

An Assessment of the Strategies Adopted by Adamawa State Government towards Achieving Millennium Development Goals (MDGS) in Water Supply

Dr. Olusegun Adegoke Adewusi

Department of Economics
School of Management and Information Technology
Federal University of Technology
Yola, Nigeria

Abstract

The paper assesses the various strategies adopted by Adamawa state government in ameliorating conditions of water supply in the state with a view to achieving the Millennium Development Goals. The paper makes use of secondary data obtained from National Bureau of Statistics affiliated office in the federal government secretariat, Yola and the policy document of Adamawa State Rural Water Supply and Environmental Sanitation Agency Yola. The secondary data obtained from these sources are used in measuring two major indicators in water related areas in Adamawa state. The indicators are the percentage of households using surface water as a source of drinking and cooking and sources of water in Adamawa state. The author also understudies various strategies adopted by the Adamawa state government in its water sector. The data collected are used to measure the indicators before and after the application of the strategies, using the neighbouring states of Taraba, Gombe and Yobe as control. The comparison of the indicators between the periods before intervention and after the intervention reveals that the strategies adopted by Adamawa state government were effective. The full implementation of the strategies by Adamawa state government is recommended by the study.

Key words: Surface water, Access to water, Safe water, Sources of water, Sources of drinking and cooking, Rural water supply

1.0 Introduction

Water is the second most important need in human life. Despite this importance, however, about 70 percent of Adamawa state rural population does not have enough portable drinking water for both human and domestic consumption (National water and sanitation policy draft document, 2000). This is largely due to poor planning, inadequate funding, lack of government prioritization of the facility, haphazard implementation and lack of state policy for water supply and sanitation (Adamawa State Rural Water Supply and Environmental Sanitation Agency Policy Document, 2000).

Some of the bodies involved presently in the state for the provision of rural water supply include the following. Adamawa state Unicef assisted rural water supply and environmental sanitation agency, Upper Benue River Basin Development Authority (UBRBDA); local government areas, non-government organizations (NGOs) and individuals. Surprisingly, most of these bodies carry out their activities with little or no involvement of the benefiting communities. This is due mainly to poor coordination, lack of clear policy direction, lack of focus in terms of goals and objectives which resulted in the state's inability to achieve full coverage of the rural population with safe water (Adamawa State Rural Water Supply and Environmental Sanitation Agency Policy Document, 2000).

Should the situation of water be so critical in Adamawa State? The endowment of Adamawa state in terms of water resources does not suggest this. Like many other states of the federation, Adamawa state is endowed with abundant water resources both at the surface and underground. However, the distribution of this resource is not even both in time and space. Invariably, this abundant resource is not readily available to the people because it is not being properly harnessed and managed. Hence the water supply situation in the state is far from being satisfactory (Adebayo et al 2004).

In most of the Adamawa state rural communities, water supply is principally from boreholes and wells, supplemented with water obtained directly from rivers during the rainy season. However, not all the boreholes are functional. Apart from mechanical problems, the non-functionality of boreholes might be due to geological factor. Most parts of Adamawa state are underlain by basement complex rocks which are very unpredictable in terms of water yield. Similarly, the wells are shallow, seasonal and liable to contaminations (Adebayo et al, 2004).

The inadequacies outlined above towards the provision of portable water supply in Adamawa state call for a well articulated approach to water supply. Objectives of this study are summarized as follows: the study examines access to safe water in Adamawa state, using the percentage of households using surface water as a source of drinking and cooking and sources of water, as the main indicators. In addition, the study identifies the strategies adopted by the Adamawa state government to improve water supply in the state. The study also assesses the effectiveness or otherwise of the various strategies adopted by the Adamawa state government in the water sector.

The study is approached with the focus on the following questions.

- i. What percentage of households used surface water as a source of drinking and cooking in Adamawa state before the policy strategies were adopted in year 2000?
- ii. Which policy strategies were adopted by the Adamawa state government to improve water supply in the state?
- iii. How effective are the policy strategies adopted by the Adamawa state government in the water sector?

