



Water and Sanitation Program

World Bank Rural Water Supply and Sanitation Thematic Group

Small Towns and Multi-Village Initiatives

An international partnership to help the poor gain sustained access to improved water supply and sanitation services

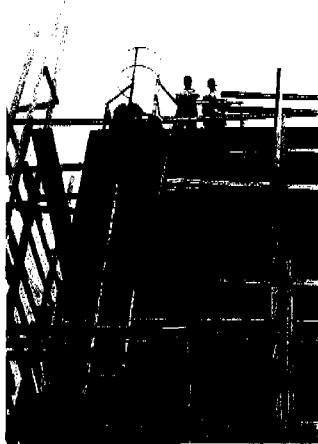
Small Towns and Multi-Village Initiatives

The issues

Water supply and sanitation in both rural communities and large urban centers has received much attention during the last two decades, but it is only recently that attention has focused on finding ways of improving the relatively poor levels of service found in small towns and multi-village schemes. In particular, there is a need for innovative management models that provide good quality, affordable services that are sustainable and can be expanded to meet demand.

The likelihood of water system sustainability is improved when consumers agree to a tariff that ensures their chosen level of service

In many countries, small towns are the most rapidly expanding centers of population growth and commercial activity



Globally, rural water service delivery is shifting more and more towards piped water schemes as a result of improving standards of living and increasing aspirations of the rural population

Multi-village schemes are an emerging option where local water sources are either scarce or not fit for drinking, or where economies of scale dictate that more than one village be served by the same system

WSP and RWSTG's work

The Water and Sanitation Program (WSP) in collaboration with the World Bank Rural Water Supply and Sanitation Thematic Group (RWSTG) is studying and documenting appropriate management models and professional support services for small town and multi-village water supply systems which lead to improved and sustainable outcomes. The WSP-based Small Towns and Multi-Village Network supports sector professionals and national policy makers in leading sector dialogue and in developing action plans for water and sanitation. The network connects consultants engaged in case studies, private sector and NGO representatives, government agencies in concerned countries, scientists and academics, WSP and World Bank teams, and donor organizations involved in the sector.

Management Models: Basic Principles and Best Practices

Taken together, institutional arrangements and key ingredients for success set out basic principles and best practices, and provide the analytical framework needed to assess management model options.

Definition

In terms of water supply, small towns can be characterized as settlements that are sufficiently large and dense to benefit from the economies of scale offered by piped systems, but too small and dispersed to be efficiently managed by a conventional urban water utility. There is growing consensus that they require formal management arrangements, a legal basis for ownership and management, and the ability to expand to meet the growing demand for water. They offer a higher level of service than is normally found in individual rural villages, but are similar in many ways to piped multi-village systems.

Management, operation and maintenance

Small town and multi-village water supplies are usually managed by municipal water departments, autonomous municipal water boards, or water user associations at the local level, or by public water utilities at the regional or national level. Operations may be contracted out under:

- management contracts (where the company is paid a set fee or a fee plus a share of profits, under a 2-5 year contract)
- lease contracts (where the company finances operations and maintenance from water revenues at its own risk, under a 7-15 year contract)
- concessions (where the company finances investments, operations and maintenance from its own revenue at its own risk, under a 20-30 year contract)

Supplemental professional support may be provided to water boards/associations and community based operators:

- by consulting engineers and financial advisors on a retainer basis
- by private firms through a franchise arrangement
- by higher level organizations such as regional or national utilities or NGOs, or by an Association of Water User Associations

Institutional arrangements and key ingredients for success

Institutional arrangements address issues concerning the roles of the community, the private sector and local government:

- who owns and manages the facilities?
- what is the legal basis for ownership?
- who plans, designs and supervises construction or expansion of the facilities?
- what financing arrangements exist?
- who operates, maintains, collects revenues, and keeps accounts?
- who regulates performance of town water authorities and operators?
- who regulates tariffs and water quality?
- who audits accounts?

