a democratic system had some impact and expectation of good governance. For the new leaders, the new spirit of democratic governance imposed new expectations of 'democratic benefits' which led to the initial promises of infrastructural development. Such expectations later transformed into failed promises in the context of challenges of corruption which threw in many questions of accountability and transparency on the new leaders.

The two policies are working for the same goal of universal coverage in water supply and sanitation provision. However, their mechanism of reaching set targets differ owing to their being authored in different government ministries. The coverage projections embodied in the two policy documents seem to run parallel to some official statistical reports of progress recorded in the supply of water and sanitation services to the citizens (compare Tables 2, 3 and other reports). By aiming at improving access to water and sanitation upto 50% in 2006 for instance, it would seem as if the authors of the National Environmental Sanitation policy were not already aware of some official statistical sources that even claimed higher coverage for the population in sanitation. One implication of this seeming contradiction is that public efforts at addressing water supply and sanitation challenges in Nigeria are not based on careful, thorough and comprehensive analysis and information on citizens' needs and the level of service availability. Nigeria does not maintain comprehensive records of water and sanitation needs of communities to serve as working reference for project and service allocation and deliveries as well as assessment of performance of public water and sanitation programmes. Consequently, politics determine service provision in the water and sanitation sector than merit and needs. Official records and statistics of improved service deliveries have often been utilized to project a 'romanticized' scenario to the outside world and donor agencies as ways of justifying public performance and public investments while at the same time covering up

the reality of poor access. Various scholarly submissions on the general progress in Nigeria's infrastructural development efforts in the past 13 years do not give remarkable record of improvements. Lack of participatory planning, poor technical and institutional capacity, bureaucratic problems and poor maintenance culture, poor data management and a lack of adequate monitoring and evaluation, corruption, absence of coordination and policy continuity⁸, among several other problems have been held responsible. Marcellus (2009) specifically noted that while Nigeria's wealth rose within the period of democratic governance owing to better petroleum oil prices and substantial debt relief by the Paris club, the average Nigerian still remains disproportionately very poor and without access to basic infrastructures quite contrary to some official figures from the Central Bank of Nigeria (the author cited the CBN, 2005:76). While Osagie (2007: 2) attributes Nigeria's problem to poor leadership and uncoordinated action as responsible for programme failures, Marcellus argued that public policies in Nigeria are only seen as perfunctory obligations which hardly received commensurate action towards goal realization. From all assessments and indication, it is doubtful if Nigeria has progressed in the water and sanitation ladder of achieving significant coverage for her citizens. Recent reports (DFID, 2005; Ademiluyi and Odugbesan, 2008; Nwankwoala, 2011 and several others) have painted grim and abysmally 'below the expectation' picture for the Nigerian water supply and sanitation sector. Some of these challenges are further discussed in the next segment.

⁸ Taking example of vision 2010 of the Sani Abacha regime, Aluko (2006) observed that in spite of the best ideas and intentions encapsulated in the reform agenda, the subsequent regime led by Olusegun Obasanjo terminated the plan because of sheer hatred for Abacha. He went on to observe that Obasanjo's tenure elongation programme was explicitly premised on guaranteeing the survival of his vision 2020 plan.

4 The Challenges of Developing Workable Water and Sanitation Policies in Nigeria

Clearly, the water and sanitation sector over the last ten decades in Nigeria has passed through several phases and developments mostly characterized by: a) too many short-lived and incoherent policies and very little action; b.) lack of proper policy coordination mechanism; c.) excessive politicization of service and corruption; d.) a lack of policy continuity; e.) excessive international pressures with poor local institutional and technical capacities to adapt; f.) very many agencies with none effectively in charge; g.) unrealistic assumptions of situations and; h.) poor implementation as a result of a lack of political commitment and corruption.

Practically and administratively, Nigeria has not developed effective and coherent policies in the water and sanitation sector over the period of its colonial and post-colonial existence. From the long list of policies and regulatory frameworks earlier discussed, it is argued that Nigeria's water and sanitation policies are ad hoc mechanisms which arise basically in response to emergencies and international pressures as well as political efforts by successive leaders to justify existence and 'perceived' performance. The colonial legacies of supplying public drinking water to congested urban areas still dominate the policy scenes. The greater part of the ten decades has equally witnessed much emphasis over drinking water provision while the sanitation aspect takes the least consideration in the priority list. This can be seen in the large network of urban water cooperation in all the 36 states of the Federal Republic of Nigeria including the Federal Capital Territory (FCT), Abuja. In spite of the prevalence of such urban-biased policy targets and efforts, the prospect of addressing urban water and sanitation problems in Nigeria is even more unlikely given the current policy practices of using economic instruments in service delivery, with utter disregard to the prevailing poverty among the citizenry. The phenomenon of peri-urban areas (often seen as illegal or squatter settlements) surrounding the cities in Nigeria were hardly accounted for by relevant policies, yet such settlements impose straining pressure on the capacity of urban water network system to sustain adequate supplies. The implication is that public efforts at addressing urban water and sanitation challenges without taking into consideration the multiplicity of challenges including poverty and the urban fringes cannot produce the intended result of sustaining a safe and healthy environment given that the consequences of neglecting such issues will turn out to work against whatever intervention efforts is available for the main urban areas.