1.1 Conceptual Framework/Literature Review

This section defines the three concepts of the study. Access and safe water are defined as follows:

Access, according to the National Programme of Action, is availability of at least 30 litres of safe drinking water per person per day from a location within 500 metres of every household. On the other hand, safe water is water that is chemically acceptable (WHO standard) and pathogen free i.e water from protected sources including water piped into households, water from public taps, water from boreholes installed with hand-pump, water from protected dug wells and protected springs and rain water.

The two major indicators are defined as follows:

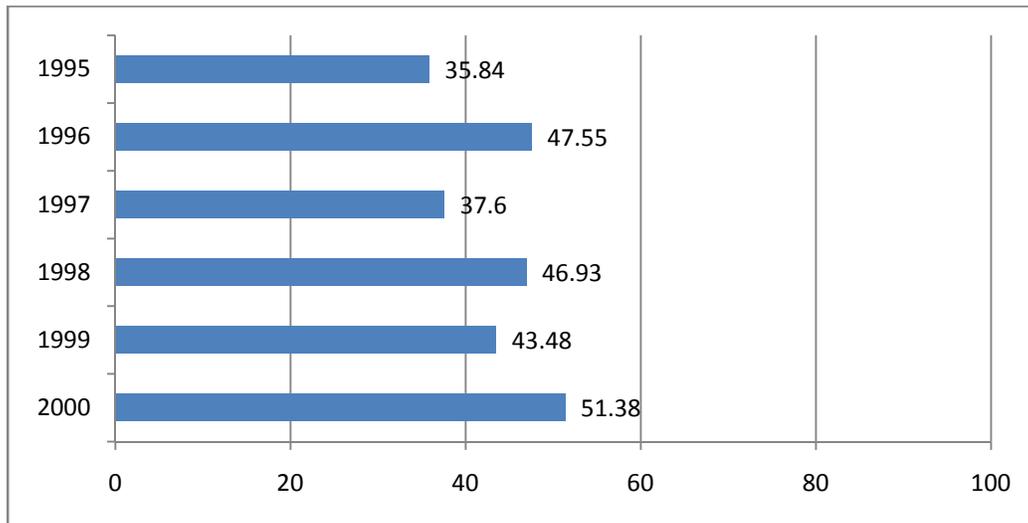
Sources of water: - This is defined as source including any of the following: surface water, well water and boreholes, public tap, HH piped water, tankers and vendors (National population commission, 2006).

Surface water: - This is defined as sources such as streams, rivers, lakes and ponds (National Population Commission, 2006).

1.1.1 Water Situation in Adamawa State in the Pre-Intervention Years (1995-2000)

The two indicators used to measure the progress of water supply in Adamawa state in this study are the percentage of the households using surface water as source of drinking and cooking and the sources of water in Adamawa state. As earlier defined in the introduction, we reiterate that surface water is a source such as streams, rivers, lakes and ponds (National population commission, 2006). It is also obvious that all the sources included in the surface water are not “safe water” because “safe water” is defined as water that is chemically acceptable (WHO standard) and pathogen free i.e water from protected sources including water piped into households, water from public taps, water from boreholes installed with hand-pumps water from protected dug wells and protected springs and rain. Going by this definition, it is clear from the revelation in figure 1 that large percentage of households in Adamawa state did not obtain water from sources declared as “safe” in the pre-intervention period (1995-2000).

Figure 1: Percentage of households using surface water as source of drinking and cooking in Adamawa state (1995-2000)



Source: NBS (General Household Survey Report, 1995-2000)

As can be seen from figure 1, percentage of households using surface water as sources of drinking and cooking in Adamawa state in the pre-intervention period (1995-2000) presents a galloping character. This percentage of households rose and fell within the period, rising from 35.84 percent (1995) to 47.55 percent (1996). It fell to 37.60 percent in 1997 but unfortunately it rose to 46.93 percent in 1998. This zig-zag movement continued till year 2000 by which year the percentage of households using surface water has risen to 51.38 percent. One glaring observation can be made from this scenario. The percentage of households using these unsafe sources of water was too high even if we take the least, 35.84 percent (1995) during the period. The concern of the stakeholders in water sector in Adamawa state was, therefore, not a misguided one. It is noteworthy that in adopting new strategies to address water problem in Adamawa state, the target of the stakeholders, was to reduce the percentage of households using surface water as sources of drinking and cooking in Adamawa state and the strategies were carefully formulated to conform to the set target.

