

significantly informed policy formulation in the sector. For instance, it is not clear how current policies and interventions will impact on water and sanitation supply through additional yield and/or savings. Issues of technology, impact on local water resources, acceptability to local community, local employment, running costs and expenditure, and long-term applicability. One would have expected that all these issues should be addressed comprehensively by policy. However, the current water and sanitation policies indicate a need for further analysis and reform.

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Water and Sanitation in Nigeria: A Briefing on National Policy

Water and Sanitation in NEEDS and National Development Plan (NDP)



low level of sanitation, especially in urban centres and peri-urban slums, as a critical issue in this sector. Environmental health considerations therefore remain vital to achieving the objectives of NEEDS since environment provides the foundation for all development

efforts in Nigeria.

It is useful to understand the extent to which a policy has met its objectives and whether those who were intended to benefit have done so. This paper, therefore, reviews existing national water and sanitation policies with a view to examining their effectiveness.

The National Economic Empowerment and Development Strategy (NEEDS) [2003-2007] recognized that good health is unobtainable unless the environments in which people live are healthy. Many of the diseases that affect Nigerians, including malaria, tuberculosis, diarrhoea, and dysentery, are due to unhealthy environmental conditions (NPC 2004). The NEEDS identifies the

The National Water Supply and Sanitation Strategy under NEEDS recognises that water supply and sanitation are central to improvements in so many aspects of human development, health, education, urban and rural development, development of industry, and general economic development and thus are central to the government's primary mission of poverty reduction. Therefore the NEEDS proposed that water supply and sanitation should be a primary focus of the government. The National Water Supply and Sanitation Programme proposed four sub-sectors for water supply and sanitation: urban areas, small towns, rural areas, and water

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resources management and sanitation.

In the urban water sub-sector, the Nigerian government has adopted a fundamental reorientation in the concept of service provision. By separating infrastructure investment and ownership from service operation, the government expects to introduce competition with significant efficiency gains. The core urban water strategy is to improve service delivery through optimal public private partnerships (PPP) in investment, management and delivery of water services. A key focus of development assistance sought by the government, therefore, is in the area of technical and investment assistance to launch PPP as a viable instrument for sector and utility reform.

For small towns, government policy is to decentralize ownership and management of water supply systems to attract and involve optimal community involvement and support from the private sector, including operating under contract, and regularizing the services of independent providers or franchisers. In small towns, the focus is on community ownership coupled with local private sector contracting for operations.

In the rural areas, government focus is on increasing the water supply to attain 60 percent rural coverage by 2007 with a three-pronged approach of water rehabilitation, expansion and construction of low cost rural water schemes. This strategy involves

sharing ownership and management by communities and local governments, with communities taking charge of operations and maintenance. In the rural areas and small towns, the fiscal focus is on phasing out subsidies for maintenance and on restricting subsidies to partial coverage of capital costs, to engender greater community ownership.

Looking forward, the Draft NEEDS II and the President Yar'Adua's seven-point agenda which are being harmonised to form the National Development Plan (NDP) present another opportunity for scaling up water and sanitation coverage in Nigeria. Highlights of water and sanitation issues in the Draft NEEDS II show that government will provide targeted subsidies for water and sanitation facilities for the poorest of the poor even though it is silent on the specific strategy for achieving this (Charles-Monwuba 2007). Also, the proposed National Development Plan (NDP) budget provides for rehabilitation, new facilities, and operation and maintenance for sanitation in urban, small towns and rural areas.

Furthermore, one can easily discern from Draft NEEDS II that water and sanitation are cross-cutting issues among important sectors like health, education, agriculture, and environment. This calls for greater coordination of these sectors so as to ensure that their activities and projects in the water and sanitation sector avoid

water supply and sanitation and water resources management boosts countries' economic growth and contributes greatly to poverty eradication; the economic benefits of improved water supply and, in particular, sanitation far outweighs the investment costs. Similarly WaterAid (2007), noted that the broad benefits associated with averting mortality and morbidity from poor sanitation far outweigh the costs of implementing and maintaining low-cost sanitation systems. National economies are more resilient to rainfall variability, and economic growth is boosted when water storage and harnessing capacity is improved; and improved water resources management and water supply and sanitation contributes significantly to increased production and productivity within economic sectors.

