



**Water and  
Sanitation  
Program**

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

**Linking Sustainability  
with Demand,  
Gender and Poverty**

A study in community-managed water  
supply projects in 15 countries



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## Foreword

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**T**he World Bank's policy research team on engendering development found that gender inequality is more pervasive in poor countries. In those countries, the disparities are greatest among poorer people. Though in no region of the world have women achieved full equality, in poorer regions they continue to have fewer rights, less access to resources, and more limited voice. Many of the disparities between women and men—in rights, resources, and voice—are also disparities between the poor and the better off members of society. Though women and girls bear the brunt, these disparities reduce economic growth and constrain development generally. The study team, whose findings were recently published by The World Bank in *Engendering Development - through Gender Equality in Rights, Resources, and Voice*, recommends a broad, three-part strategy to promote gender equality that will give all members of a society a better chance to escape from poverty.

Those of us working in water supply and sanitation can promote a number of the specific measures recommended in the study at the micro level by designing and implementing projects that better take into account gender

and poverty perspectives. These include measures such as service delivery to facilitate equal access for women and men; promoting gender equality in access to productive resources and earnings capacity; reducing personal costs to women of their household roles to free up time for more productive activities; and strengthening women's voice and participation.

This report, *Linking Sustainability with Demand, Gender and Poverty*, presents the results of a study of community-managed water supply services in 88 communities around the world. It adds to the evidence that giving more attention to the service demands of women as well as men, of the poor members of a community as well as those who are better off, pays off directly in terms of sustainability of the services. Providing greater voice and choice to all during the process of service establishment results in greater equity later—a better distribution of the burdens and benefits among community members, and improved water supplies that more community members use in a health-promoting manner. Greater access of women and poor people to training and to





participation in water users' committees also contributes to sustainability.

The report points to some specific actions that agencies can take to target women and poor community members more effectively. Among them are participatory tools that lead to greater inclusion of often-excluded groups in making decisions throughout the service planning and implementation process. The methodology developed to conduct the study—*Methodology for Participatory Assessments with Communities, Institutions and Policy Makers* published by the Water and Sanitation Program—is a tool that agencies can use to plan for and monitor sustainability.

These two publications provide practical guidance to help water supply and sanitation sector practitioners and policy makers target women and poorer community members more effectively. Doing so will lead to more sustainable and equitable development that contributes to broader societal goals, including gender equality and a higher quality of life for the poor.

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## Preface

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**W**hen we began the Participatory Learning and Action (PLA) Initiative more than three years ago, we and the other members of the PLA team had two objectives: The first was to add to the knowledge that greater attention to gender pays off in increased sustainability. We proposed to do this by conducting a series of rapid assessments in projects known to have some participatory and demand-responsive features, to see if more gender-sensitive demand was linked to better outcomes. We reasoned that agency officials responsible for water supply and sanitation services would pay more attention to gender, if they had evidence that doing so pays off in better sustained services. As we started to plan the study, we immediately added poverty—poor and better off—as a dimension, recognizing that poverty equals gender in importance as an element of a community’s heterogeneity.

Our second objective was a five-year capacity-building phase to use the knowledge to help change the way programs and projects are designed and implemented. It was only when we discussed practical follow-up to the assessments that potential funding agencies found they could justify the relatively high estimated costs of the assessments, then envisaged for 14 countries.

Achieving these two objectives has proved to be more challenging, has taken longer, and has cost more than we originally envisaged. Nevertheless, with this publication, we are completing the first objective, of adding empirical evidence that gender and poverty targeting matter to sustainability. Although we have not attempted to show a causal relationship, the data from the 88 communities in 15 countries are clear and the associations are significant—*projects that used more gender- and poverty-sensitive demand-responsive approaches had results that were better sustained*. These communities also used their services more effectively, i.e., the majority used the improved water supply in a health-promoting manner. The findings also show that giving choices to more community groups—the poor, better off, women and men—and letting them influence (or control) the process of service establishment empowers them to later manage and sustain their services more effectively.

These findings are consistent with demand-responsiveness. Giving users the kind of services they want and are willing to pay for makes for more satisfied users, services that continue to meet users’ demands over time, and are therefore better sustained. This may not be startling to some, but evidence from around the



globe can help convince skeptics—and strengthen the resolve of supporters—that the effort to reach out to all major groups in poor communities is worth making.