1.2 Methodology of the Study

Bearing in mind the definitions of “safe water” “surface water”, and “sources of water” as stated in the introduction, the author collected secondary data on the percentage of households in Adamawa state using surface water as a source of drinking and cooking from General Households Survey Report of National Bureau of Statistics in federal government secretariat, Yola, for a period spanning six years (1995-2000). This six-year period is noted by this study as the pre-intervention period. Then, the author also collected secondary data on the various strategies adopted by the Adamawa state government, to enhance water situation in the state; from Adamawa State Rural Water Supply and Environmental Sanitation Agency, Yola.

The strategies on which data were collected include: monitoring and maintenance; cost-sharing, capacity building and responsibility allotment. The author understudies the application of these strategies to the water sector between the year 2000 (the pre-intervention year) and year 2007. Year 2007 is chosen because it is the mid-way to the Millennium Development Goals (MDGs) targeted year of 2015. then, the author collected fresh data on the two major indicators (percentage of households using surface water as a source of drinking and cooking and sources of water) in Adamawa state for year 2007, and compared it with the data on the two indicators for the pre-intervention year of 2000 in order to establish the effectiveness or otherwise of the adopted strategies. In doing this, the neighbouring states of Taraba, Gombe and Yobe (all in the North-eastern zone) are used as the control.

1.3 Strategies Adopted By The Adamawa State Government In The Water Sector (2000-2007)

The strategies adopted were categorized into four; namely:

- i. Strategies on monitoring and maintenance
- ii. Cost-sharing strategy
- iii. Strategy on capacity building
- iv. Strategy on responsibility allotment.

i. Strategy on Monitoring and Maintenance

This strategy is subdivided into monitoring and maintenance. In the monitoring aspect of this strategy, Adamawa state rural water supply and environmental sanitation agency was mandated to undertake all, water facility baseline survey in all rural communities of the state for proper planning and intervention with water services. In formulating this strategy, it was a conceded fact by the water supply planners in the state that the use of surface water as sources of drinking and cooking was prevalent in the rural communities, hence, the focus of this strategy, was rural locations. Also, as part of the monitoring strategy, Adamawa state rural water supply and environmental sanitation agency was mandated to undertake periodic monitoring and evaluation of water supply facilities provided in the rural areas for impact analysis.

On the other hand, maintenance strategies were focused on the following:

- (a) Existing waters supply facilities in the state were to be rehabilitated so as to obtain optimum operational capacity.
- (b) Solar driven pumps were to be given highest priorities in the rehabilitation and upgrading of hand pump water supply schemes in rural areas.
- (c) Other alternative water supply schemes such as spring development, protected hand dug wells, infiltration galleries and rain water harvesting were to be promoted.
- (d) Adamawa state rural water supply and environmental sanitation agency was to ensure that a functional water quality analysis laboratory of appropriate capacity is installed in the rural water agency head office.

ii. Cost-sharing Strategy

According to the dictum of this strategy, all stakeholders in water supply sector (federal government, state government, local government areas and the benefiting communities) were to jointly share the costs of capital investments, operational costs and maintenance costs. With respect to the costs of capital investments, adopted strategy is as shown in table 1 below:

Table 1: Cost sharing principles for capital investment in water supply (% of investment)

| Stakeholders | Rural areas | Small towns | Urban areas |
|--|-------------|-------------|-------------|
| Federal government | 50 | 50 | 30 |
| State government (state water agencies-SWAs) | 25 | 30 | 60 |
| Local Government | 20 | 15 | 10 |
| Community | 5 | 5 | 0 |

Source: (FMWR, 2000)

In the case of operational and maintenance costs, the sharing formula is given in table 2.

