



## Water utilities research: NWSC, Uganda

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NATIONAL WATER AND Sewerage Corporation (NWSC) is a semi-autonomous government organization in Uganda which was created by presidential decree in 1972, and charged with the responsibility of provision of water and sewerage/sewage treatment in the main urban centres of the country. Having started off with three major towns of Kampala, Jinja and Entebbe, NWSC has, since 1988 extended its services to cover eight more towns of the country. Provision of watsan services in rural areas and other urban centres remains the responsibility of the Directorate of Water Development, a government department, which also oversees the overall management of Uganda's water resources.

Although a tariff structure has all along been in place, NWSC did not, until 1987, formulate effective measures to recover the water rates, nor was the mechanism for price changing effective. NWSC's operations mainly relied on government subvention, which in most cases was inadequate. Consumers who were lucky to receive services considered it a right from the central government, if not from God, and resisted to pay user fees. This attitude, which was aggravated by Dictator Idi Amin's pronouncement of water is free for all Ugandans, has unfortunately developed, to some extent, into a national culture of expecting free services.

Since Government could hardly release enough funds for operations, maintenance and capital development, the installations in most cases deteriorated, except for rare interventions of international donor agencies. The outcome was that the water supply systems in the urban centres operated at less than 10 per cent of capacity utilization, providing services for about two hours a day, by 1985. The residents had to spend unproportionately high percentage of their income to purchase untreated water from vendors.

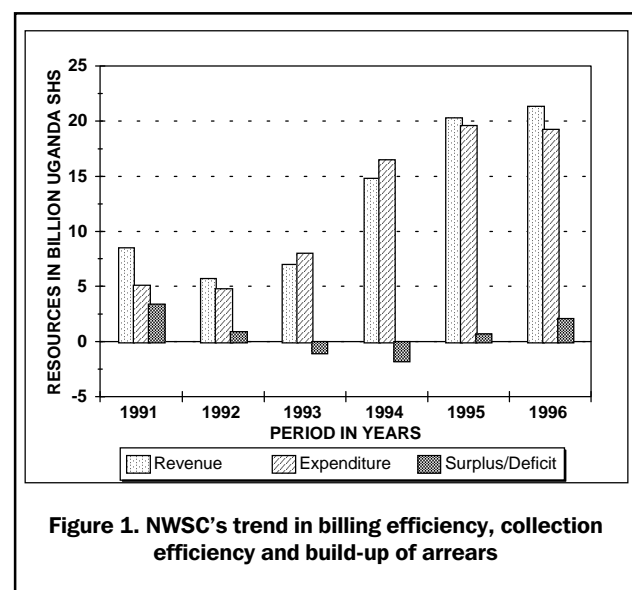
When Government liberalized the national economy in 1987, and divested some of its responsibilities from various state-owned parastatals, NWSC was expected to strengthen measures for cost recovery, and become fully self-financing in its operations. With acquisition of international credit guaranteed by the government (but onlent to NWSC on commercial interest rates), NWSC rehabilitated water/sewerage systems in nine major towns. Furthermore, the capital city of Kampala had its water treatment works capacity expanded to meet the demand of the city up to 1998. In the current year, two more towns in the Western region of the country have had their water supply systems rehabilitated, and handed over to NWSC.

As a result of rehabilitation/expansion projects, service coverage in the area of jurisdiction of NWSC has tremendously improved to about 50 per cent of the customer base, as of 1996. Furthermore, with the help of technical assistance, various management systems have been put in place; These include customer base geographical information, computerized billing, financial, internal audit, plant maintenance, human resource development, project planning and capital development.

In past five years, NWSC has been in the process of Institution Development program which involved management development through various training programs, restructuring and downsizing, decentralizing, and increase in take-home packages of the workforce. These measures have resulted in an increase in overall performance as reflected in improvements in financial performance indicators. NWSC, which in inception stages solely relied on subvention for its operations, improved to a deficit budgeting in the late 1980s, and moved further to a surplus budgeting later in the early 1990s. Figure 1 shows the trend of performance in budget balancing.

