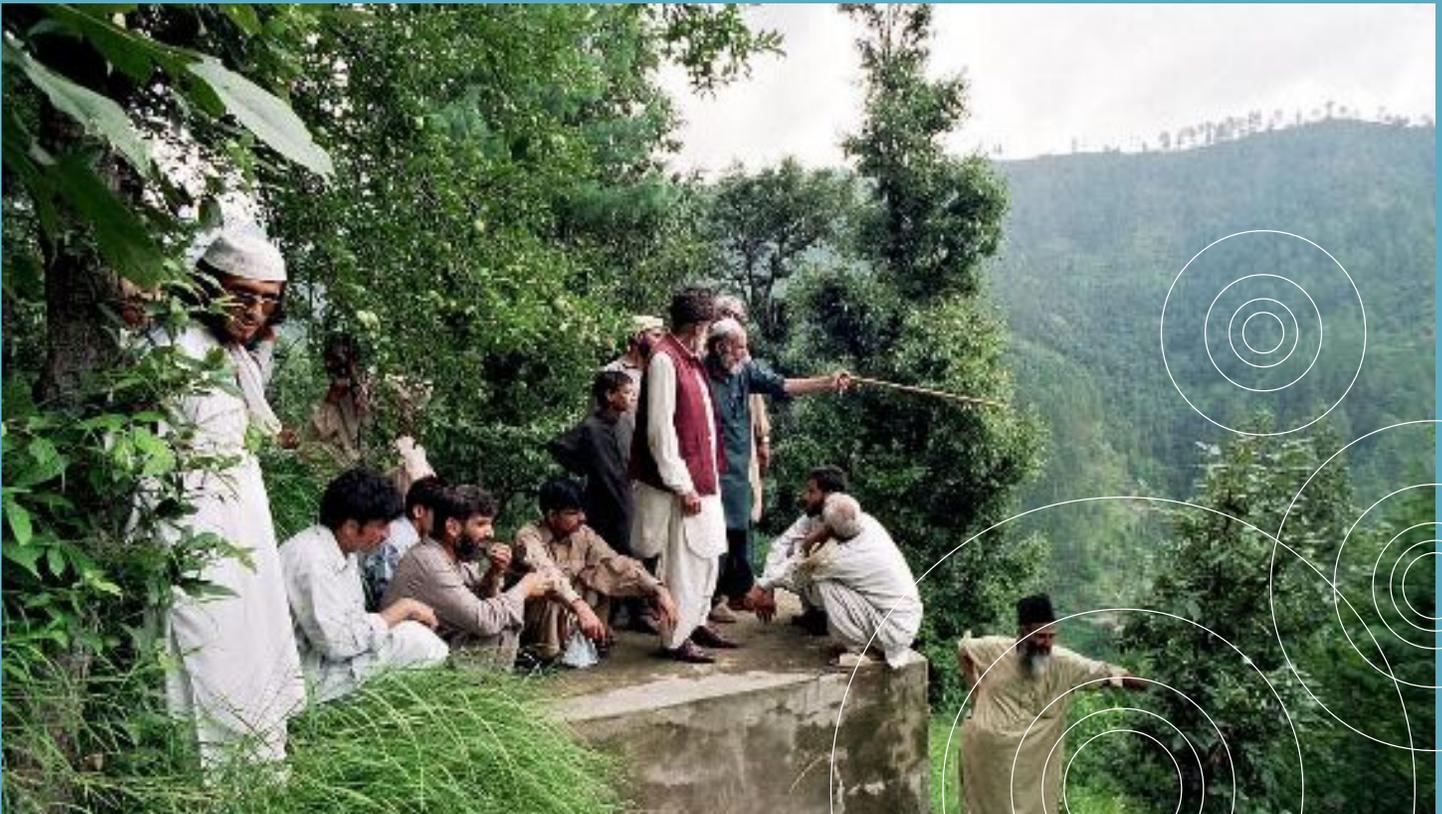


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Component-Sharing: Up-Scaling Demand-Responsive Approaches in Rural Water Supply and Sanitation Sector in Pakistan

Water and Sanitation Program–South Asia (WSP-SA), in partnership with Government of Pakistan (GoP) agencies, has been working to implement the Rio/Dublin Principles in the Rural Water Supply and Sanitation (RWSS) sector in the country. Notable progress has been made, although considerable challenges remain. The overarching objectives of RWSS development activities continue to be improving access to, quality of, and gender and spatial equity in, delivery of services. In order to achieve these objectives, adoption of community-driven and demand-responsive implementation arrangements, leads to substantial savings in capital and recurrent project costs and also strengthens sustainability. Component-sharing is a very effective strategy to implement Demand-Responsive Approaches (DRAs).