Table 2: Cost sharing principles for operational and maintenance costs (% of cost)

| Stakeholder | % of cost |
|------------------------|-----------|
| Federal government | 0 |
| State government | 10 |
| Local government | 20 |
| Benefiting communities | 70 |

Source: Adamawa State Rural Water Supply and Environmental Sanitation Agency, 2000

The rationale behind the sharing formula is to ensure sustainability. In order to achieve this purpose, benefiting communities were granted the full ownership of the facilities provided by the state government.

iii. Strategy on Capacity Building

In this respect, Adamawa state rural water supply and environmental sanitation agency was mandated to vigorously pursue the following:

- A. Facilitation of local manufacture of water supply facilities inputs.
- B. Provision of technical support for capacity building at local government and community levels towards the provision of state water supply facilities.
- C. Encouragement of rapid manpower development through training of technical staff.
- D. Promotion of private sector participation in the rural water supply so as to complement the efforts of the state.
- E. Formulation of laws to regulate the activities of the private operators so as to guarantee adequate protection for consumers as well as fairness to the service provider.

iv. Strategy on the responsibility allotment

Besides the cost-sharing strategy involving the stakeholders in the water sector, a separate strategy was adopted for the sharing of responsibilities among the stakeholders from the state level down to the community level. This arrangement is as contained in table 3.

Table 3: Allotment of responsibilities among the stakeholders in the water sector in Adamawa state.

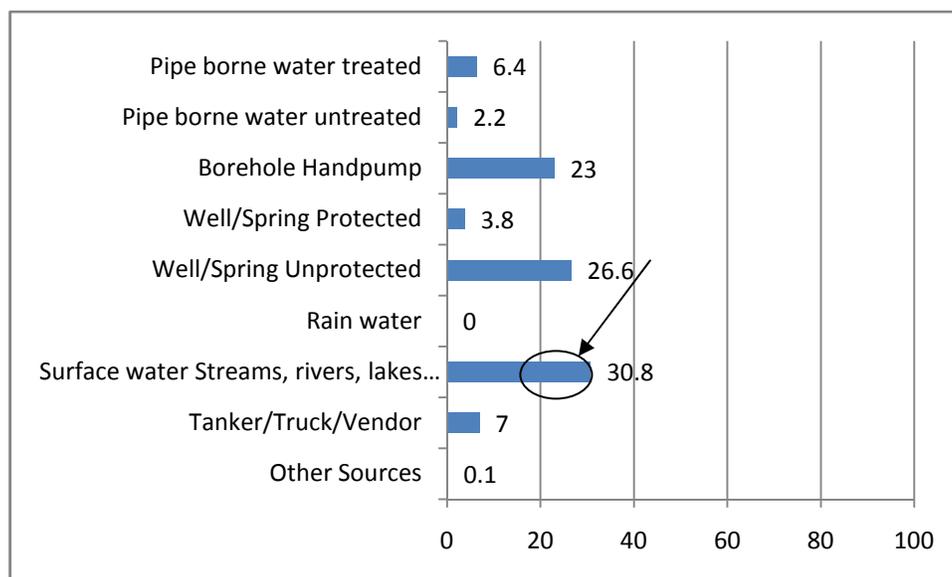
| Responsibility | Undertaking stakeholder |
|--|--|
| (a) Responsibility for the establishment, operation, quality, control and maintenance of rural water supply. | Adamawa state rural water supply and environmental sanitation agency. |
| (b) Responsibility for licensing and monitoring of the private sector in the provision of rural water supply. | Adamawa state rural water supply and environmental sanitation agency. |
| (c) Responsibility for the establishment of water and environmental sanitation committee (WESCOMs). | Local government (through its rural water supply and environmental sanitation department). |
| (d) Responsibility for the establishment of village level operational maintenance (VLOM) and community mobilization and sensitization units. | Local government (through its rural water supply and environmental sanitation department). |
| (e) Responsibility for the report on the conditions and status of facilities within the local government areas. | Local government (through its rural water supply and environmental sanitation department). |

Source: Adamawa State Rural Water Supply and Environmental Sanitation Agency

1.4 Discussion and Findings

As mentioned earlier, the target of the Adamawa state government, in adopting the strategies, is to reduce the percentage of the households, using surface water as sources of drinking and cooking. We reiterate that surface water refers to sources including water from streams, rivers, lakes and ponds (National Population commission, 2006). We also want to emphasize that surface water is not one of the “safe sources” of water (see definition of “safe water” in the introduction). Adamawa state government has applied the formulated strategies to the water sector over the years. Did Adamawa state government get its priorities right? Has the water sector fared better in Adamawa state consequent upon the application of the new strategies? The answers to this barrage of questions are provided by figure 2. It is to be emphasized once again that year 2007 is chosen because it is the mid-year to the Millennium Development Goals (MDGs) targeted year of 2015.