A survey of the contents of individual policy does not show thoroughness and most of the policy contents are not significantly different from previous arrangements. Each policy seems to come with a particular regime and vanishes afterwards. Table 5 clearly shows that virtually all the policies in the water and sanitation sector were framed in the last two decades (1989-2007) which coincided with the peak of international declarations and policy pronouncements. Apart from the National Policy on Environment (1989) which was a highly generalized framework, all other policies focusing either directly or indirectly on water and sanitation coincided with the period of democratic governance (2000-2007). It is also obvious that most of the documented policies were framed as parallel instruments from different agencies of government without proper coordination. For instance, the Federal Ministry of Water Resources (FMWR) came up with the National Water Resources Management Policy (2003) and the National Water and Sanitation Policy (2004); the Federal Ministry of Environment (FME) was responsible for the National Environmental Sanitation Policy (NESP, 2005) while Rural Water Supply and Sanitation Policy (2000) was introduced by the Federal Ministry of Rural Development (FMRD). On the other hand, the National Economic Empowerment and Development Strategy (NEEDS) (2003-2007) was a coordinated programme of the Federal Government of Nigeria and which was anchored by the National Planning Commission (NPC). The Presidency equally coordinated some policies and programmes in the sector, including the

Presidential Initiatives on Water and Sanitation (2003) and the urban water and sanitation sector reform (2000).

At the various governmental and administrative levels water and sanitation has no specific institutional domain. Different Ministries and Agencies assume relevance and arrogate responsibilities for their respective Ministries without clear mechanism of coordination. At the state and local government levels, there are further fragmentation and division of authorities to the extent that what emerge are inter-agency competition both between agencies of each state and between agencies of States and the Federal Government. This consequently leads to parallel drinking water projects in some areas and communities as well as duplication of responsibilities. Allocation of water and sanitation projects is often politicized to favour communities with influential public officials, bureaucrats or politicians. Akpabio (2007) reported a questionable instance of over-concentration of drinking water project in one local government and specifically in one community while communities who needed such facility could not have a single project. Such anomaly was clearly attributed to politics and absence of standard practices, a situation which created opportunities for highly placed officials and bureaucrats to divert public drinking water facility to their respective communities of origin while other communities without representation in public offices and agencies were neglected.

Thorough public attention in the water and sanitation sector in Nigeria has equally been hampered by a lack of policy continuity and regime instability. Of the 51 years of political independence, for instance, the military has ruled the country for about 36 years leaving only about 15 years for the civilians. Throughout the periods of Military dictatorship, the water and sanitation sector was principally governed by decrees, edicts and regulatory practices (Table 4) either as a means of protecting available water sources or as ad hoc measures to address public health emergencies and needs. Given that such acts of legislative and regulatory engagement in the sector was unilaterally dictated by a regime in power, their survival and impacts were, to a large extent, determined by the longevity of such regime. Each time a particular regime left the scene, policies equally changed and which ultimately affected what happened in the water and sanitation sector. Long years of military rule means relevant policies under those periods were hardly subjected to public scrutiny and could not have been based on proper and empirical needs assessments to reflect the true situation and needs of the people. The situation is not even different within the context of Nigeria's current democratic experiment given that policies are still being designed either in response to international guidelines and directives or as a response to emergency situation. The national water resources management policy of 2003 and the national water and sanitation policy of 2004 both relied on economic tools of pricing and cost recovery in the provision of water and sanitation without taking into consideration the realities of socio-economic and developmental contexts of the population. It would also logically seem that Nigeria's current democratic leaders' policy claims and promises of targeting improved water and sanitation services to its citizens are fraught with 'opportunism' going by the pattern of implementation practices. While the human right imperatives of water and sanitation needs for the citizenry is clearly and universally recognized at international level (and domesticated by many other countries), Nigerian policy makers choose to ignore the 'human right' dimension of such needs in total preference for full commoditization and privatization even when such goals are hardly defended by the realities of socio-economic condition of the population.

