Executive Summary

Conference on Small Towns Water Supply: Inter-Country Dialogue of West African Countries

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For more information please contact:
Annie Manou-Savina : WSP, Cote d'Ivoire
Nathan M. Belete: WBI, Washington

Management of Small Town Water Supply Services: West Africa Inter-country Meeting Initial Executive Summary

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SMALL TOWNS: A SPECIAL PROBLEM

In Africa, the problem of supplying water to small towns, secondary centers and large rural towns lies between:

- Rural water supply managed according to a predominantly community model; and
- "Conventional" urban water supply operated by authorized dealers, who most often enjoy a monopoly.

With a few exceptions, the population of these "small towns" is between 2000 and 20,000 inhabitants. Living standards are generally higher in these towns than in rural areas. With regard to potable water supply, the preference is for uninterrupted service (24 hours a day) and the possibility to connect to the supply network (individual connections).

Significant innovations

Some surprising examples can be found today. They are early warning signs of how water supply will be managed in the future: the price of water fixed according to operating costs, renewal of equipment, and the extension of the supply network; operators who invest in water supply; using a portion of the proceeds from water sales to pay for technical and financial monitoring of operators.

Although users can only finance a small portion of initial investments, they are able to finance an increase in the distribution network (individual connections) or extensions to the network

In Mauritania, the introduction of private operators ("*concessionaires*") has, to a large extent, helped improve the quality and continuity of supply. Placed in a position of trust, users have invested immensely in individual connections and extensions to the network. According to a recent study carried out in Mauritania under the "small towns" global initiative (Water and Sanitation Program (WSP) and World Bank), some networks have been extended by 200 or 300% as a result of investments by users.

A private operator finances initial investments and operates

Kalebu Ltd. is a Ugandan micro-enterprise, which used its own funds to finance four water supply installations, which it now operates to supply water to about one thousand households in outlying areas of Kampala. The company signed a 30-year contract with representatives of the inhabitants of the area. This agreement between

private operator and community came about because the State, due to lack of means, could not rise to the challenge of ensuring access by all to basic services.

Financing the monitoring and control of operators with proceeds from water sales reduces the cost price of water produced

To acquire the means to pursue its policy on monitoring facilities put up by the State, the *Direction Nationale de l'Hydraulique du Mali* set up an advisory unit for operators belonging to associations. The unit offers advice and conducts a rigorous control of operations. Furthermore, the quasi-permanent contact with a team of professionals helps to avoid errors and unnecessary expenses and provides transparency, thereby limiting the risk of embezzlement. Its operation is partly financed by a fee paid by each association amounting to 20 FCFA per m^3 of water produced. This is far below the savings, which result from the support and advisory services provided to operators.

In principle, free water supply is forbidden in all countries in West Africa and maintenance services are based on a marketable logic.

... and preconceived ideas needing clarification

Although the progress is promising, some preconceived ideas still need clarification.

Delegating water supply services to a private operator would mean liberalization of the water market, while, in most cases, the private operator does not freely fix the price of the service. On the other hand, the true costs must be applied to protect users from abusive practices, regardless of whether a public or private operator is in charge of the operating the system.

Municipalities would not have the know-how to manage the water supply service, while in actual fact, they are being asked to delegate this industrial and commercial activity. It is the local authorities that have to deliberate on issues such as the choice of agent and the fixing of the price of water. Besides, the mere fact of focusing the discussion on the issue serves as an opportunity to train local leaders to deal with matters on public services in general.

Financing technical and financial monitoring would constitute a surcharge for the user, while the Administrations in any case, do not have the means to exercise this control which is the guarantee of good quality service. Experience has shown that this surcharge is, in part, made up for by the reduction of the maintenance item, and especially by the creation of economies of scale (less frequent and shorter break-down periods help to spread the same fixed charges over a larger product volume, thereby reducing the cost price).