Although the overall public and private investment needs for improved water supply and sanitation and water resources management are considerable, meeting such investment challenges is highly feasible and within the reach of most nations. So, there is the need to include Nigeria's water and sanitation service development part of its economic development programme. But are Nigeria's water and sanitation policies addressing this need?

Access to water and sanitation (MDG 7, target 10) is an important ingredient of quality of life (Anad

2006). So, there is the need to conduct a detailed analysis and study of issues related to water quantity, water quality, and water use in Nigeria. Results from such analysis should assist policy formulation in the water sector. For instance, such a study should generate criteria for measuring the implementation and effectiveness of Nigeria's water and sanitation policy. This will have a feedback effect in modernizing and re-informing policy.

Criteria are the measurable dimensions of objectives. Criteria/measures should be appropriate to the unit of analysis. A set of criteria/measures against which policies to influence water and sanitation demand and usage should be measured include:

- Economic efficiency (economic criteria);
- Social development (technical criteria);
- Social/gender equity (equity criteria);
- Environmental protection (environmental criteria);
- Sustainability of water and sanitation supply and services (administrative criteria);
- Political acceptability (political criteria).

A look at Nigeria's water and sanitation policies over the years through the above criteria shows that a detailed study and analysis of the issues involved in the water and sanitation sector may not have

Ministry of Environment and published, after approval by the President of the Federal Republic of Nigeria, and the National Executive Council, in January 2005. The Policy covers: Solid waste; Medical waste management; Excreta and sewage management; Food

range of environmental issues including many that had previously been under the Ministry of Health. These responsibilities include the provision of potable water and excreta and sewage management but it is recognised in the policy document that

| Year | Target |
|------|--|
| 2007 | Improve coverage of sanitation to 60% of the population |
| 2010 | Extension of sanitation coverage to 65% of the population |
| 2015 | Extension of sanitation coverage to 80% of the population |
| 2020 | Extension of sanitation coverage to 90% of the population |
| 2025 | Achieve and sustain 100% sanitation coverage of the population |

Table 1: Nigeria's Sanitation Targets (2007-2025)

sanitation; Sanitary inspection of premises; Market and abattoir management; Adequate potable water supply; School sanitation; Pest and vector control; Management of Urban drainage; Control of reared and stray animals; Disposal of the dead (humans and animals); Weed and vegetation control and Hygiene education and promotion. The objective of the 2004 Sanitation Policy is for all Nigerians to have access to adequate, affordable and sustainable sanitation through the active participation of Federal, State and Local Governments, NGOs, development partners, private sector, communities, households, and individuals. The policy sets the following milestones/targets (Table 1).

The Federal Ministry of Environment has responsibility for a

the Federal Ministry of Water Resources (FMWR) will collaborate with the Ministry of Environment on water sanitation activities including sewage, storm water control and quality control of water supply sources.

Conclusion and Recommendation

According the Global Environment Outlook (2000) report, Nigeria is one of the 25 African countries that will be subject to water scarcity or stress by 2025 (UNEP 2000). The projection shows Nigeria will witness water stress with about 1,000-1,700 m³/person/year. A key challenge to water and sanitation security is the reconciliation of water and sanitation demand and supply both for the medium and long term.

Investing in water and sanitation is a driver of development. Improved

waste of resources and promote synergy and effectiveness. If synergy and effectiveness are compromised, then the realization of the President's seven-point agenda (which is not water and sanitation specific) could be threatened.

Water and Sanitation: Previous Policies

In Nigeria, numerous policy guidelines for water resource management exist only at the federal level (Adeoti 2007). Some of the policies associated with water resources and sanitation include the 1989 National Policy on Environment, the 1993 Water Resources Decree no. 101, the Rural Water Supply and Sanitation Policy 2000, the National Water Supply and Sanitation Policy 2000, the National Water Resources Management Policy 2003, and the National Water Sanitation Policy 2004.