Our second objective of using the results has been underway for some time, since we published the methodology to conduct the 88 community assessments, now called the Methodology for Participatory Assessments (MPA). The MPA is a methodology that can make projects more demand-responsive, with methods to identify the poor and better off members of communities, and then to give them more equitable and greater voice and choice during the process of service establishment. The MPA has other features that make it a useful tool for communities, project and agency staff to plan for and monitor sustainability, access, use, benefits, and user satisfaction in a poverty and gender-specific manner.

The challenge now is to move ahead and use the results towards the goal of better sustained and more effectively used water supply and sanitation services. We envisage a set of interconnected tasks:

- ❖ To apply the MPA to large-scale programs, without endangering its interactive, learning qualities, while adjusting it to the specific conditions and needs of the individual setting. Applications in planning and evaluation are already formulated or underway in several projects, and there is interest from others.
- ❖ To develop sufficient local capacity that project and task managers can readily call upon, without each time having to incur the time and expense of undertaking extensive training, and to institutionalize this capacity into existing country and inter-country sector support organizations. The MPA is a methodology with an analytical framework that drives towards sustainability and that embeds gender and poverty at every stage. Even experienced hands in participatory

methods need some training to use it properly and to its full potential.

- ❖ To continue to learn from experience and incorporate the lessons in the MPA in order to target interventions more precisely and equitably, thereby improving their effectiveness, efficiency and benefits. Two activities are necessary here. First, MPA practitioners need the opportunity to meet periodically to exchange experiences and lessons among themselves and with peer reviewers who are specialists in participatory planning and evaluation. In this way experiences and lessons can be fed back into the methodology and its quality preserved when adjustments are made and applications are scaled up. Second, a global core group needs to monitor the further development and modification of the MPA, to ensure quality and preserve the integrity of the MPA as a tool that monitors sustainability, embeds gender and poverty, and encourages learning at all levels because it uses participatory (rather than extractive) methods.
- ❖ The MPA's analytical framework can be applied in other sectors in order to plan and monitor community-managed sustainable services, provided that sector-specific indicators are developed.

From the outset the PLA has been a multi-faceted collaborative effort: first between the WSP and the IRC, as a global activity overseen by a global core group involving staff of WSP, IRC, and several other organizations, and then among the communities, projects, and agencies (government, NGO, and external support agencies) that participated in the assessments. The collaboration has been fruitful and successful, and we hope to broaden it as we move forward.

December 2000

Bruce Gross  
Christine van Wijk  
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## Acknowledgements

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**T**he Participatory Learning and Action (PLA) Initiative harnessed the talents and energies of agencies and individuals around the globe. It was a collaborative effort of the Water and Sanitation Program (WSP) and the IRC International Water and Sanitation Centre. It was planned, managed and carried out under the supervision of a core team from the WSP and IRC.

Core team members took responsibility for overseeing the 88 community assessments and various institutional assessments conducted: Rose Lidonde and Noma Musabayene in Eastern and Southern Africa; Rekha Dayal with Shalini Sinha in South Asia; Christine van Wijk with Jennifer Francis in West Africa and Maria Lucia Borba in Latin America; and Nilanjana Mukherjee with Indrawati Josodipoero and Karen Jonesy Jacob in East Asia and the Pacific. These assessments could not have been done without the enthusiastic and supportive cooperation of women, men and water committee members in the communities, and in the many project, government and non-governmental agencies that were involved. Nilanjana Mukherjee designed the basic sequence of participatory assessment tools with poverty-targeting. Christine van Wijk took the lead in the development and pilot testing of the methodology and kept statistical analysis on track. Rekha Dayal served as the field coordinator. Bruce Gross was responsible for overall task management and for keeping the PLA Initiative funded.

Data analysis added a new set of people to the core team. Among them, Uday Mehta and Anurag Rohatgi developed the initial plan and organized and collated the data. Special thanks go to A.J. (Viju) James, who joined the team late, and without whose tenacity and skills in statistical analysis over many months, the global results might still be elusive.

This report owes much to Suzanne Reiff, who task-managed most of the data analysis and drafting stage, and pulled together much of the original material. Thanks also to the peer reviewers whose incisive comments sharpened the report's messages: Nina Shatifan, Social Development and Gender Adviser, AusAID; Wendy Wakeman, Senior Community Development Specialist, The World Bank; and Mike (Harvey) Garn, now-retired economic advisor to The World Bank's Water and Sanitation Division.