Community management would cost less for the user, while a volunteer (often lacking experience) may sometimes commit costly management errors, or, in the long run, end up by paying himself, officially or otherwise, for work done. Furthermore, the typical manager of a community grouping is rather cautious. Having been appointed by his peers, he keeps to a minimum in running the system, not by laziness or ill will, but because his status is governed with consensus in mind.

He therefore manages the service at the least cost and avoids initiating any risky action. Volunteer work is well suited to the project's implementation phase, but not to an operation strategy that calls for optimal use of facilities. True, its approach may comply with the directives of the association's office, but it hardly makes for achieving economies of scale that would lead to a reduction in the cost price of the water service.

Although the budgetary item for wages is reduced, numerous experiences of this nature have brought about false savings. Therefore, volunteer work under long-term management does not always help to make provision for equipment renewal.

OVERVIEW OF EXISTING SYSTEM

All over West Africa, a basic principle remains unchanged:

Water supply is a marketable service of general interest, ***to which access by all remains a priority of the State's technical services*** *which, due to lack of budgetary appropriation from their governments, are unable to take up this challenge.*

While the institutional context is undergoing major changes, some sector practioners are trying to define new organizational set-ups and seeking innovative working methods.

Delegated management – a necessary organizational method

The new distribution of roles and responsibilities among stakeholders is marked by the emergence of local government and the refocusing of State-run services on their fundamental missions.

Emergence of local government

Municipalities have been taking on an increased role in the development of the economic fabric, but with regard to organization of the water service, little progress has been made. In Mauritania, after a period of deep involvement in the management of the service, the municipalities saw all their prerogatives taken away from them. In Senegal, the law does not give local government water supply powers. In Mali, the State is gearing up to transfer water supply responsibilities to the municipalities, but the law forbids direct force account.

Users' groups form Associations

Today, the former management committees are forming Associations that have legal status, which enable them to enter into contracts with the State and to hire private service providers. There is, however, some concern as to the legitimacy of these sometimes hurriedly fabricated institutions within the framework of a project.

Skills transfer and refocus on fundamental tasks

The Government's technical services have started refocusing their activities on fundamental tasks, namely management of water resources, definition of standards

and regulations and financing and ownership of investment projects. The national directorates are therefore increasingly decentralizing their regional activities. However, these decentralized technical services are most often under the control of projects financed by international organizations.

This proliferation of stakeholders leads to management methods whereby each one is responsible for a precise set of duties. Care must, however, be taken to avoid having multiple responsibilities, which often lead the State or its technical services to become judges in their own cause.

Role sharing helps to avoid multiple responsibilities

<table>
<tr><th></th><th>Control</th><th>Ownership</th><th>Operation</th><th>Maintenance</th></tr>
<tr><td>The community as a whole</td><td colspan="4">Association or community-type structures</td></tr>
<tr><td>Community management</td><td colspan="2">Government services act at the same time as grantor and control body</td><td colspan="2">Association or community-type structures managing the running of facilities</td></tr>
<tr><td>Delegated management</td><td>Government services</td><td>Municipalities</td><td>Users' associations</td><td>Private service providers</td></tr>
<tr><td>Lease</td><td>Government services</td><td>Municipalities</td><td colspan="2">A farmer who can call on suppliers and other private service providers</td></tr>
</table>

There are always real cases to support each of the situations described above, for example:

- Associations or non-governmental organizations finance, build and operate a water supply system, sometimes outside national strategy. This is typically the case of the associations of the nationals of the three countries along the Senegal River basin;

- The Government department responsible for water supply entrusts the operating of the facilities to a community grouping. If the grouping is a legal entity, commitments can be written in a delegation contract (for example, Mali);

- Cases of delegation between the State and a private operator are rare. In Burkina for example, five pumping stations are operated by the company which supplied the equipment;

- It is not common to find the water supply service in competition with another service. Uganda is already going in this direction, allowing an operator to bid for the delegated management of several centers. Under international competitive

bidding, the same firm will soon be allowed to provide the water supply service to five other towns or neighbourhoods;

- In two-thirds of the small towns equipped with a water supply system in Mauritania, the service has been delegated on the basis of a light legal arrangement, and has helped to solve the problem of unemployment among young qualified people and to relieve the State of a centralized management that had become too burdensome.