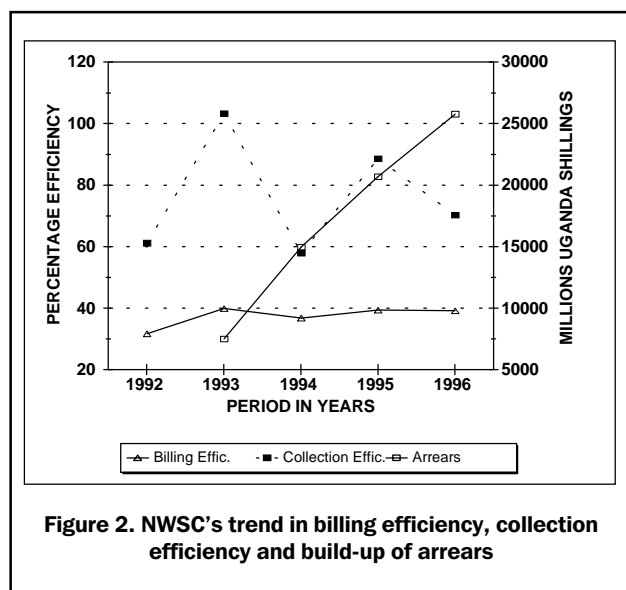
Accounted-For-Water increased from 3-5 per cent in mid-eighties to the current 40 per cent, while bill collection efficiency rose from 0-2 per cent to 60-100 per cent over the same period. Figure II shows the trend over the period 1992-1996.

The graph in Figure II shows that while billing efficiency has remained at about 40 per cent, the collection efficiency



**Figure 1. NWSC's trend in billing efficiency, collection efficiency and build-up of arrears**

Source: NWSC commercial department (1997)



**Figure 2. NWSC's trend in billing efficiency, collection efficiency and build-up of arrears**

Source: NWSC commercial department (1997)

has been erratic. The high values for collection efficiency are due to single-time collections made from accumulated arrears, especially by the Central Government. Indeed, it can be seen that the build-up of arrears is on the upward trend. This phenomenon is unhealthy, more so as NWSC strives to expand its geographical markets to urban centres with the majority of residents lying in the low-income earners' bracket.

### Research in good practices

It is clear from the existing situation of NWSC that if the growth of the organization has to be sustained, a strategy has to be formulated to overcome these operational problems. Adequate resources have been sunk into the infrastructure; it is imperative that management (the software) be examined at this juncture. A research team has been put in place to study the most suitable options of water utility management, given the prevailing conditions in the near and macro-environments. As a preliminary observation, it was strongly felt that given the dynamic nature of the macro-environment, private sector participation (PSP) should be considered. Furthermore, it was envisaged that NWSC could have a lot to learn from water utility organizations with outstanding performance in the region. Study trips were consequently made to the US and Southern Africa, with a view of getting an insight into good management practices.

### Study trip to the World Bank headquarters

It was recognized that the World Bank (WB), through its involvement in institutional development of water utility organizations the world over, has acquired vast concepts in PSP options in watsan services. As an initiative to tap these resources, a delegation comprising of the Managing Director (the principal author) and the Project Manager took a study tour to the WB Headquarters. PSP is in line

with the NWSC statute, Uganda Government Statute No 7 of 1995.

As a preparation for the study tour in Washington, contacts were made with various private water authorities in the UK, through the office of the Regulating Authority, OFWAT. This enabled the delegation to get an insight in PSP in watsan services in high income countries.

Various WB specialists in the field of PSP in water utilities were consulted. During the course of the interaction, it was agreed that for PSP to catch on, the following were the pre-requisites:

- Political commitment.
- Schemes with built-in incentives.
- Regulatory framework and body.
- Capacity for complex contracts management.
- Security for investments and investors.
- Scheme financial model and competitive bidding criteria.

It was noted that the political climate was conducive to, and the new legislation adequately addresses the issues of, PSP in Uganda's water sector. Furthermore, NWSC has made initial steps by carrying out pilot projects in PSP such as community management in Jinja/Njeru peri-urban areas, and private sector involvement in arrears collection.

Further recommendations were made to NWSC, as follows:

- NWSC could join the water utility program in the sub-project Development of Management Capacity of African Water Utilities. There are already five members under this project, membership of which would benefit NWSC by tapping the resources of African experts team on PSP.
- NWSC could convene a national workshop on institutional options for involving the private sector in water utility management, where all major stakeholders would participate.
- A fact-finding mission could be sent to Senegal and South Africa to focus on selected options, for the purpose of sharing experience.

### Search for Good Practices in Water Utilities Management in Southern Africa

In November 1996, the co-author went on a six weeks' trip to three countries in Southern Africa, during which he visited five water utilities, in the quest for good practices in the delivery of services. Although the time was considered inadequate for an intensive study, contacts were made for further exchange of experience. A summary of outstanding management practices for easy adaptation by NWSC from each organization is shown in Table 1.