Managers at both the WSP and the IRC shared the PLA vision and supported the initiative, and many other staff members of both organizations helped throughout, in ways too numerous to mention. Lastly, and perhaps most importantly, thanks to the WSP's donors, in particular the governments of Canada, The Netherlands, Norway, Sweden, and the Africa region of the United Nations Development Programme, without whose generosity and in some cases, active participation, this work could not even have been contemplated.



## Introduction



What could bring about sustained access of the poor to improved services?

In October 1997 a group of specialists from national, bilateral and international organizations working in water supply and sanitation came together out of a common concern: how to better integrate gender-sensitive approaches into water sector work in order to promote more effectively sustained and used services. The meeting was organized jointly by the Water and Sanitation Program (WSP) and the Gender Network (GENNET) of the Water Supply and Sanitation Collaborative Council (WSSCC). The group agreed that much progress had

been made with regards to raising awareness of gender issues in the WSS sector, but identified two key areas that seemed to hamper further progress in the field:

- ❖ lack of empirical data regarding the extent to which gender-sensitive project approaches actually have a significant impact on the sustainability of services created through projects, and
- ❖ lack of a suitable methodology to help task and project managers and staff deal with gender in projects.

Two earlier studies<sup>1</sup> had looked into participation and project effectiveness and demand-responsiveness and sustainability. While the studies had identified key elements of a demand-responsive approach, they had not inquired into dimensions of gender or poverty (also a key equity concern). Meeting participants agreed that a study designed specifically to investigate the links between sustainability, demand, gender and poverty in projects around the world could help fill the empirical data gap.

<sup>1</sup>Narayan, Deepa, *The Contribution of People's Participation*, The World Bank, July 1995. Katz, Travis and Jennifer Sara, *Making Rural Water Supply Sustainable: Recommendations from a Global Study*, UNDP-World Bank Water and Sanitation Program, 1997.





To that end, the global Participatory Learning and Action (PLA) Initiative was launched. This report presents the findings of the PLA studies, which have yielded valuable lessons and practical strategies to assist funding and implementing agencies to deliver more demand-responsive water services. It also provides researchers and practitioners with insights into an innovative methodology for participatory research and community mobilization.

## Key Findings: Gender- and Poverty-Sensitivity Pays off in Sustainability

Key findings of PLA initiative shed light on the linkages between gender, poverty, and demand-responsiveness. In particular, the PLA initiative found that:

- ❖ Better sustained services are more effectively used, by the majority of community members in a health-promoting manner. Sustained services may not always be effectively used, for example, if the improved service reaches only better off households. If they are not effectively used, however, the community cannot capture the full benefits of the improved service, in particular, improved health and quality of life.
- ❖ Better sustained services are significantly associated with a better gender- and poverty-sensitivity in the demand-responsiveness of projects, user influence and control over project implementation, sharing of burdens and benefits during operations, and user satisfaction.
- ❖ Services are better sustained when projects offer informed choices to both women and men, poor and better off, thus empowering them to influence the process of service establishment.

- ❖ The greater the sharing of control among community members—both women and men, poor and better off—in the management of the service, the more likely the users will perceive the value of the benefits of the service to equal (or exceed) the costs. The more satisfied they are, the better they sustain their services.
- ❖ Agency policies and objectives influence results on the ground, but agency staffing and operational practices are even more strongly associated with better service outcomes.

## Implications: Making Demand-Responsive Services More Sensitive to Gender and Poverty Aspects

The goal of community-managed water supply and sanitation is to develop communities that can sustain and use their services effectively. The past decade has seen a lot of progress in understanding how better to reach this goal by offering more demand-responsive services. The findings point to a number of important implications for programming that can help to accelerate progress in this direction.

- ❖ The right policies can leverage agency practice in the direction of demand-responsive approaches that are more gender- and poverty-sensitive, i.e., that offer more options and information about them, to all major user groups. Projects sponsored by agencies that mandate demand-responsive and gender- and poverty-focused approaches are more likely to incorporate those approaches than projects from agencies that do not.
- ❖ Agencies need the right staff, skill sets, and practices to make their interventions more



demand-responsive and gender- and poverty-sensitive. The availability of both technical and social staff and their working together in teams, and an agency's capacity to plan and monitor using gender- and poverty-disaggregated data are among the key factors associated with better results on the ground. A supportive management and staff training are also important.