In the case of delegated management contracts and farming leases, the granting authority must be able to provide a minimum legal security (adequate contract duration clear termination conditions, etc.). Price fixing and revision must be done at the local level and checked by competent technical services.

The choice of operators must be accomplished through a consultation procedure, the main criteria being: technical competence and prior experience in a similar area (commercial management); financing capability; credibility of the operator at the local level and the fact that the operator's structure should be light enough to avoid the unnecessary incurring of fixed charges.

The contractual modalities should provide for the hiring of a private operator, who will be protected against high commercial risks, ensuring at the same time that the quality of service and price of water remain acceptable. To this end, the purpose of a control mechanism will be to ensure a balance between contractual relations and compliance with the commitments made. Although regulatory agencies have recently sprung up in Mali and Mauritania, for instance, they are not as yet operational to deal with water supply service in small towns.

Maintenance contracting

The water supply operator may undertake maintenance work himself or call on a private service provider who is a maintenance specialist. Apart from the services provided on a case-by-case basis (i.e. service provided from time to time on the request of the client who is none other than the operator), the maintenance service may be arranged on a contract basis. The assignment of tasks as well as the sharing of responsibilities and risks must be well defined.

The maintenance service should be arranged such that the operator can mobilize all the skills and control mechanisms needed to carry out a whole range of activities which, in ascending order of complexity are: providing daily maintenance and preventive maintenance according to manufacturer's instructions; interpreting performance indicators and, where relevant, replacing worn parts; analyzing complex break-downs and detecting accounting irregularities.

The operator charges users directly for the water supplied. He bears all commercial risks of the operation such as default in paying, damage to equipment as a result of vandalism, flooding etc. He entrusts a portion of the tasks mentioned in Table 2 to a service provider.

TABLE 2. SHARING OF TASKS AND RESPONSIBILITIES BETWEEN OPERATORS AND MAINTENANCE WORKERS

Type of maintenance contract	LESS ⇦ Service provider Commitment ⇨ STRONG		
Tasks and responsibilities	Case No. 1	Case No. 2	Case No. 3
Checks on equipment	Service provider		
Purchase of replacement parts		Service provider	
Repair of complex break-downs			
Purchase of major spare parts	Operator		Service provider
Change of defective parts due to design faults			
Provision of an equipment renewal fund		Operator	
Replacement of broken or stolen parts			Operator

With regard to photovoltaic systems, the full-service maintenance contracts of the regional solar program resemble that of Case No. 2. Depending on the variant, the service provider is bound to provide for equipment replacement. If the equipment breaks down, he covers the costs fully or partially. Otherwise, he pockets the money once the contract has ended.

Too often the maintenance contract rather resembles an after sales service in which the operator has not been involved for the choice of service provider.

Innovative experiences and interesting practices

Define a level of basic service to promote a true demand-driven approach

In order to better target assistance to the poorest classes of population, it is useful to define a level of service beyond which the user must pay a high proportion of the initial investment. For example, in Niger, the basic service comprises a borehole, a water tower and four standpipes.

In Benin, the basic service comprises a borehole (or well) equipped for 300 inhabitants. This basic level serves as a yardstick for fixing the initial contribution amount. If the cost of the water supply is below or equal to the cost of the basic solution found, the contribution is 5%; if it is the sole possible solution, the contribution is again 5%; if the cost of water supply is higher than that of the basic solution, the contribution is 5% + 10% of the basic solution found for water supply.

Fees charged on price of water to finance technical and financial monitoring

The Malian water supply directorate (DNH) has entrusted the management of water supply to the users' associations, but compels them to collaborate with the *Cellule de Conseil aux Adductions d'Eau Potable* (CCAEP), which is remunerated in proportion to the production performance of the systems (20 FCFA per cubic metre produced). The directorate carries out technical and financial monitoring to:

- Register operating data; outline preventive maintenance measures; guide the work of operators, and carry out repair jobs from a distance;

- Check the operating accounts every six months, and then give feedback to users' associations, the decentralized services and municipalities.

