



## WATER, SANITATION, ENVIRONMENT and DEVELOPMENT

### Peculiarities of Otulu water supply



Chimezie P Osuocha

#### Introduction

This paper is more of a case study focusing on a community confronted with peculiar problems hampering its efforts to provide potable water to its populace particularly the less fortunate. One such problem is that water supply in this community is being treated purely as an individual affair rather than a communal responsibility. Although the community is adequately motivated and has been generating funds internally to execute some projects, all their recent investments are in favour of non water related projects like electricity, Church building, market etc. This type of attitude towards communal water supply could have been influenced also by an old feeling that water supply to the citizenry is the responsibility of the government.

Otulu the village in question is one of the 35 villages that constitute Alhiazu Mbaise Local Government Area (LGA) of Imo state in the eastern part of Nigeria within the rain forest zone. It is a big village situated south east of the LGA and occupying an area of about 9 square kilometers (sq.km). It has a population exceeding 15,000 with about 50% of this permanently resident within the village, and a literacy level exceeding 70%. It is an upland village situated about 34 kms on the Owerri - Umuahia route and about 7kms away from the nearest stream or river. As a result of this, water supply has been one of its major problems. Many years back, up to the early 1960s, the community's main source of water supply was some communal ponds. This caused guinea worm problems and consequently forced many people to trek the 7kms to fetch the stream water. Realising the benefits of clean water and the difficulties in trekking the long distances to fetch stream water, individuals with houses roofed with galvanised roofing sheets began to develop rainwater harvesting systems. This system commonly known as Tank among the villagers was encouraged by the amount of rainfall within the forest zone which occurs between March - October each year and ranges between 1000mm - 2500mm per annum. The tank incidentally became popular among the village rich and in spite of its benefits has presented some problems against communally developed water supply systems.

#### Existing water supply situation in the community

In the past up to the early 1960s the community depended on pond water particularly during the 4 to 6 months (October to February) of dry season. This resulted in water

borne diseases such as diarrhoea, guinea worm etc and incidentally created the awareness in the 1960s for the need for potable water in the community. Faced with the problem of lack of an alternative the people of Otulu resorted to trekking the 7kms to the nearest stream in Omukwu in search of potable water. This source is a spring and as such is potable. However it is observed that each adult could only carry a maximum of about 40 litres while each child of about 10 years could carry about 5 litres on the head for such a distance.

Owing to this long distance to the stream, the several man-hours lost from farming and other difficulties encountered, the idea of rain water harvesting through roof catchment and large ground storage tanks was born. This system had been and is still on individual household basis except for one that is owned by an association in the community.

The storage tank is usually the most expensive component of the system and it is normally buried underground with a little part of it above the ground surface with an average capacity of about 100 cubic meters. It is usually lined on the four sides with either specially made block work or reinforced concrete. The bottom lining is either of mortar or reinforced concrete while the roof in the 1960s was in some cases galvanised sheets but these days it is solely made of reinforced concrete. The tank is normally provided with a small opening at the roof measuring about 45 square centimetres as an access for fetching the water. This opening is supposed to be covered with a small metal door. The sanitary condition of the water is ensured with the usage of one small bucket solely meant for fetching the water from the tank or installation of surface pumps which lifts the water to an overhead tank. The average cost of constructing one of this storage tanks was approximately N1000:00 in 1980; it rose to between N2,000 - N3,000:00 in 1985, but now it is about N30,000:00 - N40,000:00 in 1993 with reinforcement only on the roof. Other components of the Tank include the roof gutter around the roof and the pipe connection from the roof gutter to the storage tank.

Investigations have shown that 150 such systems exist in this community owned mainly by the village rich. Some of these are also for commercial purposes and it is estimated that water from this source is sold for N6.00 for 30 litres in 1993.

It is also known that water from the Tank is hardly sufficient for the village particularly during the peak of dry season and festive periods when the influx of people swells

the population. Some people have been noted to obtain their water supply from outside the community owing to insufficient supply and inability to pay the price of the Tank water. An attempt was made to supplement the supply through pipe extension from a borehole 5 kilometres in a neighbouring village but the programme was hampered by problems often associated with lack of supply owing to pump and/or power source failures and most probably, the nonchalant attitude of the Tank owners. The taps have reached the market square since 1987 but they are dry most part of the year and sometimes the whole year.

