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policy and planning for water supply in nigeria

the example of oyo north division

INTRODUCTION

The provision of water in sufficient quantity and adequate quality is a prerequisite for the healthy living of a people. Yet, in Nigeria as in other developing countries of the world, the existing situation is that of non-availability of water in many areas and inadequacy where pipe-borne water is provided. The problem of non-availability is partly due to climatic conditions especially in the drier regions of the country; but what seems to be more a significant reason is the inability to tap the existing resources. The problem of inadequacy, on the other hand, can be attributed to an inefficient distribution system and lack of population forecasts to match the demand for water with its supply.

Although scarcity of water is a national problem, there are obvious differences in the magnitudes of the problem as among the different geographical and administrative regions of the country on the one hand, and between the rural and urban areas on the other. The large centres are provided with pipe-borne water although average per capita consumption is grossly low. The rural dwellers, however, are perpetually short of good supply of water.

Oyo North Division of the newly created Oyo State is one of the least developed areas in the state using all readily available criteria(1). The supply of water as well as other infrastructural facilities in the division is far from being adequate. Attention is therefore focused on this division which typifies many such areas in the country.

OYO NORTH DIVISION

The division is one of the twelve administrative divisions of the Oyo state. It covers an extensive area of the north-western part of the state and consists of three district council areas: Shaki District Council, Okeho/Iganna District Council and Irepo District Council.

Physically the division is made up of an undulating landscape studded with inselbergs. It is drained by the rivers Offiki and Oyan and their numerous tiny tributaries. Rainfall is just moderate ranging between 1150 mm and 1350 mm (45-53 inches) per annum. The vegetation is mainly savanna with the exception of patches of forest along the main streams(2).

The division's population rose from 129 955 in 1952 to 412 491 in 1963. There are six towns with populations of 20 000 and above: Shaki, Igboho, Kishi, Okeho, Ilero and Igbetti. The six towns by Nigerian definition constitute the urban centres of the area. Table 1 shows the rate of growth of the towns between the 1952 and 1963 population censuses(3,4)

Table 1: The growth of towns in Oyo North Division: 1952 - 1963

Town	Census population 1952	Census population 1963	Growth % per annum
Shaki	22 983	76 290	11.5
Igboho	8476	46 776	16.8
Kishi	7827	42 374	16.6
Okeho	15 807	34 316	7.3
Ilero	11 168	28 911	9.0
Igbetti	10 955	25 238	7.9

The high rate of urbanization observable in the centres is reminiscent of the situation in the country as a whole. This is mainly due to the ever-increasing drift of people from the rural areas to the large centres.

Problems of Water Supply

The only settlement in the division being served by pipe-borne water is Shaki, the divisional headquarters. The town accounts for about 13% of the division's population. The proposal to provide Shaki with potable water was made in the early sixties. An Israeli firm was employed to undertake preliminary studies to ascertain the suitability of the River Fofo for pipe-borne water and then to design the system. The actual construction was done by a government contractor.

The Shaki Water Scheme was completed in 1967 at a capital cost of 1.50 million naira. Provision was made for the 76 290 people of the town according to the 1963 population census. The average daily supply was only 946 m^3 (208 000 gallons) or 12.4 l/person (2.7 gal/person). Public water taps were installed in open spaces throughout the town. In some cases, a single tap was to serve a whole neighbourhood while very few houses had private taps. The supply of water has had to be rationed by closing the taps for about 14 hours in the day or for even longer periods in the dry season. A special arrangement was made, however, whereby a water tanker was used to serve health and educational institutions.

Inadequate as the water supply in Shaki was, a number of developments increased the subsequent demand for water even higher. Shaki was made a divisional headquarters in the same year that the water project was completed pulling more government workers into the town. Secondly, the town had a rather large share of the Nigerian traders repatriated from Ghana in 1969 which helped to increase the population considerably. Also, the number of secondary schools in the town increased from one in 1967 to three in 1975. Then over a thousand soldiers were moved into and settled at Shaki in March 1974. And to all this may be added the high annual natural increase of 2.7% in population which is of course noticeable all over the country.

In view of the rapid expansion of the town, attempts have been made since 1973 to increase the supply of water. By 1975 the supply had doubled from the 1967 level, as can be seen in Table 2.

Table 2: Water supply in Shaki: 1967 - 1975

Year	Average daily supply	
	m^3	000 gal
1967	946	208
1968	946	208
1969	946	208
1970	946	208
1971	946	208
1972	946	208
1973	1064	234
1974	1418	312
1975	1896	417

Source: Shaki Waterworks

This increase, though, was just sufficient to maintain the initial low level of consumption. In order to be able to meet the minimum consumption level considered appropriate for an urban dweller at Nigeria's state of development (i.e. 114 l/d or 25 gal/d per person)(5), the present level of supply has to be increased many times. This will necessitate the extension of the impounding reservoir, the replacement of the pumping engines with bigger ones and the training of more personnel.

Although the government of Oyo state has voted money for the improvement and extension of some waterworks which would include Shaki, there is no likelihood that the envisaged minimum level of consumption in the town will be met in the near future.

As mentioned earlier on, Shaki is the only town which is supplied with potable water in the division - albeit inadequate. Other towns and villages rely solely on brooks, ponds, streams and shallow wells. These are often unreliable and unhygienic sources of water supply which give rise to the incidence of diseases. The incidence of water-borne diseases in Oyo North Division is evidenced in a survey recently conducted by the author in 21 dispensaries of the division. The dispensary assistants were asked what they, according to their observation, thought to be the most common disease in their areas. Table 3 is a summary of their responses.

