



Mechanisms for sustainability in a supply-driven environment

Parameswaran Iyer

The Swajal Project design incorporates, for the first time in India, capital cost recovery for water services.

The policy environment in Uttar Pradesh does not strongly support a demand-responsive approach, but the state government has taken steps toward such an approach by agreeing to test a World Bank-assisted rural water supply and sanitation (RWSS) project.

Progress has been encouraging, it appears that although most of India's water and sanitation delivery services are currently subsidized, cost recovery from relatively poor communities will not be a problem as the demand for sustainable systems is so great. Another encouraging sign is that under the project's new delivery system, the government has so far been willing to play a facilitating and partnership role rather than an implementing one.

Rural water supply and sanitation in Uttar Pradesh have traditionally been handled by the UP Jal Nigam (UPJN) — a highly centralized water utility. Funded by government grants, the UPJN constructs and maintains water-supply schemes throughout the state, and employs a supply-driven approach to service delivery which rarely takes consumer preferences

into account. There are no mechanisms for capital cost recovery, and operation and maintenance (O&M) costs are rarely collected. Poor O&M is a major problem, with roughly one-third of schemes out of order at any given time.

An alternative model

In 1994 the Uttar Pradesh government decided to tackle the problem of poor investment sustainability in the RWSS sector by piloting an alternative service-delivery model developed in conjunction with the World Bank — the Swajal Project (Uttar Pradesh Rural Water Supply and Environmental Sanitation Project).

The project, launched in 1996, aims to benefit 1.2 million people from 1000 villages (out of the 110 000 villages in the state) by 2002, and is being implemented in four stages, at a total cost of \$71 million (around £46 million). As of March 1999, 70 villages are in the O&M phase; 200 are in the construction and implementation phase; 300 are in the planning phase; and the remainder are at the pre-planning stage.

Sustainability mechanisms

Since sustainability of investments is one of the major objectives of the project, various specific mechanisms have been built into its design:

Cost recovery

The \$71m project is financed by an IBRD (International Bank for Reconstruction and Development) loan (84 per cent) and a state government grant (6 per cent), with the remaining 10 per cent coming from the communities themselves (contributions may be in cash, labour, or in kind). This is the first time that project communities in India have contributed towards the cost of water-supply schemes. For latrines and other individual 'assets' like compost pits, each beneficiary contributes about 40 per cent of the

What's so special about the Swajal Project?

This rural water supply and sanitation project aims to:

- improve sustainability by adopting a demand-responsive approach, which introduces partial recovery of capital costs and full recovery of operation and maintenance (O&M) costs;
- develop community participation so that communities play a major role in identifying, planning, building, and operating and maintaining their water supply and sanitation schemes; and
- create institutional structures to facilitate decentralized decision-making and, in so doing, to test an alternative to the supply-driven approach to service delivery.

The project components are:

- water-supply systems, including piped water, handpumps, power pumps, dug-wells and rainwater collection;
- environmental sanitation, including latrines (twin pit, pour-flush, or single pit with a partition), drainage systems, and compost pits;
- health and environmental sanitation awareness, women's development initiatives, and non-formal education; and
- studies and sector development (for example, the development of a state-wide strategy, a sanitation and gender campaign, the identification of alternate water and sanitation technologies).

<i>Technology</i>	<i>Per capita cost</i>	<i>Per capita Monthly tariff per household</i>		
		<i>O&M cost p.a.</i>	<i>Household connections</i>	<i>Public standposts</i>
Gravity-spring source	1751	24.00	30.00	10.00
Gravity-stream source	1796	30.00	40.00	13.00
Pumping-infiltration well	1646	78.00	90.00	28.00
Rainwater harvesting	772	6.00	Nil	Nil
Handpumps	350	3.60	Nil	2.00
Dug-wells	710	5.50	Nil	2.50
Powerpumps	782	73.00	75.00	25.00

Table 1. Menu of technology options and their costs (costs are in rupees: £1 = Rs54 at time of project).