The model is based on a paradox: a portion of the budget allotted for inspection and advisory purposes does not lead to an increase in the price of water. On the contrary, the savings made exceed the additional expenditure incurred for this service (20 FCFA/m^3). Since 1996, there has been an obvious control over costs: the average cost price dropped from 431 FCFA to 228 FCFA, i.e. a drop of about 200 FCFA/m^3. The gap between the minimum and maximum values was bridged after 4 years, bringing about a convergence in the cost prices.

Furthermore, the risk of embezzlement is discouraged through account audits and transparency of results. The support of an accounts manager helps to avoid mistakes and unnecessary expenses. With better maintenance, breakdowns are less frequent and are dealt with more promptly.

PROBABLE DEVELOPMENTS IN THE ROLE OF STAKEHOLDERS

Delegated management is a model under promotion. It assumes that three stakeholders are present at the local level, namely a licensing authority, a representative of users and a private operator.

If in the future, the municipality plays the role of licensing authority and the private operators get fully involved in the public water supply market; then the users' association will shed its role as operator and may disappear. Should the municipal authorities fail to defend the interests of users, the association may mobilize itself from time to time during a crisis situation or when important decisions need to be made (increases in price of water, financing extensions, etc.).

But we must not delude ourselves. Transfer of powers to the local authorities and decentralization of the technical services will be done gradually. A period of transition must therefore be envisaged to develop a culture of checks and balances and set up an arbitration mechanism.

Users' associations

Advantages	Limitations
Proximity of users and ability to manage conflicts locally Flexibility in coping with difficulties in bill recovery Permanence in long run Association status minimizes risk-taking at individual level Users are the best placed to express their demand and choice in terms of level of services	Loss of impetus if no motivation (especially with regard to finance) No capital, therefore no guarantee in event of poor management Generally, no skill to manage complex installations technically Tendency to reduce expenses rather than increase earnings

Most suitable role for this stakeholder

- A user's association is suitable for managing customers who are not yet used to an "urban" service, and who, in general, are not very solvent;
- A users' association will find it very difficult to technically manage the "production" segment, especially in the case of a thermal pump. On the other hand, a little training will enable it to easily manage the distribution segment.

Central/Regional technical services

Advantages	Limitations
Rich experience in setting up projects and drawing up statutory texts High expertise on issue of water resources Neutrality towards local stakeholders Bi and multi-lateral financing have to pass through them	Their operation depends entirely on projects Little experience in management of small town water supply service Discrepancy between scope of skills and very weak current human resources Slowness due to obligation to comply with public accounting rules

Most suitable role for this stakeholder

- Management of water resource
- Adapting statutory texts to new challenges
- Arbitration between stakeholders (in absence of regulatory body)

Private operators

Advantages	Limitations
Search for economies of scale, therefore have to attract new clients Freedom to mobilize technical skills at given time, against suitable payment Quick response to technical problems, ability to innovate Remuneration commensurate with performance and not with the activity Ability to invest and interest to reinvest profits in service upgrade	The granting authority has very little legal recourse in case of system faults and departure of operator Risk of slippage if operator is in a situation of monopoly, without any true checks and balances Becomes committed only when risks are low and profit opportunities reasonable Suffers from bad press in eyes of users Risk of collusion with authority which grants the service Long amortization periods for investments (5 to 30 years), making the water sector less attractive than others

Most suitable role for this stakeholder

- Well-suited for carrying out functions with high technical value added (for example, water production, commercial management of a broad client base (with use of computer), maintenance of pumping plants etc.)

What about the issue of funds?