Table 3: Common diseases in Oyo North Division

Disease	Number of dispensaries	Percentage
Malaria	7	33.3
Guinea-worm	2	9.5
Measles	2	9.5
Dysentery	4	19.1
Diarrhoea	5	23.8
Cough	1	4.8
	21	100.0

Source: Fieldwork, March - June, 1976

Of the six diseases mentioned, three - guinea-worm, dysentery and diarrhoea - are directly water-related. After malaria which ranks highest in the list, the three diseases follow in succession and account for 51.9% of the observed common diseases in the division.

Apart from the incidence of diseases, there is also the problem of accessibility to the water sources. In the dry season, some of the sources around homes get dried up and distances up to 8 km (5 miles) are covered to reach the nearest one. A lot of valuable time and energy is thus wasted walking the long distances carrying water in pitchers and pails.

Factors responsible for non-availability and inadequacy of water supply

The problems analysed above cannot be tackled effectively without a thorough understanding of the factors that are directly and indirectly responsible. The following are considered to be some of the factors:

1. Governments' water supply policy: The Federal and State governments of Nigeria do not appear to give the necessary priority to water supply. It had been observed that the governments spend more money annually on road developments, telecommunication services and power supply than on water supply schemes. In the third national development plan, the Federal government and all the state governments allocated 2.8% of the total capital expenditure to water supply. This compares very unfavourably with 22.2% and 10.1% allocated to transport and defence respectively(5). Furthermore, the development plans reveal that attention is paid much more to urban than rural water supply. For example, the first national plan allocated 12 500 000 naira to urban water projects while only 6 206 000 naira(7) was allocated to rural areas where the majority of Nigerians live.

2. Politics: The supply of pipe-borne water and other facilities before the military era was essentially a political decision. Rather than giving consideration to the needs of an area, the determining factor was whether a community supported or opposed the government of the day. The electorate also saw the provision of services as reward for political party support. Thus those who enjoy pipe-borne water deliberately default payment of water rates. In 1972 for instance, the then Western Nigeria Water Corporation estimated a revenue of 40 000 naira from water rates in Shaki, but only 3252 naira or 8% of the estimated revenue was actually collected(8). The same situation was reported in other towns which enjoy pipe-borne water. The corporation was therefore left with very limited financial resources for the operation and maintenance of the water schemes.

3. Lack of data: The primary data required for planning water projects are lacking throughout the country. Planners have to contend with the scanty hydrological and meteorological information gathered from local people. They also have to rely on figures obtained from a population census conducted many years past.

4. Misdirected self-help efforts: A lot of self-help projects have sprung up during the past decade. This is encouraged by the government through subsidies and provision of technical assistance(9). However, general observation confirms that preference is given by communities to such projects as town halls, tarred roads and secondary schools. Projects which have direct effect on their health are rarely undertaken.

5. Organizational problems: The State Water Corporation is a quasi-government institution charged with the responsibility of supervising and maintaining all the water schemes in the state. It is also responsible for planning, designing and constructing new water schemes. These responsibilities appear far too much for a single organization especially in a country where there is shortage of experienced management and technical personnel.

Policy and planning guidelines

In view of the above considerations, the following guidelines are suggested to improve on the quantity and quality of water supply in the rural and urban areas of the country.

1. It is imperative that priority attention is given to water supply in the development plans. The relative importance of the different sectors of the economy should be weighted and allocation of funds made accordingly. For example, the relative importance of providing for water vis-a-vis a multi-million naira governor's lodge should be obvious. The application of cost benefit analysis could be very helpful in this regard.

2. Planning of water schemes should be based not only on the present size of population but also on a projected size. This will prevent a situation in which some water projects are extended more than twice within a decade(10).

3. There is a need to conduct regional studies which can be useful in recognising the potentials and needs of different geographical or administrative regions. Such studies should be made by teams of people drawn from different disciplines such as engineering, hydrology, landscape survey, town/country planning, sociology, geology, economics, geography etc.

4. As there is a dire shortage of qualified personnel generally in the country, the training of people in the fields listed above should be one of the priority areas in the country's manpower planning programmes.

5. The state water corporations need to be relieved of some of their responsibilities to make them more efficient. While the corporations look after the efficient operation of the already established water schemes, separate bodies could be set up to be responsible for investigating, planning, designing and constructing new schemes. In addition, there is need for district or area water boards which will be responsible to the state water corporation. This will encourage the active participation of local populace in the day-to-day running of the water schemes.

6. The government should modify its policy of aiding self-help projects. More aid in the form of money and technical advice should be given to projects which have direct bearing on the people's health and welfare.

7. Water projects should be based on intermediate technology. One of the reasons why the governments of Nigeria shy away from water schemes is the wrong notion that water schemes necessarily have to be large dams. As nearly 80% of the people still live in the rural areas(11), more emphasis should be placed on constructing small dams to serve isolated communities and groups of communities.

CONCLUSION

The scarcity of domestic water supply has assumed a wide dimension in many parts of Nigeria. Although the large administrative and commercial centres of the country are provided with pipe-borne water, the quantity available for consumption is far below the minimum requirement. The rural dwellers, however, still depend on local sources of water supply which are unreliable, unhygienic and often not easily accessible.

It is therefore incumbent on the Federal and State governments to accord water supply in both urban and rural areas a high priority. The policy objective should be to provide clean water in adequate quantities to all communities. Allocation of financial resources and training of personnel should accordingly be geared towards achieving this objective.

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