Over the past few years, several models have been used to make capital cost-sharing operational. Component-sharing is one such approach. It is transparent, less liable to abuse, and more practical to implement.

Overview

A project based on a component-sharing approach comprises a set of discrete activities (components), allowing the community to independently undertake one or more of these activities.

Capital cost-sharing or, simply, cost-sharing, is one strategy to ensure the Demand-Responsive Approach or DRA.¹ This, in turn, goes a long way in achieving the objectives laid down in the Rio/Dublin Principles (See Box 1). Over the last decade or so, various models have been used to make cost-sharing operational. Each of these models has its pros and cons. In the simplest of these models, the community is required to contribute, in cash or kind, a fixed percentage of the total project cost. Implementation of this model, however, has limitations relating to transparency and likelihood of abuse. These limitations can be

overcome through component-sharing (See Box 2). Component-sharing includes cost-sharing but is likely to be more transparent, less liable to abuse, and more practical to implement. As a one-time contribution or otherwise, it is also likely to be less of a burden on the community. The well-documented Orangi Pilot Project (OPP) in Karachi first provided the conceptual framework for component-sharing, albeit in an urban setting and primarily focused on sanitation. According to the OPP model, “Sanitation can be divided into two sections: internal and external. Internal sanitation includes a sanitary latrine in the house, the sewer in the lane, and connector sewer, while the external consists of trunk sewers and treatment plants. Furthermore, if [the] communities are provided technical assistance and social guidance, they can finance and manage the

construction of internal sanitation provided external infrastructure is available to them.”²

This field note presents three models of component-sharing with differing elements necessitated by the specific environment of each model:

- Local Government & Rural Development Department’s (LG&RDD) water supply schemes in Azad Jammu and Kashmir (AJK)
- Sanitation schemes in Lodhran district of the Punjab being implemented by Lodhran Pilot Project (LPP)
- The erstwhile Public Health Engineering Department’s (PHED) pilot water supply schemes in Sindh.

The models are not comparable in terms of size (See Table 1). The AJK model covers the entire rural water supply system in AJK and has been

Box 1

The Rio/Dublin Principles

An International Conference on Water and the Environment at Dublin in January 1992 enunciated the four Rio/Dublin Principles:

- (1) Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment
- (2) Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels
- (3) Women play a central part in the provision, management and safeguarding of water
- (4) Water has an economic value in all its competing uses and should be recognized as an economic good.

(From “Understanding the Importance of Water,” Urban Water Resources Management, Global Development Research Center, www.gdrc.org)

¹ A distinction is made between need and demand for a service. Need is simply the desire to have a service. When this need is backed up by a willingness to pay for the service, partially or fully, it is described as demand.

² Arif Hasan, 1997, quoted in UNDP, “Accelerating the Pace of Development, A Case Study of The Lodhran Pilot Project,” 2002.

in place for over a decade. The Lodhran and Sindh models, on the other hand, represent pilot activities in a few districts of the provinces of the Punjab and Sindh, respectively. Each model, however, has significant lessons to offer.

Development Process in Rural Water Supply and Sanitation

Any water supply and sanitation system (or scheme, as it is generally referred to in Pakistan) goes through a number of phases from planning to implementation. These phases, as listed, are not necessarily sequential and include, though are not limited to:

- identification of the need
- initial social and technical assessment
- prioritization
- social mobilization
- formalization of agreements between various partners [for example, through a Memorandum of Understanding (MoU)]
- technical design
- procurement
- installation/construction
- operations and maintenance (O&M)
- extension, repair, rehabilitation.

There are, usually, at least two partners in the whole process: the

user community or the beneficiaries and the government agency with the primary responsibility for service delivery. In a number of cases, a third partner has been involved with a great deal of success, that is, a non-governmental organization (NGO), as an intermediary, a facilitator, a consultant, or even as a contractor. There are cases, too, where the communities and the NGOs are the only partners.

Traditionally, the communities have only been perceived as passive recipients of the service delivery provided by the respective government agencies. In recent years, and in the true spirit of the Rio/Dublin Principles, efforts have been made to change that. WSP-SA and many other international agencies have supported Government of Pakistan (GoP) in these efforts. Through component-sharing, modeled essentially after OPP, effort is made to entrust complete responsibility for implementation of a part or whole of one or several components of the Rural Water Supply and Sanitation (RWSS) delivery system to the users. However, in an RWSS system, it may not always be possible to make a clear distinction between the external and internal components. Nor does it appear to be necessary to make that distinction.