From whatever angle that is viewed, the Nigerian institutional environment has not been able to address disparities in access to water and sanitation by the population. Inequitable access can be understood from the perspectives of disparities in fresh water availability, income, power and low institutional capacity to address relevant needs. Coverage levels differ by geography and household characteristics, with urban households more likely to have access to improved water and sanitation services than the rural households. At the root of these disparities is the income gap which enhances

or constrains a household's financial capacity to access the basic water and sanitation services. Blakely et al (2005) had specifically observed a common trend in the medium and low income countries whereby households earning less than US \$1 per day were almost nine times more likely to lack improved water and sanitation than those earning more than US \$2 per day. Although the trend of inequitable access to water and sanitation services seems a global phenomenon with respect to the less developed countries of the world (UNICEF and WHO, 2004), what particularly makes the Nigerian case seem hopeless relates to low institutional capacity to address the problem.

5 Concluding Remarks

There is a common trend in the literature that seems to demonstrate that public efforts at addressing water supply and sanitation services in developing countries are not based on a holistic approach (Lane, 2012; Mara, 2012; Moe and Rheingans, 2006), which implies that water supply services are not planned in a way that integrates or incorporates sanitation concerns. This situation is not different in Nigeria as this review has shown. The Nigerian water and sanitation sector remains poorly represented at policy, political and practice domains over the last ten decades. While a little effort is noticeable in the drinking water section of the sector, same cannot be said about the sanitation sub-section. The reason for this is not far-fetched: water is the first entry point in the hierarchy of citizens' needs and failure to guarantee its supplies where it matters most can lead to serious political setback. Past and present governments in Nigeria often overemphasize on the primacy of drinking water supply over sanitation services. From the various discussions and analyses, the policy and practice spaces have witnessed relatively little attention and action in the early 1990s but then, such actions were mostly ad hoc, short-lived, disjointed, highly uncoordinated and lacked clear focus and approaches of intervention. Virtually all the available national policies were framed in response to global policy directives and pressures such as the United Nations International Drinking Water Supply and Sanitation Decade (Water Decade, 1981-1990); the New Delhi Statement (some for all rather than more for some, 1990); the Dublin Principles (Water as economic good, 1992); and the Millennium Development Goals (MDGs) (reducing the proportion of the population without access, 2000); and the most recent namely, the United Nations declaration of water and sanitation as a right in 2010.

The contents of individual policies over the last 20 years reflect several international policy and paradigmatic trends such as integrated water resources management (IWRM), water privatization and differences between water and sanitation. While the rural water supply and sanitation policy (2004), national environmental sanitation policy (2005) and all other subsequent policies were clearly framed in the direction of achieving the Millennium Development Goals target of halving the proportion of population without access by 2015; the national water resources management policy (2003) and the national water and sanitation policy (2004) were purely based on the Dublin principles that placed economic value on water resources. Such blind application of economic tools (e.g., pricing and cost recovery) has characterized recent reforms especially in the urban water and sanitation sector, raising the crucial question of equity and affordability in the midst of persistent poverty. Most policy tools do not take into consideration the local peculiarities of resource availability and diversities in socio-economic contexts of the Nigerian population. A report by Akpabio et al (2007) in the Cross River Basin, southern Nigeria, showed that the need for IWRM in the basin is hardly appreciated given the difficulties of attracting user participation in project financing and cost recovery in the midst of abundant natural water resources. The report queried the rationale for imposing uniform mandates and objectives on every river basin development authorities in the country without the consideration of diversities and variabilities in the geographies of water resources distribution. In the real sense, international discourses on water and sanitation in Nigeria are, in most cases, very weakly and ambiguously translated at practice levels. A number of factors explain this to include absence of user participation and voices, poor leadership accountability and corruption, excessive powers and influence of few individuals in the policy making circles, a lack of institutional capacity to appropriately interpret and implement relevant policies, among several others. This scenario very much aligns with Mukhtarov's (2009) argument that the capacity of states to process and meaningfully use relevant ideas from an international level is crucial in policy translation and is linked to the financial and human resources as well as the mechanism for policy deliberation at national level.