The National Policy on Environment of 1989, in the field of water resources management, recognizes catchment basins as the unit of analysis in water management and even regulates water quality standards and pollution control. The River Basin Development Authorities (RBDAs) are parastatals under the Federal Ministry of Agriculture and Water Resources and are charged with the development, operation and management of reservoirs and other hydraulic infrastructure within their basin area, with the development of both surface and groundwater



resources with emphasis on the provision of bulk water for irrigation and drinking purposes in their basin area, and also with the development of a comprehensive water resources master plan (FMWR 2003).

Enacted in 1993, the Water Resources Decree no. 101 establishes that water is owned by the nation, managed and controlled by the Federal Government through the Federal Ministry of Water Resources. The Rural Water Supply and Sanitation Policy of 2000 focuses on issues relating to rural water supply and sanitation and devolves more responsibilities to the rural communities with objectives of assisting all rural communities to obtain water supply facilities and ensuring that assistance is directed to communities that are prepared to maintain their facilities; increasing the capacity of local, state and federal governments to assist communities to obtain basic water supply facilities that the communities themselves can maintain with private sector support; increasing the capacity of the private sector at the state and local level to construct high quality hand-dug wells, boreholes and latrines and to repair water supply equipment; and

supplementing the National Primary Healthcare Programme by promoting better health practices, focusing on clean water, good hygiene, diarrhoea control and proper excreta disposal.

While the National Water Supply and Sanitation Policy (NWSSP) of 2000 focuses on provisions relating to providing potable water and adequate sanitation to all Nigerians in an affordable and sustainable manner through participatory investment by the three tiers of government, i.e. federal, state and local governments, the private sector and the beneficiaries, the essential elements of the NWSSP 2000 include the following (FMWR 2000):

- Increase service coverage for water supply sanitation nationwide to meet the level of socio-economic demand of the nation in the sector;
- Ensure good water quality standards are maintained by water supply undertakings;
- Ensure affordability of water supply and sanitation services for the citizens;
- Guarantee affordable access for the poor to basic human need level of water supply and sanitation services;
- Enhance national capacity in the operation and management of water supply and sanitation undertaking;
- Privatize water supply and wastewater services (where feasible) with adequate protection for the poor;
- Monitor the performance of the sector for sound policy adjustment and development;

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- Legislation, regulations and standards for water supply and sanitation; and
- Reform the water and sanitation sector to attain and maintain internationally acceptable standards.

The National Water Policy (NWP) 2004 recognizes the need to balance water uses, water allocation and water protection carefully through a regulatory system of river basin-based management and a participatory approach. This represents a radical shift in the way that the water sector will be managed in Nigeria, rejecting the top down approach and looking to implement, for the first time, an integrated, demand driven approach and effective management of the resource. As the NWP recognises, there has been no water resource management in Nigeria to this point, only a top down, supply driven, development of water resources. This has led to investments which have not been effectively utilised, representing a major wastage of government funding which continues until today.

Nevertheless, the National Water Policy sees water as an economic good. This is because water is supplied at a cost, and the service may not be sustained if the real cost of supplying it is not recovered. However, this notion should be handled with care in a country like Nigeria where access to improve drinking water and access to

- Providing for existing customary uses of water;
- Promoting the efficient, sustainable and beneficial use of water in the public interest;
- Facilitating social development, poverty reduction, improved public health and economic development;
- Providing for growing demand for water use, promoting conservation of use and recognizing the economic value of water;
- Reducing and preventing pollution and degradation of water resources;
- Managing floods and droughts;
- Encouraging appropriate private sector involvement in the delivery of water services;
- Promoting dams safety; and
- Meeting international obligations.

It is observed that the National Water and Sanitation Policy defined water as an economic good and this led to classification of the commodity under economic services at the federal level. This is not so in the States and the Local Governments where water resources and sanitation are classified as social commodities. This discrepancy can constrain private investment and the zeal behind the provision of water resources.

The National Council on Water Resources facilitates the provision of guidance to the government on any water-related legislation, national water resources policy and strategy and issues of coordination in the water sector. Therefore, early passage of the

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Water Bill will do more good to the issue of water supply and clear some outstanding confusion and contradiction.

The National Water Supply and Sanitation Programme proposes a strategy for the water supply and sanitation in urban areas, small towns, rural areas and water resources management and sanitation. For the urban and rural areas, the federal and state governments have agreed to cooperate in financing capital investment.