The component-sharing approach is now being used in the RWSS initiatives all over Pakistan to varying degrees. In some areas, as for

example in AJK, component-sharing has been in practice for almost 40 years with notable success. To encourage component-sharing, the evaluation criteria for all agencies concerned require initial assessment of the schemes. The proposed schemes with greater component-sharing are given more weight and proposals for schemes thus prioritized. However, the chances of the evaluation favoring the relatively economically stronger communities are offset by the fact that poorer communities may choose service levels commensurate with their capacity to share in the cost.

Three Component-Sharing Models

AJK Rural Water Supply

LG&RDD is primarily responsible for planning and implementing new schemes. The requests for new schemes flow from the community to the LG&RDD through various channels such as community activists and public servants, leading to an Application or Demand Note on a standard form. On filing of the Demand Note, the social organization (SO) staff undertake a baseline survey to collect information about the community and existing facilities. The survey is followed by the formation of a Water and Sanitation Committee (WSC) with a Chairperson, a General Secretary, a Treasurer and at least three other members. The WSC Chairperson and a district official

An enabling policy environment to establish the essential working relationship between the partners is critical — devolution provides a very important foundation for creating such an environment.

sign an MoU, laying down Rights and Obligations of both parties.

The WSC is responsible for:

- ensuring representation of the entire community
- coordination with LG&RDD
- completion of tasks assigned to the community
- opening and operating a bank account for local community contributions, public grants, fees, etc.
- collecting water service charges and contributions
- taking over the completed scheme for O&M
- arranging appropriate training for personnel from amongst the consumers
- procurement of land and water sources
- resolution of local disputes
- keeping accounts
- ensuring effective participation of women
- promotion of health and hygiene education.

The LG&RDD is responsible for:

- preparing technical design
- informing WSC of project details
- delivering government funds and materials