Operators must at all costs build funds to renew the facilities

The savings made could turn out to be a risky venture (embezzlement, devaluation, etc.) as well as a loss for the local economy, which often requires investment. But how could we ensure that when the time comes, the operator will be able to pay for repairs and renewal of equipment? How do we reconcile the uniqueness of the water budget with local development as a whole?

What are the barriers to investment by the private sector and banks?

Convinced that the water sector relies on public investment, the commercial banks are not interested in the sector. How then do we render "bankable" the applications of operators wishing to invest in their facilities?

Before private investors finance water supply installations, care must be taken beforehand not to oversize the installations; this makes the budget for equipment renewal so high that it becomes quite impossible to balance the operating account. The risk posed by defaulters such as the decentralized services, must also be curbed.

How do we control private investors in order to safeguard the interest of users?

Control has proved to be a complex function and often has negative effects. Market mechanisms, in particular, competition among companies, are good stimulants for improving their services and keeping pace with demand. To this end, it is useful, with the involvement of the representatives of the local checks and balances body, to study the balance sheets so that the pricing policy may be reviewed on the basis of actual costs.

... so as to embark on new paths

Enhance commitment of private operators

To move beyond the lease stage, a private operator could supply the electro-mechanical equipment (generator and submersible pump) or finance the rehabilitation of the equipment, or even extensions to the distribution network. To this end, the private sector does not require any preferential treatment or subsidies. It requires a strong government -- strong in terms of monitoring mechanisms and objective performance indicators and transparent contract award procedures. It requires a stable regulatory framework and a competitive commercial environment without any major risks.

Ways and means for optimizing water supply facilities

An operator may amortize his facilities better, either by selling more water or marketing other services, which use the same equipment.

Individual connections are good for cost recovery in that, under this type of service, more water is distributed. On the contrary, limiting the number of individual connections does not make for achieving economies of scale.

The same operator may provide several commercial services by using the same energy source to run, for example, a submersible pump and a grain mill, or supply electricity or even recharge batteries. Diversifying activities is a way of making the equipment more profitable and making money to pay for equipment renewal, which constitutes an important item in operating costs.

Experimenting with mixed management models

This entails organizing a group of stakeholders and drawing the comparative advantages of each stakeholder with respect to a precise set of assignments, for instance:

- A private operator who covers the region runs a set of thermal or solar pumping stations, which he operates, maintains and renews. He resells the water on wholesale to a user's association or municipality, which in turn distributes it and takes care of customer services (billing, recovery, etc.).

- A union of the municipality contracts a private operator to take care of support-advisory or maintenance services.

Call on a specialized body to conduct an audit of operators from time to time, and even provide continuous technical monitoring and accounting services

This entails entrusting to an autonomous body, the ancillary tasks to the control of the public water service, i.e. registering and processing of technical and financial data. If the services requested are only limited to audit, a fixed payment could be made (as in Benin).

If monitoring entails obligation to provide support-advisory services (guiding the work of operators and restitution of annual balance sheet), it is better for the one to whom the technical and financial monitoring has been delegated to be paid fees charged per volume (system used in Mali).

For similar-sized centers, comparing the balance sheets of several agents encourages a type of competition by emulation. Being able to compare oneself with one's neighbors can certainly enrich negotiations among partners in the water supply business, and even contribute to maintaining quality service. It is a form of self-regulation.

To exchange ideas on the issue of water supply in small towns in Africa, the Ministry of Water and Energy of Mauritania received 70 water sector workers and professionals from nine countries in Africa at an inter-country meeting held 11-14 March 2001 in Nouakchott, Mauritania.

This joint initiative by the French Cooperation, the World Bank Institute, the Water and Sanitation Program and the Water Solidarity Program was an occasion to:

- Take stock of water policies and legislations in force in the various countries represented;
- Present the status of decentralization and distribution of roles among the various stakeholders;
- Analyze innovative experiences and promising practices, their advantages, limits and conditions of implementation and replication.

The following participated in the drafting of this Executive Summary:
Marc Vézina, ps-Eau and Bruno Valfrey, Hydroconseil
To order the final report, contact vezina@pseau.org