### The way forward

NWSC in its history of existence has changed from being an appendage to the Government Department of Water Development, to being a self-financing water utility. The

Table 1. Results of the quest for good practices

ORGANIZATION VISITED	NOTABLE PRACTICES FOR EASY ADAPTATION BY NWSC
Lusaka Water and Sewerage Corporation, ZAMBIA	<ol style="list-style-type: none"> <li>1. Advanced level of PSP e.g the planned BOOT Kafue Water Supply project</li> <li>2. Level of community involvement in peri-urban areas, quite high</li> <li>3. A well managed and integrated corporate planning process</li> <li>4. Performance management is well developed</li> </ol>
Water Utilities Corporation, BOTSWANA	<ol style="list-style-type: none"> <li>1. Well documented internal policies; financial and administrative procedures well articulated in manuals</li> <li>2. A well managed, participative corporate planning process</li> <li>3. Well developed technical functions e.g. operations/maintenance, internal project management system, telemetry monitoring systems</li> <li>4. A well developed internal customer care system</li> <li>5. A water tariff that is socially equitable to the urban poor</li> </ol>
North West Water Supply Authority, SOUTH AFRICA	<ol style="list-style-type: none"> <li>1. There is a Marketing Department whose main function is to enhance community participation</li> <li>2. Administrative policies and procedures are well laid out in manuals</li> <li>3. The Board is transparently constituted</li> <li>4. NWWSA operates sewerage system and charges the relevant municipal councils</li> </ol>
Umgeni Water, SOUTH AFRICA	<ol style="list-style-type: none"> <li>1. Umgeni Water supplies bulk water to local urban authorities, from where their main income is generated</li> <li>2. A strong and effective Rural Areas Water and Sanitation Plan is in place</li> <li>3. There are business units to provide services on commercial basis to external customers e.g. consultancy work, lab services, training</li> <li>4. A well managed and integrated corporate planning process</li> <li>5. There is a lot of emphasis on environmental protection, especially in the catchment areas of Umgeni water</li> </ol>
Durban Metro Water and Waste, SOUTH AFRICA	<ol style="list-style-type: none"> <li>1. There is a strong peri-urban development plan</li> <li>2. Market segmentation done, and appropriate service levels designed even for the low income earners resident in the shanty areas</li> <li>3. Durban Metro receives bulk water supply from Umgeni Water</li> <li>4. Meter reading is contracted out</li> </ol>

(Source: Compiled by Sam Kayaga)

service levels of NWSC's products has improved greatly, in unison with the organization's image. However, with the changing environment world-wide, NWSC requires to add in more efforts for better performance.

Preliminary research carried out show that organizations with outstanding performance have embraced change in their styles of management. Literature review and experience from partnerships with similar utility organizations in the region and elsewhere have revealed many concepts which NWSC could learn from. However, it is recognized that mere adopting of these practices may not solve the problem. NWSC therefore intends to carry out home-tailored research, in order to come up with what ideas could be adapted, to make our organization deliver the services, as per our customers' perceptions. Below are some of the activities earmarked to achieve this noble goal:

#### Strategic planning

NWSC management have been in a vigorous exercise of coming up with a Corporate Plan with fifteen goals, for the period 1997-2002. All departments evolved activities and targets leading to the fulfilment of the corporate goals, on

which the annual budgets will be based. The Corporate Plan will be revised annually.

#### Attachment of staff

As a follow-up of the Quest for Good Practices, suitable staff have been identified to go for attachment to water utilities earmarked with good practices in the respective fields. This is in line with the theme of this conference, i.e. Partnerships and innovations.

#### Environmental analysis

Research will be carried out to identify opportunities and threats that emanate from the rapidly changing macro-environment. The following aspects will be studied:

- Socio-cultural aspects such as social habits; religious, cultural, and historical beliefs, demographic parameters etc.
- Technological/Ecological/Environmental aspects such as level of regional technological advancement; operation and maintenance culture; availability of skills; availability of research funds; the proliferation of the water hyacinth, pollution of the water sources.

- Economic aspects such as the low national GDP, the low purchasing power of the customers, the high disparity in income levels, the wealth and productivity of the country.
- Political aspects such as the political stability, security of persons and property, the autonomy of the organization, and the legislature backing the operations of the organization.

Research will also be carried out in the Task and Internal Environment to look at the following aspects:

- What potential markets are available to NWSC? How is the competitive environment?
- How do the various external publics perceive NWSC? What is the organizational image?
- The organizational resource analysis to identify its strengths and weaknesses.

#### **Research projects**

The nature of opportunities and threats, strengths and weaknesses resulting from the study of the environmental analysis will determine the management methods and styles to be adapted. Further research will be conducted in the following fields:

- Marketing of services, to make NWSC more responsive, and adaptive to the changing environment.
- Suitable options for PSP in NWSC. This will be done in collaboration with other institutions where PSP has already taken root. The recommendations of the WB experts will be examined further. Already, NWSC has been earmarked as a participant in the ODA-sponsored research project, to be managed by WEDC, entitled Contracting out water and sanitation services.
- Motivation of staff and how the organizational culture can be re-shaped.

#### **References**

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