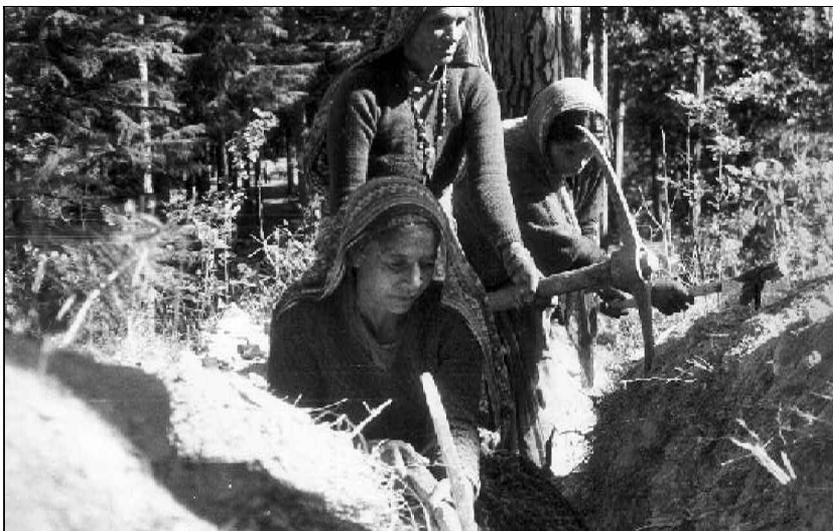
The close involvement of women in planning, construction, and operation and maintenance has contributed significantly to long-term sustainability.

capital cost. All construction funds are transferred to the community's bank account, which is jointly managed with the support organization assisting the community. This transparent financial management has significantly reduced the misuse of funds traditionally associated with public sector utility operations in India. In addition to contributing toward capital costs, the communities assume full responsibility for O&M of the water-supply system, and raising funds through differentiated tariff rates for household connection holders and public stand-pipe users.

So far, sheer social pressure has forced almost everyone to pay. In the case of user charges, since one year's O&M costs are recovered up front, as yet there have been no defaults in the first year of operation.

Focus on women

Most capacity-building activities are focused on women — the main stakeholders in the sector. Women make up more than 40 per cent of all Village Water and Sanitation Committees (VWSCs), and are thus heavily involved in



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Women in Bisona village digging trenches for their new pipelines.

decision-making. This empowerment of women and their close involvement in planning, construction and O&M, has contributed significantly to long-term sustainability.

Technology choice

The community chooses its own water supply technology through the 'feasibility' process, whereby a menu of possible technology options is offered by the support organization. The major factor influencing a community's choice of technologies is cost — both in terms of capital (where they will pay around 10 per cent), and O&M (for which the community will be totally financially responsible). The option to choose lower-cost technologies enables communities to avoid the trap of over-designed, unnecessarily expensive schemes. In one case, for example, a community originally opted for a power pump with an overhead tank and distribution system, but on learning of its prohibitively high O&M costs (in terms of electricity and staff) later changed to dug-wells. Finally, private companies have been contracted to both supervise the quality of community construction and to give advice.

Attention to structure

The project's institutional mechanism has had to be tailor-made to support the reforms envisaged by project planners. To this end, the Swajal Project has created a unique institutional framework to put the demand-responsive model into operation. This framework consists of a network of three organizations — the Project Management Unit (PMU), the support organizations (usually NGOs) at the district level, and the VWSCs at the community level.

The PMU is administered by the UP government's Department of Rural Development but, unlike a typical government organization, it is autonomous and can operate flexibly. Together with its headquarters in Lucknow, the PMU has ten District Project Management Units (DPMUs), which act as its eyes and ears in the field and are always open to the support organizations and VWSCs.

The VWSCs are the group most

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intimately involved with the planning, implementation, maintenance and management of the schemes. A VWSC is made up of 7 to 12 elected members, with at least a fifth coming from 'scheduled' (disadvantaged) castes or tribes.

Finally, project planners ensure that each selected community is fully prepared to start construction. Each village undergoes a 33-month scheme comprising pre-planning, planning, implementation, and O&M.