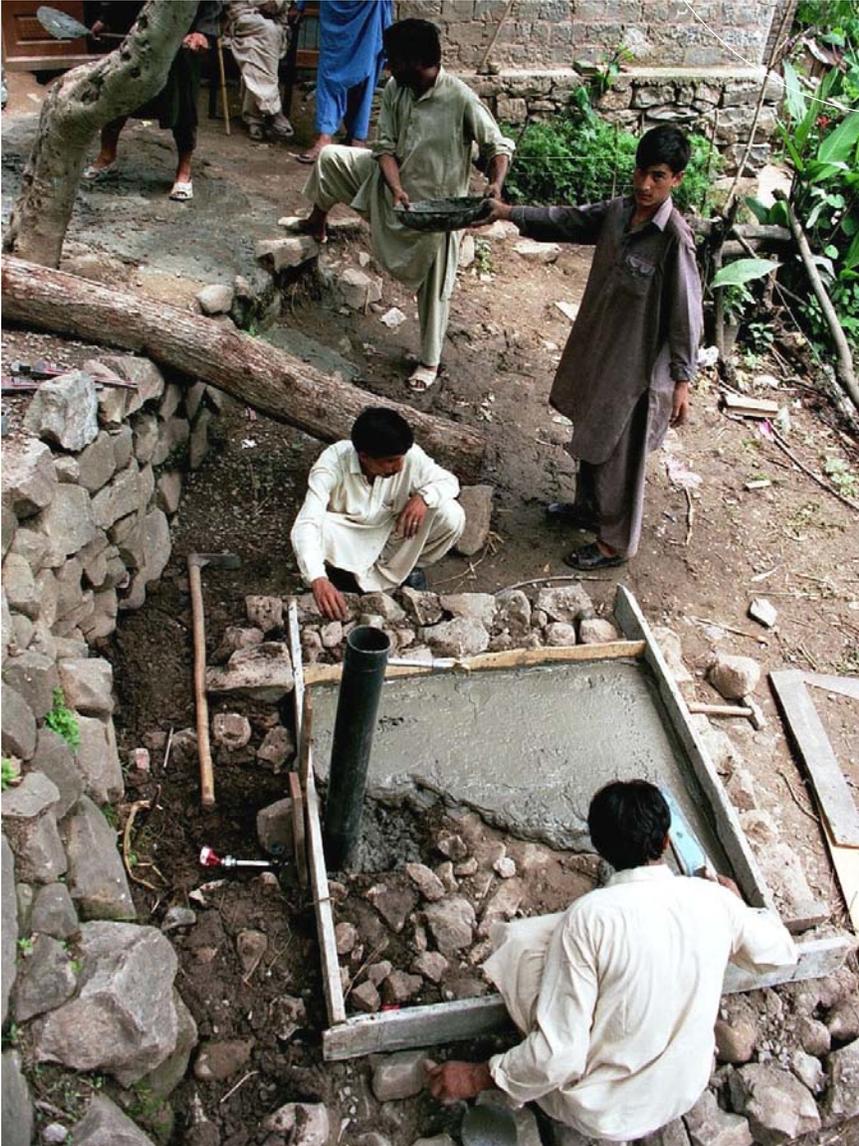
Box 2

Component-Sharing Objectives

- Devolving decision-making to the lowest possible appropriate level
- Involving end users in all facets of planning
- Assessing the demand
- Getting the users' inputs for an appropriate service level and design
- Sharing cost
- Entrusting communities, in order to keep them continuously engaged during the O&M, with complete responsibility for part or whole of one or more of the following components:
 - provision of tanks and pipelines, including construction and installation, with technical guidance and supervision of government and/or NGO
 - supply of construction materials such as sand and gravel
 - transportation of materials such as pipes, cement, pumps, etc., from the nearest metaled road to the project site — this is often a substantial cost
 - labor, where members of the beneficiary communities volunteer to work on the project or the community arranges for adequate compensation for the local laborers.

Findings: Great Flexibility in Institutional Arrangements

- An enabling policy environment to establish the essential working relationship between the partners is critical — devolution provides a very important foundation for creating such an environment
- Participation of the user community in the planning and design process to negotiate component-sharing can lead to important technical and financial breakthroughs
- Communities are frequently more knowledgeable about available resources than other development partners
- Major reasons for selection of the technology include affordability, technical viability, quantity and quality
- More implementation responsibilities for communities strengthen ownership and sustainability.



Estimated cost to the government of gravity and pumping schemes must not exceed Rs. 1,650³ and Rs. 3,300 per capita, respectively. Construction and material cost of overhead tanks that have more than a 5,000-gallon capacity is financed by LG&RDD. Smaller tanks are completely planned, financed and constructed by the community with technical assistance from the LG&RDD. The department finances pipes and associated fittings, and also processes the procurement, but the community is involved at every stage. On selection of the successful bid, the final work order is issued by WSC. Interim progress and completion is documented on standard forms. Transportation of materials from the nearest metaled road to the project site is the community's responsibility and community members undertake this voluntarily. The community also lays pipelines. For any required skilled labor that cannot be arranged on voluntary basis, the community identifies the resources and directly contracts the services, usually locally.

- preparing, monitoring, and observing the implementation schedule
 - training of technicians recommended by WSC
 - checking the WSC's financial and other records and assisting it in keeping the accounts in order
 - assisting the WSC in case of losses due to natural disasters, on a case-to-case basis
 - ensuring that quantity and quality of water supplied are of the required standards.
- In addition, LG&RDD and WSC have powers to initiate action to recover the funds or materials found embezzled.

NRSP Lodhran Pilot Project

Lodhran is a typical, small agricultural market town in southern Punjab with a population of a little over 65,000. Lodhran residents consider sewage disposal their biggest problem. Impressed by OPP and its other extensions, a local activist persuaded the political

³US \$1 = Pakistan Rs. 58 (PKR 1 = US \$0.17) as of May 2003.

Lodhran residents consider sewage disposal their biggest problem. Lodhran Pilot Project (LPP) inspired by OPP's success, is a major indigenous initiative to address this problem. LPP has been set up as an NGO and it is the local support organization. It is responsible for coordination with the TMA, social mobilization and technical assistance to the community.

leadership to initiate the pilot in Lodhran. The Municipal Committee Lodhran (MCL, now known as the Tehsil Municipal Administration, TMA) is the local executing agency (instead of the PHED, in a significant departure from the previous policy). The TMA is directly responsible for the rehabilitation and extension of main sewers and disposal units before the communities undertake construction of house latrines, house connections and also primary and secondary sewers.