The background aim of international and donor interests in the water and sanitation sector in Nigeria (just like in other African countries) have been driven basically by the wider neoliberal strategy to reduce or outrightly eliminate public sector involvement in the organization and delivery of public water and sanitation services. Such neoliberal ideologies have influenced the direction of policy formulation and practices mostly in the last twelve years of democratic experiment. This is noticed mostly in the uncritical willingness and acceptance of wide scale participation of the private sector in the management of water and sanitation as public agencies at national and state levels have introduced commercial operations into water and sanitation services. Services are now mostly restricted to the rich and settlements in high socio-economic residential areas. State water agencies are now rationalizing supplies and focusing on demand responsive services provision to be able to qualify for continued donor supports. Drinking water is increasingly being commoditized and marketized in sachets and open places. This creates serious access problem especially in the urban areas whereby the depth of social inequality in access to water and sanitation keeps being reproduced and sustained. Donor and multilateral agency involvements in water and sanitation sector in Nigeria have changed the structure of services with several implications. A recent study conducted by Udom (2011) on water accessibility in Akwa Ibom State, observed that urban public water supply agency's attention is mostly concentrated in high socio-economic and residential areas occupied by high government officials and the rich. Beyond such areas, the study found out that public water services declined in coverage and regularity of supply. This means that settlements in low quality residential and socio-economic areas are hardly served with public drinking water services, not even to mention public sanitation infrastructures. Given that most households in Nigeria live below poverty line (Okosun et.al, 2012), the choice between the options of improving household water or sanitation access will certainly be sacrificed only on attaining basic water needs for drinking, cooking and occasional personal laundry activities while attention to sanitation matters will be seen as luxury and secondary. This tends to explain why most households live in unhygienic and poor sanitary condition characterized by water-borne, water-washed, water-based and water related diseases and infections⁹ (White et.al, 1972 and Bradley, 1977). Several studies have shown that the poor are likely to suffer most both in urban and rural areas (Udom, 2011; Dung-Gwom, 2004; Akpabio, 2008; Gabriel and Abraham, 2009). Their lack of the necessary financial capacity to be connected and integrated into available public water services means they must spend the greater part of their income on commercial water services to cope with associated daily existential and livelihood concerns. Castro (2008) has argued that the neo-liberal claims often advanced to justify policies of private sector involvement as a guarantee for improved access to water and sanitation services in developing countries are hardly supported by clear empirical evidence.

While acknowledging the role of global policy directives in shaping local policies and priorities in the water and sanitation sector, the democratization efforts in the late 1990s was equally important in creating space for policy initiatives and implementation practices. It is argued in this paper that in an attempt to catch up with international policy framework, successive governments in Nigeria hardly framed policies that reflect the developmental realities and contexts in the country. Consequently, most policy practices and implementation often narrows down to technical solution at the expense of appropriate and locally-led intervention. Creating hardware sanitary systems and infrastructures often dominate the policy space while an important factor such as citizen-led initiatives as well as changing the behaviours of the citizens is ignored.

To properly situate the Nigerian institutional environment to be able to respond to the numerous challenges in the water and sanitation sector, many barriers need to be addressed. The most important of the barriers to overcome relate to improvement in the institutional capacity in the

⁹ White et al (1972) and Bradley (1977) classified: i.) water-borne infection as spread through water supplies; ii.) Water-washed infection as spread through lack of water for personal hygiene; iii.) Water-based infection as transmitted through an aquatic invertebrate host; and iv.) water related insect vectors as infections spread by insects that depend on water.

water and sanitation service sector. There is urgent need for manpower training and organizational learning. Going by the review, Nigeria has a short and highly underdeveloped institutional history in the water and sanitation sector largely due to long years of military rule. Developing effective capacity at various scales of policy and implementation practices, through massive manpower training, is important in guaranteeing adaptive utilization, translation and implementation of relevant international water and sanitation policies at the national and local country levels. What is currently happening in the water and sanitation service sector is blind and uncritical application of global policy tools without thoughtful attention to local circumstances. While the country's political leadership and a lack of effective institutional capacity are partly to blame over some inappropriate policies in the water and sanitation service sector, the practice of attaching conditionalities for loans by multilateral financial agencies clearly demonstrate the prevailing rhetoric often embedded in most international agency commitment to assisting the developing countries in solving their water and sanitation challenges. Beyond this macro-perspective, other useful and practical national and local level initiatives toward solving the water and sanitation problems in Nigeria border basically on: a) sustaining massive public investment in water and sanitation infrastructures; b) less politicization of relevant water and sanitation programmes; c) less excessive attention to technological approaches and more attention to adequate local level participation and involvement; d) maintenance of comprehensive data on need areas as well as sustaining a culture of post-project evaluation to determine programme success levels.

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