Key ingredients for success can be broadly categorized under:

financial viability

- autonomy
- financing
- regulation
- cost effective design/works
- cost effective operation

quality of service

- political support/conflict
- management stability
- organizational arrangements
- flexibility
- technical and private sector support
- accountability
- coverage



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Management models being promoted/implemented under World Bank projects

| Country/Project | Management, operation and professional support | Community contribution to financing |
|---|--|--|
| <p><u>Ghana</u> Community Water and Sanitation Project</p> | <p>Management through a community Water Board, with operation and maintenance carried out by local employees. Limited use of service contracts.</p> | <p>5% community. 5% District Assembly.</p> |
| <p><u>Nigeria</u> Small Towns Water Supply and Sanitation Program Pilot Project</p> | <p>Management through a community Water Consumer Association, encouraged to contract a Private Operator.</p> | <p>10% minimum community. 30 % State Government. Community pays 70% of the cost of sanitation facilities.</p> |
| <p><u>Uganda</u> Small Towns Water and Sanitation Project</p> | <p>Management Contract. Oversight by the Town Council, contracting a Private Operator under a two-year management contract.</p> | <p>2% to 5% community. Under management contracts, operators provide start-up capital.</p> |
| <p><u>Philippines</u> Local Government Unit Urban Water and Sanitation Project</p> | <p>Design-Build-Lease Contract. Oversight by the Local Government Unit, contracting a Private Operator under a construction contract and a 15 year lease agreement.</p> | <p>Full cost recovery on Development Bank of the Philippines' sub-loans to Local Government Units. Revenues from water sales cover debt service.</p> |
| <p><u>Paraguay</u> Fourth Rural Water Supply and Sanitation Project</p> | <p>(1) Community Water User Association is responsible for management, operation and maintenance. Technical support provided by regional Association of WUAs. (2) Build-Own-Operate Contract. WUA contracts a Private Operator under a 10 year lease agreement. Construction is carried out by the operator under a government contract.</p> | <p>(1) 40% to 60% community. (2) Full cost recovery. Operators finance construction and recover their costs through a connection fee and the tariff.</p> |
| <p><u>Franchise</u> Pilot proposal</p> | <p>Lease Agreement/Management Contract: between asset owner and operator/franchisee. Franchise Agreement: between franchisor and operator/franchisee ensures professional support. Operator/franchisee is responsible for day to day management. Professional support from franchisor.</p> | <p>Funding of capital costs probably on a partial or total grant basis, but full cost recovery if the lease fee between owner and operator/franchisee covers debt service.</p> |

For more information visit our web site at: <http://www.wsp.org/english/activities/small-towns.html>

Management Models with the most potential

Some management models currently being promoted under World Bank projects are introduced below.

Community management with professional support

The autonomy and single *raison d'être* of Municipal Water Boards and Water User Associations overcome many of the problems associated with Municipal Water Departments and Public Water Utilities. The WSP and the RWSTG are focusing on case studies where the community manages the system through water boards/associations, where operators are accountable to the water board/association (sometimes as employees but preferably as contracted private operators), and where professional support services have proved effective.

Professional support

There is growing consensus that small town or multi-village systems under community management require professional support. Locally based operators can perform routine operations well, but what is missing is the professional support needed to maintain good service at a reasonable cost and to expand facilities to meet demand. For example, professional technical and financial skills are required for (i) planning, design and construction management of new/rehabilitated systems and planned expansions; (ii) ongoing strategic planning to reduce unaccounted-for-water and increase sales through distribution extensions, new connections and tariff management; (iii) advice on maintaining treated water quality, reducing operating costs and resolving operational problems; and (iv) advice and oversight on accounting, financing and external auditing.

Full service management models

Several full service, Build-Operate-Transfer BOT type, management models are being studied. These include Design-Build-Lease DBL contracts, Franchising, and Build-Own-Operate BOO contracts.

Under a typical DBL contract the municipality arranges the lease agreements, and a private company designs, constructs and manages operation and maintenance. The lease agreement for operation and maintenance may be for a group of towns over a 10 to 15 year period. If the lease fee covers debt service, then full cost recovery is possible. One of the main challenges to BOT type contracts is how to ensure coverage of the smallest, poorest towns whose revenue base is too small to attract the private sector, for example \$20,000 per year for a community of 5,000 (20 liters per capita per day at \$0.50/m³).