- ❖ The more that gender- and poverty-sensitive demand-responsive approaches can be used from the beginning in interactions with communities, the more the community has the opportunity to influence the service delivery process, and the more it helps to build community ownership and capacity to manage the services effectively.
- ❖ Promoting cooperation and mutual understanding at and between all stakeholder levels, from the users up to agency management, can contribute to sustainability. Facilitated meetings where the stakeholders can hear each others' wishes and concerns and learn about how

their actions affect others, can be valuable to foster dialogue at every stage of the project.

- ❖ Participatory social mapping and welfare/wealth classification are valuable tools for planning, monitoring and evaluating the degree and equity of access to services and other project inputs and outcomes, for women, the poor, and other marginalized community groups. Welfare/wealth classification and social mapping give a cross-section of women and men in project communities a means to plan and monitor services in which facilities, training and functions of decision-making and control are more equitably divided.

The Methodology for Participatory Assessments (MPA) provides tools to make demand-responsive approaches a practical reality. The MPA integrates gender and poverty and uses participatory tools and techniques at community, project agency, and policy levels, thereby enabling community women and men and project and agency staff to themselves assess the sustainability of the services.



## Why Gender, Poverty and Demand?



better off men, better off women, poor women, and poor men—are likely to have different wants and needs. They may also differ in capacities and forms in which they can support water and sanitation: in kind or in cash, in lump sums or installments, in equal amounts or according to their different capacities. In a demand-responsive approach, in exchange for their contributions, users also have a voice and choice in technology and levels of service, service provider, financing arrangements and management systems, arrangements for sharing benefits and burdens, and decisions on service adjustment and expansions. To elicit and respond to the demands of various user groups for satisfactory and more sustainable services, DRA must be sensitive to dimensions of both gender and poverty.

**G**ender and poverty are essential dimensions of demand-responsiveness in all water and sanitation projects. A demand-responsive approach (DRA) takes into account that different communities and user groups—

This is so, in the first place, because men and women have different roles and responsibilities in society. They may attach different values to services and the benefits to be derived from them. Consequently, their demand for and use of services and their



economic behaviors differ. Similarly, the poor and the well-off have different expectations from their services, different needs and demands. In addition, they have very different levels of influence on community decision-making processes. In most developing countries, the poor comprise the majority in communities, but they and women lack the voice and power to make themselves heard and heeded. For the same reasons,

they often do not benefit to the same extent from water projects as do men and better off households. Their burdens may increase disproportionately with the improved service, for example, when they put more labor into maintaining the system than their more affluent neighbors who are busy with income-generating activities. Their willingness to sustain the service may be jeopardized if they perceive the costs of the service to outweigh its benefits.



## Participatory Assessments



Identifying the poor within each community and their access to services is the first step in MPA.

To shed more light on the linkages between sustained services and project approaches that are more demand-responsive and gender- and poverty-sensitive, the WSP, in collaboration with the IRC conducted participatory assessments with 88 communities that had managed and sustained their water supply systems for three or more years.

A random sample of communities was chosen from 18 projects in 15 countries, funded by a range of donors, NGOs, and governments. All the 88 communities included agreed to participate. The assessments were carried out from mid-1998 through mid-1999.

The methodology developed to conduct the assessments assumes that the objective of community-managed water supply and sanitation projects is to create a service that is not only effectively sustained, but is also effectively used by the members of the community. *Effectively sustained service* is defined as a service that regularly and reliably provides enough water of an acceptable quality, as perceived by users as well as authorities, for at least domestic use<sup>2</sup>. Breakdowns are rare and repairs are rapid (within 48 hours), and local financing covers at least the regular costs of operation, maintenance, and repairs. *Effectively used service* is defined as the combination of the percentage of households with easy access to the improved water supply; the percentage always using the improved water supply at least for drinking; and the environmentally sound use of the water system (presence of proper drainage and lack of stagnant water).

A working hypothesis was developed, based upon findings from previous studies, informal evidence, and years of experience from the field: *communities better sustain their services*

<sup>2</sup>Domestic use, as interpreted by project designers, usually includes the use of water for drinking, cooking, clothes-washing, cleaning and personal hygiene. Productive uses within the household are seldom considered explicitly.



when projects are more participatory, demand-responsive, and gender- and poverty-sensitive. *Effectively sustained services* and *effectively used services* thus are the study's two dependent variables. They were defined and assessed separately so that relationships between them could be tested, as well as between each of them and the study's independent variables.