LPP has been set up as an NGO and is the local support organization. It is responsible for coordination with the TMA, social mobilization and technical assistance to the community. OPP acts as LPP's Chief Technical Advisor, with its research and training arm — Orangi Pilot Project— Research and Training Institute (OPP-RTI) — also involved. O&M of the lane-level system is the responsibility of the community within the locality. LPP has also

undertaken sanitation work in seven villages in collaboration with the Rural Sanitation Cell (RSC) of the National Rural Support Programme (NRSP). LPP, NRSP, and Canadian International Development Agency (CIDA) finance the external work (except for cost of land for the disposal unit) while the communities are responsible for internal work plus land for the disposal unit.

The LPP-NRSP development process in villages comprises the following steps: Villagers form a Community Organization (CO) and adopt a resolution articulating demand for LPP's intervention. This is followed by an initial assessment. An engineer prepares a feasibility study, including financial cost, commitments and capacity of the CO to implement and maintain the scheme. Terms of Partnership are then developed, discussed, agreed upon and duly signed, supported by another resolution signed by CO members confirming the community's unanimous agreement to the Partnership Terms. The first

installment of funds is then released by NRSP, signaling formal initiation of the scheme. Funds are provided by NRSP in three or four installments. After the initial installment, subsequent installments are provided based on expenditures and progress. A Construction Committee (CC) consisting of three or four CO members is responsible for procurement of materials and implementation of the scheme. On completion, the scheme is handed over to the community for O&M. The O&M funds are kept in a separate bank account opened for the purpose and operated by the committee members.

An NRSP Regional Professional Officer (RPO) periodically visits the project site to monitor progress, compliance with design and cost estimates, and to provide any technical assistance that the CC might require. NRSP staff members are required to file monthly and quarterly progress reports. Regular visits by the NRSP RPO continue after completion.

Table 1

Project Size in Terms of Cost and Population					
Model	No. of Schemes	Completed Schemes	No. of Beneficiaries	Range of Cost of Schemes (Per Capita)	Communities' Share in Cost
AJK Rural Water Supply	1,588	1,264	857,638	Rs. 634 to 1,924*	Up to 40%
Lodhran Pilot Project	7	4	6,561	Rs. 306 to 965	28% in the form of internal systems
Sindh Pilot Project	3	3	7,700	Rs. 975 to 1,670	4–18%

*Cost to government

Sindh Pilot Project

The Sindh Pilot Project (SPP) was undertaken against the backdrop of the experience of earlier International Development Association-assisted RWSS projects in Sindh, Balochistan and AJK. Interim project reviews indicated the need for greater clarification of institutional and project roles for scheme selection and more community participation in project design and implementation. There was also the need for uniformity in financial policy across the sector, better compliance with site-selection criteria, a wider choice for service-level options, and user satisfaction with the quality of drinking water.

The pilot was “to test and demonstrate alternative social mobilization models and viable technical options under a new set of project rules and implementation strategies, following a DRA leading to sustainable water supply schemes.” OPP-RTI developed the conceptual framework for the pilot. The Sindh Graduate Association (SGA), with a province-wide network of volunteers and impressive track record in social development of the rural communities, was chosen as the principal social mobilization agent. Three villages were selected by SGA and PHED, following mutual consultation with the community, on the basis of community response and the flexibility of using various

technical solutions at the selected sites. After initial contacts were established with the communities, the proposed project and the rules were clearly defined before being launched.

The communities’ willingness to share in the capital cost and labor, and subsequently take over the O&M, was assessed. Village Development Committees (VDCs) were formed and bank accounts opened. The SGA social organizers, in consultation with the communities, developed village profiles. Various technical options were considered along with their financial implications in terms of capital and O&M cost to the communities, and options were finalized with the VDCs’ consent.

The responsibilities for different components were shared as described in Table 2 on page 11. PHED then prepared the project documentation for approval of the steering committee. Respective responsibilities of PHED and VDCs were defined for project implementation and execution. Tenders (invitations for bids) were then advertised as per the PHED procedures. PHED and VDCs jointly evaluated the bids. Contracts were awarded by PHED in accordance with the joint evaluation. PHED and VDCs jointly supervised the execution of construction, on completion of which the schemes were handed over to VDCs for O&M in 2001.



Key Findings

Flexibility for Institutional Arrangements

The three component-sharing models described above present three different institutional arrangements. In AJK, LG&RDD, a government agency, works directly with the communities to the extent that it facilitates the latter in organizing the WSCs. LG&RDD has dedicated staff for social mobilization for the purpose. The WSCs have the potential not only to work for water and sanitation but also to undertake other activities, such as education and micro-financing, depending on the communities’ preferences.