Sanitation Policy 2004

The mortality rate due to poor sanitation in Nigeria is alarming approximately 5-20%, resulting from diseases such as diarrhoea, cholera, typhoid, para-typhoid, guinea worm, etc (Nigeria sanitation Policy 2004). In Nigeria, sanitation does not have a clear institutional "home". It is shared amongst a number of ministries at central level and is the responsibility of a number of different authorities at the state or local level. It is usually shared between health, water resources and environment. As a result, sanitation programmes are generally weak and ill-conceived. Although sanitation probably needs to be addressed from a multi-sectoral approach, assigning a "lead" agency would provide a focus and some institutional accountability for the function.

The current National Environmental Sanitation Policy (NESP) was developed by the Federal



and Luiz, 2003) just as accessing the actual level and allocation of public expenditure is the key to understanding any government's true expenditure priorities and coherence with the government's policy objectives (Nicholas & Xiaoyan 1997; 3). This is a strong weapon by which any country's fiscal policy can impact on the conditions of its citizenry. Through public expenditure a subsidy is being provided for a particular expenditure which households would otherwise have made. This now increases the tendency of diverting the income set aside for that expenditure for other expenditure or rather is saved. Government expenditure then is a means of income redistribution among the citizenry in an economy.

National Water Resources Act 2007

The Draft National Water Resources Act (2007) is aimed at providing equitable, beneficial, efficient and sustainable use and management of Nigeria's surface and groundwater resources; establishing a new institutional framework for the nation's

water resources, defining functions and powers of the institutions; licensing water use, regulating construction and safety of dams, monitoring compliance and providing dispute resolution procedures; and providing for the repeal or amendment of certain laws and other matters incidental

to it. The Act in Part 1, sub-sections 2 and 3 categorically presents cases for the public trusteeship of water and entitlement to use of water respectively. It further asserts that all surface and ground water wherever it occurs is a common resource to all people, and that there shall be no private ownership of water but the public maintains the right to use water in accordance with the provisions of the Act.

The purpose of the Act is to ensure that Nigeria's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account the following factors:

- Meeting the basic human needs of present and future generations;
- Promoting equitable and affordable access to water;
- Adopting natural river basin and aquifer boundaries as the basic units for management of surface and groundwater resources respectively;
- Protecting the water environment for sustainability of the resource and protection of aquatic ecosystems, and recognizing the polluter pays principle;

adequate sanitation facilities are still on a very low threshold. Therefore there is need for proper distinction of water usage (domestic, industrial, commercial, etc) to avoid inflicting injuries on the populace who are already spending a lot to get other basic and social amenities. Though there seem to be conflicting arguments on whether water should be treated as an economic commodity or not, at the 2005 world water summit, the working definition still remains thus:

“Water should be treated as a social and cultural good, and not primarily as an economic good” [and] “the right to water clearly falls within the category of guarantees essential for securing an adequate standard of living, particularly since it is one of the most fundamental conditions for survival.”

If the main driving force behind water and sanitation policies in Nigeria is poverty eradication as claimed by the policy documents, regarding water as an economic good should be carefully explained to avoid the profit motive becoming the main driving force. Regarding water as an economic good without adequate explanation might make the profit motive paramount

which could affect both the affordability and the accessibility of the commodity. The final burden will be borne by people in the lowest income quintiles which unfortunately contain more than 50 percent of the Nigerian population. The poverty profile in Nigeria reveals that more than 70 percent of the population live below the poverty line of US\$1 per day.

The poor situation with respect to water and sanitation in Nigeria is a contributory factor to high morbidity and mortality rates among children. The lack of adequate water and sanitation in schools discourages enrolment; pupils often have to make do with poor facilities. In the average primary school, there is only one toilet for every 600 pupils. Teacher training and hygiene education activities in primary schools and communities help promote safe health habits. The impact of the recent development programmes has improved pupil/teacher ratio in primary education to 36.4, percentage of trained teachers in primary education to 50.7, percentage of female teachers in primary education to 50.5 and primary gross enrolment rate to 99.2 in 2004 from 39.2, 43.7, 40.1 and 87% for pupil/teacher ratio, percentage of trained teachers in primary education, percentage of female teachers in primary education and primary gross enrolment rate respectively in 2002 (UNICEF 2006).

