

WATER, SANITATION, ENVIRONMENT and DEVELOPMENT

Improving water supply through privatization



Professor S Mustafa

Abstract

In most developing countries, Government policies on water supply, if any, fail to take cognisance of the role of Private Water Vendors (PWVs). Often, political or social considerations constrain most public water corporations from charging appropriate water rates that will enable them to recover even operating costs. Thus, despite huge government investments over the years in the water sector, Public Water Corporations in Nigeria due mainly to low water tariffs that they charge, experience difficulty in maintaining and operating their systems. This situation has resulted in continued deterioration of treatment plants and distribution networks, leading to inadequate and poor service as enough funds could not be generated to replace broken down parts or expand existing systems. The current world wide economic recession has caused most developing countries particularly to experience, in differing degrees, deteriorating per capita income growth, stagnating if not declining government revenues and serious balance of payments and debt servicing difficulties. These have led to drastic cut backs in investments and slow down in on-going projects. To deal with the problems of broken down plants and expansion of existing services, both Federal and State Governments in Nigeria resorted to external loans to finance water projects.

Water tariff is too low in all State Water Agencies (SWAs) in Nigeria when compared with the high production costs of water. Water rate in metered residential areas has been found to vary widely from one state to another. It is as low as N0.44/m³ in Borno and Yobe States, slightly up to N2.6/m³ in Kwara State, averaging N1.35/m³ for the whole country. In the case of unmetered residential areas, the charge varies appreciably from N2.00/month in Edo State to N152.4/month in Anambra and Enugu States, averaging N32.5/month for the whole country. The production cost of water on the other hand is estimated at N20.00/m³.

In a recent study conducted by the author, private water vendors operating in towns and cities in the northern part of the country were found to charge an average of N45/m³, more than 33 times the tariff charged by SWAs for metered residential areas.

The paper examines the poor state of water supply in most towns and cities in Nigeria which can be traced to inadequate funding resulting from inability of SWAs to charge higher tariffs to maintain their services. Private water vendors who on the other hand are not licensed but free

to fix their rates, make profits and expand their services to all towns and cities in the country. Other than the exorbitant rates charged by Private Water Vendors (PWVs), and that they sometimes obtain their supplies from unhygienic sources, nevertheless, their services go a long way towards supplementing government effort.

If the services rendered by the water vendors can be taken into consideration, there will be greater participation by the private sector in water resources development including their eventual involvement in the manufacturing of water equipment, plants and chemicals.

Introduction

Nigeria is blessed with abundant water resources. With an areal coverage of 924,000 square kilometers has a population by 1992 census of 88 million, which is about 1/5 (one fifth) of Africa's total population. An estimate of the available surface water resources of the country is put at 259 billion cubic metres, thus giving an average yield of about 283 litres/m². The underground water potential on the other hand is estimated at 87 billion cubic meters.

The country has varied climatic features as it extends over the tropical rain forest to as far north as the semi-arid zones. Despite abundance in water supplies, there is often uncertainty in the rainfall distribution pattern both in time and spatially. For example, the average annual rainfall amount varies from 3,000 mm/year in the southern part of the country to about 500 mm/year in the extreme north. The annual amount varies widely from year to year, especially in the north and can be by as much as 100% from wet to drought year.

The Federal Government of Nigeria in an effort to improve the living standard and economic well being of the population has over the years embarked on many water projects aimed at self sufficiency in food production. The projects involve the creation of large capital outlay. Within a span of ten years, over 100 billion cubic metres of water had been brought under storage. Indeed, during the 1992 - 1993 period, water resources development has received more prominence than before, recording increase in budgetary allocation from 1.3% in 1992 to 3.2% in 1993 of the total capital expenditure. On the whole, the amount allocated to the agricultural sector, including water resources and rural development during the 1993 - 1995 Rolling Plan period add up to 14% of the total budgetary allocation.

History of water supply in Nigeria

The history of water supply in Nigeria at an organized level dates back to the colonial era when numerous water schemes were established to provide water to Government Reserve Areas (GRAs). The schemes were constructed and operated by Public Works Departments through levies or use of community labour force.

The system continued to independence whereupon, Water Supply Divisions were created to take over all aspects of water supply activities in general. The creation of states in the country in the early seventies, saw the emergence of State Water Agencies charged purely with the responsibility of providing water to both urban and semi-urban centres. In few cases however, the supplies were extended to rural areas as well. The SWAs are now in existence in all the 30 states of the Federation and in the Federal Capital Territory (FCT), Abuja, named either State Water Board or Public Utilities Board. In the latter case, water services are usually combined with electricity supply and road network developments in rural areas. These Agencies as created within the States are funded and controlled by their respective Governments through appropriate enabling edicts and acts.

At the state level, SWAs are generally charged with the responsibility for the development and supply of potable water to the inhabitants of the state. In general, they partake in the provision, operation and maintenance of urban and semi-urban water supplies. Current position shows that about 80% of urban and semi-urban population are served from groundwater, the remaining 20% from surface water. It is expected however, that the position would reverse in future due to excessive withdrawal from ground water sources and, more population would be served from surface water sources. Other governmental agencies, like Local Government Departments, Directorate of Food Roads and Rural Infrastructure (DFRRI) and Agricultural Development Programmes (ADPs) also engage in water supply just as many non-governmental agencies like UNICEF, CUSO and WHO. There are also direct foreign government assisted programmes such as EEC, USAID, JICA, Chinese assistance, etc that engage mostly in borehole drilling and construction of hand-dug wells, particularly in areas to supplement water supply efforts.