In LPP, there are two arrangements: In the urban areas, the government (MCL), an NGO (OPP), and local activists have collaborated to form a local NGO, LPP. This NGO in turn

The differences in the institutional arrangements demonstrate the great flexibility available in applying the component-sharing models. Adaptations to the model may be made depending upon the resources available locally, the local policy and development environment, and other factors.

works both with MCL and OPP, as well as helps the user communities organize into smaller (lane) groups. In the rural areas, LPP has arranged for assistance from the national NGO, NRSP, to work with the local communities, organize them, and improve sanitation. In this effort, MCL is not involved directly.

Finally, in SPP, the principal partners include the government agency, PHED, a provincial NGO, SGA, and the members of the beneficiary communities. Though PHED has had experience of social mobilization, in this pilot it confines itself to technical and financial aspects. Social mobilization is the responsibility of SGA.

The differences in the institutional arrangements demonstrate the great flexibility available in applying the component-sharing models. Adaptations to the model may be made depending upon the resources available locally, the local policy and development environment, and other factors. With communities as the principal beneficiaries and decision-makers, as many components as possible should be entrusted to the communities. The communities need assistance for social mobilization, which may be available internally. Most material resources, including funds, procurement and construction skills, are available locally also. However, communities do need limited technical assistance in engineering,

elements of planning, designing, construction and O&M. The extent to which the communities need this would depend upon the nature of the scheme. For larger and more complex schemes, the communities would need greater technical assistance as well as financial resources. As long as some public funds are involved, the public sector would be involved in planning, implementation and monitoring.

Enabling Policy Environment

An enabling policy environment establishes the essential working-level basis between the partners. This policy environment defines the quality and extent of interaction between the partners.

Community Participation in Planning

In Sindh, discussion with the community on various technical options and the implications of each, for the project as a whole and for the community, led to a major change in the design criterion (*See Box 3*). Such detailed discussions with the community and the appropriate response by the project team enhanced the transparency and ownership of the project by the community. As a result, the community was aware and prepared for the O&M requirements of the water supply system, and is managing it successfully to date.

Box 3

Community Participation in Planning Leads to Major Change in Engineering Design Criterion

In Sindh, government agency and NGO discussions with the community on various technical options, with implications of each for the project as a whole and for the community, led to a major change in the design criterion. PHED, for many years, has designed rural water supply schemes based on the criterion that a supply of 20 gallons of drinking water is required per capita per day. In one of the three schemes of the pilot, water supply was from a canal. PHED's responsibility was to build the pipeline from the canal up to a holding/settling reservoir. The reservoir was to be built by the community. The community found the cost of the reservoir very high. It asked PHED to change the design criterion from 20 gallons to 5 gallons per person per day. The community stated that it would use the filtered water only for drinking and cooking purposes. For other purposes, it decided that it would use unfiltered water available right at the source. This amendment in design led to a reduction in overall cost of the project as well as the cost to be borne by the community.

Communities are the Most Knowledgeable Partners on Available Resources

In AJK, the LG&RDD has frequently discovered that communities are more knowledgeable about available springs as sources of water. LG&RDD staff are directed to springs and water sources that communities consider more cost-effective to tap. The communities also enter into dialogue with neighboring communities in order to share a source in the interest of a better and cheaper solution.

Selection of Appropriate Technology and Service Level

The reasons for selection of the appropriate technology can be many. These include affordability, technical viability, quantity and quality. In mechanized water supply schemes, for example, energy cost can constitute up to 70 percent of the O&M cost. The preferred quality and quantity of service will also impact on the selected technology. For example, in Sindh, one community preferred filtered water and also agreed to bear the resultant cost. But in Lodhran, the communities are unable to treat sewage before it is disposed off.

Empowerment of Communities

One of the inherent strengths of the component-sharing model is that, continuous dialogue compels all partners to recognize the community

as the most important partner in the development process leading to empowerment and increased ownership. However, thus far, the communities seem to be continuing to depend on the social and political activists among themselves to provide the requisite leadership. The quality of consultation between the leadership and the general membership is variable. There is an effort by all communities to subsidize the benefits to the poorer sections. However, that necessarily translates into a lesser share for the poorer sections in the decision-making. Likewise, women seem to be the greatest beneficiaries of the Water and Sanitation Sector (WSS) development. They are known to use their influence through the male family members for better WSS services and are not seen to be actively engaged directly in social mobilization and decision-making.