Improvements in net primary

school enrolment, retention and educational attainment, as well as improvements in nutritional status were achieved by establishing more 'girl-friendly', 'child-friendly' schools, promoting quality teaching and learning practices, caring for children in need of special protection, improving access to safe water and sanitation, and enlisting the participation of community and neighborhood groups. Other activities include promoting best nutrition and care practices including de-worming. Safer water sources through the project reduced the under 5 mortality rate from 230 in 1990 to 194 in 2005 as well as infant mortality from 120 in 1990 to 100 in 2005 (<http://www.unicef.org/infobycountry/nigeria.html>). Yet, these pilot projects have not been replicated by government. As a result, the majority of school-age children do not have access to these essential services and there is therefore a need for a significant increase in investments in water resources development especially at the local level.

According to the 1999 Constitution the Local Governments (LGAs) in Nigeria are responsible for the establishment, operation and maintenance of rural water supply schemes in conjunction with the benefiting communities. They also have the responsibility of establishing, equipping and funding the Water and Environmental Sanitation Departments.

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Where the information is available on LGA financing of water and sanitation services from our pilot study in Enugu state, the general trend shows that actual mobilisation and utilisation in Local Governments were either lower than the anticipated or equal to the anticipated revenue. This implies that there is very low capacity in the Local Government Areas to mobilise and utilise resources.

The estimate of capital investment required to achieve the rural target of 66% safe water supply coverage developed by the former Ministry of Water Resources (FMWR) and WaterAid is N50.8 billion or US\$0.4 billion. The cost-sharing formula in the National Water & Sanitation Policy (2000) requires federal, state and local government to contribute 50%, 25% and 20% respectively which implies that the federal, state and local governments are expected to contribute N25.4 billion, N12.7 billion and N10.16 billion annually to be able to meet with the target.

Further analysis from the Enugu pilot study revealed that average capital allocation to water supply for the three Local Governments were N6.6 and N7.5 million in 2004 and 2005 respectively. This implies that if all the 774 Local Governments in Nigeria were to follow the same trend, their total expenditure on water supply in 2005 would have been N5.8 billion or US\$45

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million all other things being equal. This is roughly half of the budget required to meet the national target. Similarly for average sanitation budget allocation from the three Local Governments was N450,000 and N600,000 for 2004 and 2005 respectively hence if this is used as a benchmark for other Local Governments, their total expenditure on sanitation would have been N464 million or US\$3.6 million in 2005. Judging from what is expected, Local Governments should spend up to N10.16 billion to be able to meet with the rural target of 66%. However, if all the Local Governments follow the same trend with the three LGAs included in the Enugu study, instead of spending N10.16 billion they would have spent just N5.8bn which falls short of the expected amount by N4.4 billion. It may therefore be concluded that the attainment of national and MDG targets will require a significant increase in sector investment by local government.

Further insight was carried out using the per capita water expenditure for the three Local Governments studied. This further inquiry revealed that per capita water capital expenditure in 2005 increased to N100, N79 and N91 from N92, N45, and N79 in 2004 for Udenu, Igbo-Etiti and Nkanu East Local Governments respectively. Though there was an increment from 2004 to 2005, the total per capita water expenditure was still too low to achieve



the target of 20 litres per person per day. The average price of N15 for every 20 litres in the state was recorded by BECANS (2007). If this rate is anything to go by, it implies that per capita expenditure should be at least N5,490.00 (US\$43) for the Local Government to meet with 100 percent access to water supply and sanitation facilities by 2015 which will amount to approximately N67million, N94million and N80million for Udenu, Igbo-Etiti and Nkanu East LGs annually respectively (or \$531,746, \$714,282 and \$634,920 for Udenu, Igbo-Etiti and Nkanu East LGs annually respectively).

The above per capita expenditure on water by the Local Governments in Enugu puts the State at risk of not meeting the MDG of water if the trend persists. Issues relating to education, water and health care, are generally considered as the main redistributive or antipoverty policy instrument in developing countries (Bourguignon