Besides these bodies, there are private water vendors engaged in the development and supply of water to areas not accessible or connected to public supplies. The well established private vendors derive their sources from boreholes which they develop and supply water through tanker trucks and charge fees as they deem fit. The medium to small scale water vendors fetch water from stream sources or public standpipes, depending on the availability of supplies and their resources.

Problems of state water agencies

The State Water Agencies face quite a number of problems, mostly financial due to their total dependence on state subventions for both capital and revenue expenditures. This in turn subjects them to government regulations and often undue interventions in the day to day running of their organisations. A clear manifestation of this is that most SWAs are saddled with more office and administrative staff leaving the scientific service units under-staffed. Also political/social considerations are often brought to undermine their efficient performance and indeed, revenue generation.

Another problem recently identified³ was, the high cost of water projects generally, resulting from the use of inappropriate design parameters. Prominent among these are, high per capital design allowances, use of large percentage of services through private house connections and, adoption of long-range planning horizons. These result in the over design of projects with excessive capacity and high capital costs, thus, leading to under-utilized investment and inflated operating costs. For example, the cost per capita for high level of service (90% house connections and 10% serviced by standposts). The present day overall development cost per capita, even assuming low level of service is estimated at N1,100.00 which given the prevailing worldwide economic hardships facing a developing country like Nigeria, is quite high. Identified also, is the poor financial performance of the SWAs. The low tariff they charge, is attributable to political considerations which inhibit the collection of even the little revenue due. It is worth noting that, in most of these agencies even if all possible revenues were collected, the cost recovery at prevailing tariffs would constitute only a small fraction of recurrent expenditures.

Role of private water vendors

Services provided by Private Vendors in developing countries are rarely appreciated. The low level of service provided by public water corporations, coupled with their inability to reach the remote parts of the cities, all tend to result in the inevitable involvement of PWVs in the development and distribution of water. The low tariff chargeable by the SWAs no doubt constitute a constraint to higher performance. For example, whereas, the present cost of producing one cubic metre of potable water, requiring pumping and chemical treatment is estimated to average N20.00, water charge for metered residential areas is as low as N0.44/m³ in Borno and Yobe States, N2.64/m³ in Kwara State, averaging N1.35/m³ for the whole country⁴. For un-metered residential areas, water tariff rate is as low as N2/month in Edo State, reaching maximum of N153.4/month in Anambra and Enugu States, averaging N32.5/month for the whole country.

Private Water Vendors on the other hand, charge an average of N10.00/drum (220 litres) equivalent to N40/m³. Alternatively, 16 litres tin which is popular with most

residents is sold at N1.00, or N62.00/m³. Water tanker trucks of 10,000 litres capacity sell between N300.00 and N400.00.

Private tankers usually source their supply from public utilities and are charged only N30.00/truck load for which the owners resell at ten times this cost. Assured steady profits generated by Private Water Vendors is the reason why they are expanding their services in cities and towns and getting organized.

In a detailed study (Whittington et al, 1983), of the role of water vendors in the supply of water to Onitsha town, in Anambra State, it was established that the vast majority of the residents obtain their water from well-organised water vending system, created and operated by the private sector. In this study, it was found that the Public Utilities supplied the residents only one third of their water needs while the remaining two thirds were supplied by water vendors. The revenue derived by the latter was also 24 times that by the former in the dry seasons.

The inevitable involvement of PWVs in the development and supply of water to cities and towns in Nigeria is quite evident; the choice for the government is to recognize the services rendered by them and legislate their existence. For proper accounting and better performance SWAs could also be given the power to regulate the activities of PWVs in order to protect the public from drinking polluted water as the latter would be made to conform to stated water standards, before they are licensed to operate.

Privatizing the SWAs would therefore be the only proper action that the government must take now, to arrest the eventual complete breakdown of the system in the near future.

Conclusion

Water resources development and supply in developing countries, particularly Africa, have been the exclusive preserve of government, through its agencies. With improved living standards and rapid population growth over the years both per capita and aggregate demand for water increased substantially, much beyond the capability of the agencies to sustain. These coupled with the global economic hardships, the existing systems, could not be properly maintained or expanded, thus, the situation led to the gradual deterioration of the facilities and hence, poor or inadequate services.

In Nigeria, the low level of service of State Water Agencies saw the emergence of Private Water Vendors, operating in varying degrees in cities and towns. They develop and sell water to public, charging fees as they deem fit and prosper, thus expanding their scope of services and getting more organized. The SWAs on the other hand due mainly to government policy as constrained by political and social considerations, for example, charge only 2% of the cost of producing one cubic metre of water. The low tariff

chargeable by the SWAs is the main factor for their low performance. The government should licence Private Water Vendors and consider privatizing the SWAs as the only viable option towards promoting sustained water supply, now and in the future.

References

1. 1993 Budget Statement and the Rolling Plan, 1993 - 1995 Press Briefing by the Secretary of Finance, Mr Olashore O, 29th January, 1993, Abuja, Nigeria.
2. Dale Whittington, Donald T Lauria and Xinmin Mu: Paying for Urban Services - A study of water vending and willingness to pay for water in Onitsha, Nigeria. The World Bank, Infrastructure and Urban Development Department Report. INU 40, March, 1993.
3. Federal Republic of Nigeria Water Supply and Sanitation Sector Memorandum, World Bank Report No. 4696 UNI, October, 1984.
4. Report on findings and recommendations on billing and collection system of State Water Agencies submitted by Snc-Lavalin Int. Inc. to Federal Ministry of Agriculture, Water Resources and Rural Development in Nigeria, December, 1992.
5. Nationwide Water Supply and Sanitation Rehabilitation Study: Financial Report submitted by Diyan Consultants in association with Binnie and Partners Consulting Engineers to Federal Ministry of Agriculture, Water Resources and Rural Development, Nigeria, 1988.