Legal Framework

The major impediment in introducing the component-sharing model in the country, with the exception of AJK, hitherto, appeared to be the absence of a legal framework for entrusting more responsibilities to the beneficiaries and for establishing partnerships with the NGOs. In capital cost-sharing, the community's role was limited to mostly contribution of manual labor. No transactions of

Box 4

Local Government Ordinance and Component-Sharing

All four provinces in the country promulgated the Local Government Ordinance (LGO) in August 2001. In consultations preceding the drafting of the ordinance, the process considered various options and models, including the models described in here. The objective is to “devolve political power and financial authority, and decentralize administrative authority to accountable local governments for good governance, effective delivery of services and transparent decision-making through institutionalized participation of the people at grassroots level.”⁴ Clearly, the introduction of the new local government system devolves the highest authority for processing development schemes from provincial-level offices to (in the case of WSS) the *tehsil* level. There is built-in flexibility and encouragement, furthermore, to devolve the decision-making process to the lowest administrative level possible. Consequently, the *tehsil* councils can approve rules and bye-laws that facilitate component-sharing and community-contracting.

⁴The Punjab Local Government Ordinance, 2001. All four provinces have promulgated similar ordinances.

AJK presents a remarkable model for contracting by the community. It has had a legal framework for a component-sharing model for almost 40 years.

funds, equipment or other assets were involved. Therefore, the need for a legal framework was not paramount. In component-sharing models, however, not only are funds transferred to the communities for

onward disbursement, communities also receive materials such as pipes, etc. (See Box 5). In any public sector, such transactions are open to considerable scrutiny and bureaucratic processing. This, in turn,

can reverse the very advantages of component-sharing, that is, efficiency and cost-effectiveness.

Sustainability

The component-sharing model

Box 5

Community-Contracting: Procuring Construction Services

With component-sharing, communities themselves are responsible for a number of project components, including procurement of materials, transportation and even construction. In any case, for small (social sector) development projects, most materials as well as requisite skills are available locally. Thus, it would seem more prudent to entrust contracts for all related works and services to the communities. This would also be in the true spirit of community empowerment. Unfortunately, the legal framework for public sector development in Pakistan did (and, in many areas, still does) not allow it. This is a significant impediment in realizing the full potential of a public/NGO/community partnership. In Pakistan, as in AJK, public sector agencies normally engage private sector firms for providing construction services. These firms act as vendors for supply of skilled/unskilled labor and materials, and also coordinate construction activities. But, in the case of small, component-sharing-based projects, use of an external vendor may actually be counterproductive, since most private firms do not have the skills for interaction with communities and normally have relatively high overhead costs.

AJK presents a remarkable model for contracting by the community. It has had a legal framework for a component-sharing model for almost 40 years. A Manual of Instructions (or *Dastoorul Amal* in the official Urdu language) was first published as far back as in 1964. In 1990, the Manual was revised and updated. There are plans now to make available copies of the Manual to all offices concerned.

The Manual lays down the procedure, allowing the community to undertake procurement of all construction work. The LG&RDD acts primarily as a technical advisor, facilitator and a conduit for the public sector grants provided to the community in the form of funds and materials such as pipes, pumps, etc. WSC members are jointly held responsible. In this way, as far as LG&RDD is concerned, the communities are the owners. Construction of small tanks is completely the responsibility of the community and is not included in the project cost. Similarly, the community also makes provision of land and rights to source of water at no cost to the project. For larger overhead tanks (with a capacity of more than 5,000 gallons), the community undertakes the procurement of construction services in accordance with the project specifications. The community is free to use any procurement method (sole-source, limited or full competition, etc.). Payments are released by the public agency to the community in pre-specified tranches based on satisfactory construction progress and quality. The community is responsible to pay the contractors. LG&RDD and WSC jointly undertake procurement of technically more complex tasks. LG&RDD invites the bids and WSC participates in bid evaluation and approval. On identification of the lowest evaluated bid, WSC issues the work order. The funds are released by LG&RDD to WSC to be disbursed to the supplier on performance that is certified as satisfactory by WSC and LG&RDD. Transportation of pipes from the nearest road to the project site and their installation is the complete responsibility of the community. It is believed that this simplified contracting method has reduced cost, execution time, and has improved quality of construction.

also strengthens the prospects of long-term sustainability of the development process as communities assume more and more implementation responsibilities and develop a strong sense of ownership.