Figure 2: Percentage distribution of households by major source of water for drinking and cooking in Adamawa state (2007)



Source: NBS (Social Statistics in Nigeria, 2007)

If we compare the percentage of households using surface water as a source of drinking and cooking in year 2007 (figure 2) with the percentage of households using surface water as a source of drinking and cooking in year 2000 (figure 1), it is evident that Adamawa state has made a giant stride. This indicator reduces from 51.38 percent in year 2000 (figure 1) to 30.8 percent in year 2007 (figure 2). This can only be explained in terms of policy strategies adopted by the Adamawa state government within the period. This conclusion becomes faultless if we take the percentage of households using surface water as source of drinking and cooking in the neighbouring states of Gombe, Yobe and Taraba, within the same period as control. This information is presented in table 4.

Table 4: Percentage of households using surface water as a source of drinking and cooking in some selected states of North-eastern zone of Nigeria in 2000 and 2007.

| Year State | 2000 | 2007 | Change in absolute term between 2000 and 2007 |
|---------------|-------|------|--|
| Adamawa | 51.38 | 30.8 | 20.58 |
| Taraba | 75.15 | 69.9 | 5.25 |
| Gombe | 27.78 | 13.8 | 13.98 |
| Yobe | 2.26 | 1.9 | 0.36 |

Source: National Bureau of Statistics (2000 and 2007)

It can be seen from table 4 that of the selected states in the North-eastern zone, Adamawa state recorded the greatest stride within the period, in absolute term, reducing the percentage of the households using surface water as source of drinking and cooking by 2058 percent. This can be attributed to the series of strategies adopted by the Adamawa state government within the period.

1.5 Summary, Conclusion and Recommendations

Experience of Adamawa state government in providing solution to the barrage of water problems in the state is a very exciting one. It teaches a lesson that the socio-economic problems, besetting the developing countries of the world are not insurmountable. All that is required to face such problems head-on is a political will and carefully designed approaches and focused strategies that are capable of returning positive results.

Another exciting finding of this study is the methodology adopted by the Adamawa state government in ameliorating the water situation in the state. Conceding the fact that the surface water sources are prone to all sort of abuses and pollution and thus represents the most unsafe source of water, the government concentrated all efforts in reducing the constituent of the households that use this unsafe source of water supply in the state. The reduction in the percentage of households that use this unsafe source of water from 51.38 percent in 2000 to 30.8 percent in 2007 implies that security, in terms of water supply in Adamawa state, is attainable in the long run.

Full implementation of these strategies is recommended to Adamawa state government because of the conviction that in the long run, the strategies are capable of guaranteeing water security in Adamawa state. Besides, these strategies or typical ones are recommended to other states of federation that are faced with similar water insecurity as in Adamawa state.

References

- Adamawa State Rural Water Supply and Environmental Sanitation Agency Policy Document (2000).
Adebayo, A.A et al (2004); Mubi Region – A Geographical Synthesis (Paraclete Publishers) Yola, Nigeria.
Federal Ministry of Water Resources (2000); National Water Supply and Sanitation Policy Document, Federal Ministry of Water Resources, Abuja.
Kaliel, M.B. (2000); “Our Vision for Water Resources in the Twenty-first Century” National Press Briefing by the Honourable Federal Minister of Water Resources, Abuja.
National Bureau of Statistics – General Household Survey Report (1995-2005).
National Bureau of Statistics – Social Statistics in Nigeria (2007).
National Population Commission (2006); 2006 Population Census of the Federal Republic of Nigeria; Analytical Report at the National Level-National Population Commission’s Office, Abuja.