Under a franchise arrangement the franchisor develops an operating plan and procedures under a brand name or logo which becomes synonymous with high quality service, and commits to ongoing support and guidance to *small-scale* private operators in critical areas of management and operation and maintenance, in exchange for a share of the revenue. Although composed of many independent units with relatively small revenue bases, a franchise network has the power and resources of a much larger enterprise. By introducing an individual with entrepreneurial flair as the operator/franchisee, there is also a built-in incentive to operate the water supply efficiently and in a business-like way. Franchising best leverages the skills of the limited number of experienced water managers and operators found in most countries.

A third model of interest is Build-Own-Operate BOO. BOO contracts are less well documented than most of the other full service contracts, but represent a dynamic and potentially sustainable model based on private sector financing. Under a BOO contract the investor is committing to cost recovery through connection fees and the water tariff. Investors will only take this risk under the right kind of market conditions and incentives, possibly including different types of direct subsidies to attract initial interest in smaller towns.

Global activities and essential outputs

The outputs described below will be completed by December 2001. Knowledge is shared through the small towns and multi-village initiatives web page: <http://www.wsp.org/english/activities/small-towns.html>

Management Model Tool Kits and Tools of the Trade

- **Management Model Tool Kits** are intended to be used to design new projects or improve existing projects. The tool kits will contain sample documents required for project implementation (e.g. "terms of references", contracts, bye laws and user association rules).
- **Tools of the Trade** target identified shortcomings in existing small town and multi-village water supply and sanitation projects. For example, water demand and financial forecast models, guidelines for setting differential tariffs for different levels of service, policy guidelines for household connections, and information on billing and customer information systems and accounting software.
- **Sector Dialogue Facilitating Materials** are to help regional water and sanitation representatives lead discussions and facilitate workshop activities.

Small towns study

Under the direction of WSP regional offices, small towns case studies are currently underway in Mauritania, Colombia and Vietnam. Final reports will be completed by June 2001. A synthesis report for these initial case studies will be presented at an international small towns and multi-village conference planned for November 2001.

The objectives of the country case studies are:

- To study innovative management models that provide good quality, affordable services that are sustainable and able to be expanded. In particular to (i) test/refine/expand the basic principles and best practices hypotheses for small towns; (ii) document the implementation strategy for each management model and how the key principles/practices have been addressed; and (iii) prepare a compendium of relevant documents, leading towards the development of "management model tool kits".
- To gradually develop a corpus of knowledge about small town water supply, common vocabulary and concepts, and a methodology to analyze performance.

Multi-village systems study

Where local water sources are scarce or not fit for drinking (for example, in saline belts, or in fluoride or arsenic affected areas) the most common option left is to bring in water from an outside source. If this source is far away or very deep, then economies of scale dictate that more than one village be served by the same system. Case studies of multi-village systems in Colombia, Peru and Côte d'Ivoire have recently been documented in a WSP field note, *Multi-Village Rural Water Supply Schemes – An Emerging Challenge*. Additional multi-village case studies will result in a more substantial synthesis report during 2001.

Small multi-village systems (for example, 10 villages with a total population of around 10,000) under community management are similar to small towns in many ways. Differences between multi-village systems and small towns arise mainly in the context of really big schemes, such as those found in India and East Africa (for example, serving 100 villages or more with a total population of over 100,000). The WSP anchor is coordinating with its regional office in South Asia where a study of alternative management models appropriate for these large schemes is underway.

Some of the important issues specific to multi-village schemes are:

- rationale for building multi-village schemes
- selection of participating villages
- arguments around economies of scale
- the distinction between centralized mechanisms needed for planning and coordination of large schemes, and decentralized arrangements needed for user participation
- the distinction between management of bulk supplies and management of village level supplies
- appropriate service levels/design standards to ensure financial viability
- management stability (appropriate social intermediation, and level of social cohesion amongst the group of villages)

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