Constraints and Recommended Actions

- Lack of an appropriate legal framework and system can be a major impediment to successful implementation of component-

sharing. AJK already has a framework. The proposed extensive distribution of the Manual of Instructions should be accompanied by workshops to facilitate greater discussion. Further, the Manual itself should

Table 2

Summary of the Three Models			
Model	Component ^{5, 6}		
	Community	Local Support Organization/NGO	Government/Donor Agency
Azad Jammu and Kashmir Rural Water Supply	<ul style="list-style-type: none"> • <i>Scheme Identification</i> • Land • Source • Main/Storage Tanks • Concrete Materials • Partial Transportation of Pipes • Installation of Pipelines • Operations and Maintenance 		<ul style="list-style-type: none"> • <i>Scheme Identification</i> • <i>Social Mobilization</i> • <i>Social Assessment</i> • <i>Training</i> • <i>Technical Assessment</i> • <i>Design</i> • Overhead Tanks • Pipes • Equipment
Lodhran Pilot Project Rural Sewage Disposal ⁷	<ul style="list-style-type: none"> • Flush Latrines • Land • Concrete Materials, Pipes and Installation of Internal Pipelines • Land for Disposal Units • Operations and Maintenance of both the Internal and External Systems 	<ul style="list-style-type: none"> • <i>Scheme Identification</i> • <i>Social Mobilization</i> • <i>Social Assessment</i> • <i>Technical Assessment</i> • <i>Design</i> • Concrete Materials, Pipes and Installation of External Pipelines • Equipment • Disposal Units 	
Sindh Pilot Project Water Supply	<ul style="list-style-type: none"> • Land • Main/Storage Tanks • Pipes and Installation of Pipelines • Operations and Maintenance 	<ul style="list-style-type: none"> • <i>Scheme Identification</i> • <i>Social Mobilization</i> • <i>Social Assessment</i> 	<ul style="list-style-type: none"> • <i>Scheme Identification</i> • <i>Technical Assessment</i> • <i>Design</i> • Source • Main/Storage Tanks • Concrete Materials, Pipes and Installation of Pipelines • Equipment • Filtration Units

⁵ Soft components are in italics.

⁶ Components appearing under more than one heading are either jointly performed or, as in the case of SPP, are performed by one entity in one scheme and by another entity in another scheme.

⁷ The local support organization in LPP is partially supported by MCL, NRSP, and OPP.

be updated in the light of recent experiences. In the four provinces, the LGO provides a good legal basis for providing this framework (See Box 4).

- Inclusion of the poor and women in the decision-making process is an important consideration in the development process. In the component-sharing models reviewed here, it appears that decisions on behalf of the user communities are still taken by the activists and opinion leaders of the community. Although there is consultation among the community members, it is not clear if the component-sharing has actually helped include the poor and women in the decision-making process. Separate, focused initiatives will be required for participation of women in the process.
- Respective government agencies/NGOs require capacity for social mobilization. AJK has staff but not on a permanent basis. PHED in Sindh also had project-financed social mobilization staff who were terminated when the project closed down. Therefore, either these positions should be regularized or the work should be done through NGOs.
- The AJK and SPP projects cover only water supply. The issue of sanitation, including disposal of solid and liquid wastes, is not addressed. The LPP addresses only issues of sewage but not disposal of solid waste. This is a serious shortcoming. Water

supply must be accompanied by systems for disposal of used water. Lack of proper disposal of solid and liquid waste leads to contamination of water supply and also problems in disposal of sewage. Development efforts in water supply and sanitation must address all aspects (water supply, solid and liquid waste disposal and hygiene) simultaneously. An integrated approach, however, would present greater challenges in component-sharing, requiring additional resources.

- Rural communities cannot be expected to address certain serious health and environmental considerations without external assistance. For example, neither AJK nor SPP provide for any mechanism for initial and periodic testing of water for chemical and biological contaminants. All international standards require both. Similarly, in the LPP project area, the collected sewage is disposed off untreated and used to irrigate agricultural lands. Untreated sewage disposal is a serious environmental hazard and its use for irrigation of agricultural lands can lead to serious health issues. Technical assistance and guidance must be made available to the communities to address these issues.
- Finally, a mechanism must be in place to monitor all developmental activities, document and disseminate lessons learned, and facilitate review and revision, as necessary.

WSP-SA publishes documents to enable sharing of experiences for the benefit of various stakeholders on innovative activities being undertaken in the sector. Other publications in this series are:

- External Support Agencies in the Urban Water and Sanitation Sector, August 2000.
- Costing Basic Services for the Urban Poor, December 1999.
- Octroi in Four Municipal Councils of Southern Punjab, August 1999.



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