### Recent fund raising drives investments

Fund raising is not a recent phenomenon but has become more frequent owing to the need to provide all necessary facilities to enhance development of the communities. Available information revealed that this community has been contributing towards water supply since the late 50's and early 60's but their efforts to have communal water supply could not pay off. Like all its neighbouring communities battling to uplift their villages, Otulu has become more eager to acquire those facilities to enhance its development. However the burden is becoming heavier. All the money realised now could not achieve much because of soaring cost of items in Nigeria. As reflected on the Table in Annex I the Electricity and the Church building projects are the two focal projects in the community. Each of these projects has an organising committee responsible for the fund raising and executing the projects. Fund raising is organised either during the Easter, New Yam festival in August or the Christmas period when indigenes of the community resident in the urban areas are expected to return home. Each project has its own accounts at a designated bank and authorised signatories to operate the account. The committees are usually made up of both people resident permanently in the village (some of who are retired civil servants) and those resident in urban areas. Accounts are usually rendered to Otulu Development Union (ODU) regularly. If the current motivation is sustained the church building project may reach about 70% completion by the end of 1994 while the electricity project may provide power to the community latest by mid 1995.

Given in the table in Annex I are the funds raised since 1986 for the two projects.

### Problems hampering provision of adequate water supply to the community

#### Inadequate governmental intervention

Rural water supply in Nigeria which was hitherto neglected in the past is gradually being given some attention by the government. However, the problem of multiplicity of agencies involved in the sub-sector has not been ad-

equately streamlined. This problem in the past made it impossible to implement rural water supply programmes systematically, leading to total neglect of some communities. Otulu happened to be one of such villages that never received any government attention on water supply. Neither the Imo State Public Utility Board (which concentrated only on urban areas) nor the LGA empowered by the act establishing them had any programme for this village. The programmes of the Directorate of Food, Roads and Rural Infrastructure (DFRRI) which had a wider national spread could not even reach this community, neither could those of the International Agencies.

It is however expected that the recently developed National Rural Water supply and sanitation Sector Strategy and Action Plan would streamline the agencies and bring about more systematic implementation of rural water supply nationwide. One hopes therefore that Otulu would benefit in the near future.

#### Individualistic approach to water supply

As a result of the prevailing situation in this community, over time water supply became a personal affair and those who could afford the Tank decided to do it alone. The spread of this feeling suddenly multiplied the storage tanks into individual house-holds. This effort is good in itself because it provided potable water through self-help effort to many people within the community. However it created some problems on its trail since it is impossible for everybody within the community to afford to own the Tank and the supply from the available storages, even if it is all sold out would still be inadequate to meet the community's demand. There is no doubt therefore that the present investment focus has been influenced by nonchalant attitudes of Tank owners towards development of communal water supply system.

This becomes more obvious if we note that most of the owners of these Tanks are influential people who could through their contacts attract government project or by their abilities motivate the community towards developing communal water supply.

#### Burden of indulging in inter-community competition

Self-help effort is a common practice among communities east of the Niger. Like all human endeavours quiet competitions exist but this has led some communities to embark on prestigious projects even when they were not fully prepared. This type of problem helped to create the burden of carrying multiple projects at a time, to the detriment of such a basic project as water supply in Otulu community.

#### Suggested solution to the problem

The burden of executing projects by communal effort is becoming too taxing on the community. Any relief particu-

Annex I

YEAR	ELECTRICITY PROJECT		CHURCH BUILDING PROJECT		WATER SUPPLY PROJECT	
	AMOUNT ₦ REALISED	INVESTMENT	AMOUNT ₦ REALISED	INVESTMENT	AMOUNT ₦ REALISED	INVESTMENT
1986	86,000.00	Purchase Electric Poles	(cumulative from 1981) 50,000.00	Foundation	None	None
1987	-	-do-	20,000.00	-do-	-	-
1988	-	-	-	-	-	-
1989	75,000.00	Electric poles & Erection	-	-	-	-
1990	-	-	60,000.00	roofing	-	-
1991	72,000.00	Electric Poles & Erection	-	-	-	-
1992	221,000.00	Transformer	-	-	-	-
1993	-	-	164,000.00	Block works & Finishing.	-	-
Total:	554,860.00	-	294,000.00	-	-	-

Funds raised through launchings in Otula

larly from the government would be most welcomed and for any immediate solution to materialise, it means both the state government and good spirited agencies must endorse their financial support to the community to lessen its burden.

A re-orientation is needed to direct the attention of the community properly towards communal water supply. Since the machinery for implementation of any water supply scheme would not be difficult to establish, any programme of assistance could be started now. However any funding requirement may have to be sourced outside the community until they complete their two projects. To solve the water supply deficiency more permanently and to utilise the operation and maintenance capabilities of the community effectively a motorized borehole system is advocated since underlain aquifer is noted to be productive.

### Conclusion

It is obvious from the foregoing that the community is saddled with a lot of self-help responsibilities but they certainly need proper direction, encouragement and support. Further studies may be carried out to ascertain the life of the storage tanks and the possibility of using only the tank system with some modifications to provide water to this community. All the same their effort so far to provide potable water through this means deserves commendation.

### Notes

1980: \$1 is equiv. to N 0.6

1985: \$1 is equiv. to N 0.6

1993: (May) \$1 is equiv. to N 21.99