Project strategies

Swajal has implemented a number of specific project strategies never before built into water supply and sanitation projects in Uttar Pradesh:

Capacity-building intermediation

The support organization undertakes capacity building at the village level, and acts as intermediary between the PMU and the project communities. It also provides an integrated package of assistance to the communities, including both engineering and community-development support. Intensive village-level capacity building in the 12-month planning phase finally leads to the preparation of nine Community Action Plans (CAPs) on water supply, sanitation, the environment, health and environmental sanitation awareness, informal education, women's development education, cash and labour mobilization, monitoring and evaluation, and O&M.

Self-selection

In keeping with the programme's commitment to demand responsiveness, communities select themselves but they must demonstrate their commitment, by fulfilling specified planning phase outputs;



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those who succeed stand a far greater chance of achieving long-term sustainability.

Village Water and Sanitation Committee members collect water charges in Khankatiya village.

Learning by doing

The PMU has evolved into a flexible body capable of adapting quickly to changed circumstances and local realities. Many modifications have already been made to the project design and implementation procedures in response to stakeholders' demands, including:

- additional training for VWSCs;
- the preparation of 'how to' manuals for VWSCs;
- provisions for paying the community worker and community facilitator through the VWSC;
- changing the schedule for initial village entry to match the availability of qualified women; and
- increasing the number of demonstration construction activities in the planning phase.

The main changes made in response to demands by social organizations have

Name of village	Sustainability parameters				Overall index	Assessment of sustainability
	Effective functioning and use of water & sanitation	Demand responsiveness	User participation in service management (O&M)	User participation in construction, planning and organization		
Weightage (%)	30%	25%	25%	20%	-	
Khankatiya	28.33	21.88	18.18	16.14	84.53	L
Panergaon	23.12	19.14	20.45	14.77	77.48	L
Chamni	25.62	20.30	19.69	14.65	80.27	L
Utroran Ghurdora	15.31	15.90	12.12	13.40	56.73	UNC
Godigarh	22.50	18.35	18.93	14.54	74.32	L
					Likely (L) = > 0.7	
					Uncertain (UNC) = 0.5 - 0.7	
					Unlikely (UNL) = < 0/5	

Table 2. The use of indicators to monitor the institutional, financial, technical and social sustainability of the UP villages' RWSS schemes.

Faced with competition from Swajal, the state water utility is also beginning to adopt a more participatory style in its own projects.

Note: *Sustainability monitoring.* The methodology used in the Swajal project was first tested during the World Bank's supervision mission to another Bank project in India (Karnataka Rural Water Supply and Environmental Sanitation Project) in November 1998.

about the author

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been to make their staff salary structure more flexible, exemption from having to provide bank guarantees for the release of advance funds, and steps to reduce paperwork.

The changes made in response to demands from within the project have been to make greater efforts to sensitize PMU/DPMU staff to the way NGOs function, enabling the PMU to delegate more tasks to DPMUs, and requiring that the VWSCs collect operation and maintenance charges up-front from users for the first year.

Measuring sustainability

Operation and maintenance is already being carried out satisfactorily in the more than 70 villages where construction has been completed, and the PMU has also introduced an innovative sustainability-monitoring mechanism (based on 24-hour village visits made by project teams) in the villages in 'Batch 1', where communities have been conducting their own O&M for at least six months. This field monitoring addresses the institutional, financial, technical and social aspects of sustainability described above, and is

conducted with the participation of the community.

The first sustainability-measuring exercise, done on a pilot basis in five villages, found that four of the five schemes were likely to be sustainable, while the outcome in the fifth case was less certain (see Table 2 on page 27).

Replicable?

In terms of impact at both the policy and project level, the pilot project has been very successful and is already influencing both national and state policy in the RWSS sector. Based on the Swajal experience, the Government of India has introduced a reform package for the entire sector, which includes increased funding for capacity-building activities (previously non-existent); and at least some degree of cost recovery from users. Faced with competition from Swajal, the UPJN is also beginning to adopt a more participatory style in its own projects. The true test of success, however, will be the degree to which key elements of the Swajal pilot's approach are replicated in water supply and sanitation programmes across the state. ■

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