*Participatory approaches* involve people actively in making choices about their services. Gender- and poverty-sensitive approaches go further. A *gender-sensitive approach* gives equal access to project inputs and processes relevant for the future service, such as information, training, new functions and jobs, and decision-making to both women and men. In addition, a gender-sensitive approach pays attention to the distribution of work, resources

and benefits between women and men, such as inputs given during construction of the service and use of water for productive purposes within the household. To be gender-sensitive, projects must be prepared to deal with women and men separately, if, for example, women cannot speak up in meetings with men.

A *poverty-sensitive approach* seeks to give a better voice and choice to the poor in relationship with the better off members of a community and increase the balance between the poor and the better off members of a community in decision-making. "Poverty" projects frequently target all community members as "poor" if the community itself is poor. Doing so misses real difference in welfare, and so in power and voice. Communities are

### Targeting the Poor through Social Mapping and Welfare/wealth Classification



During the first day in a community, community men and women draw a social map of the community. The map shows local roads, paths, community facilities, water points, homes and so on. Community members, with the help of the assessment team, define welfare categories—better off, intermediate, worse off—based upon their own perceptions and criteria for defining socio-economic status in their community, for example, type of housing, possessions, livelihood, etc. They then mark the location of the houses or compounds of each category on the map. Clustering of each type of household on the map helps identify neighborhoods that are predominantly better off, middle-level or poor. The mapping process in large communities is similar, but localities, not individual houses, are mapped by economic status.

The completed social map guides selection of focus groups, to ensure that both poor and better off households are included. It serves as a graphic guide to location of existing facilities and to planning for improvements to ensure that poor households and neighborhoods are not overlooked, as the system is designed and sites chosen for location of the public facilities. It can then be used to monitor physical implementation and the extent to which the improved services provide equitable access to poorer households within these communities. The combination of gender and poverty shows up by marking in which households women or men have received training and hold functions or paid jobs.



not, as Alice Welbourn so aptly observed, “homogeneous blobs.”<sup>3</sup> They are tapestries of differences in wealth, culture, religion, ethnic background—any or all of which have an impact on a group’s ability to be included in decisions that affect them. A *poverty-sensitive approach* identifies the poor and the better off through welfare classification and determines where they are physically located in the community. It then seeks to ensure that, as the service is planned, implemented and managed, the poor receive equal access to information, decision-making, conveniently located facilities, paid construction work, membership on the water committee, and so on.

To assess the interrelationships between gender and poverty perspectives in water projects, an analytical framework was developed that looks backward from the present to the time of service establishment. The analytical framework assumes that the degree to which a community sustains an installed water and sanitation service (dependent variable A) and the degree to which its population—male and female, poor and better off—effectively uses the service (dependent variable B) are positively related to five independent variable clusters:

- C. The degree to which the service meets the demands (both at service establishment and at time of assessment) of the major population categories—men and women, poor and better off,
- D. The way in which burdens and benefits of the service are shared between men and women, poor and better off, and
- E. The degree of gender- and poverty-sensitive participation in the establishment and management of the service.

Both the dependent variables A and B and independent variables C, D, and E are assessed at the field level, in interactions with women and men water users from the community, the community water management organization, and project field staff. Gender and poverty perspective have been built into the analysis in two ways: first, within the indicators and variables; and second, by enabling groups of poor and better off women and men to participate, together as well as in separate groups, in the data collection and analysis at the community level.

The analytical framework further examines what agency factors helped or hindered the process of service establishment, and what policy factors in turn influenced the choice of the agency’s approaches. The institutional-level independent variable F is assessed at stakeholder meetings at district or province level that involve project staff and project managers, along with community members and social intermediaries. The policy-level variable G is assessed at central level, in separate meetings with policy makers, national level project personnel, funding agency representatives and through document review. The underlying assumption is that the degree of service sustainability is positively associated with:

- F. Institutional support for demand-responsive and gender- and poverty-sensitive participation, and
- G. The presence and application of demand-responsive and gender- and poverty-sensitive policies in the project and the sector.

Table 1 shows the variable clusters and the indicators, which number 28 in total. The

<sup>3</sup> PRA and Gender Workshop, *Summary of plenary discussions*, 6-7 December 1993. IIED/IDS, Sussex. mimeo. Gender and poverty are the two most prevalent heterogeneity factors. Others such as religion or ethnicity may, in any given community, be just as important in determining whether a group has a voice. Projects need to be alert to these factors and take steps to ensure excluded groups are properly included during the service planning and implementation process.

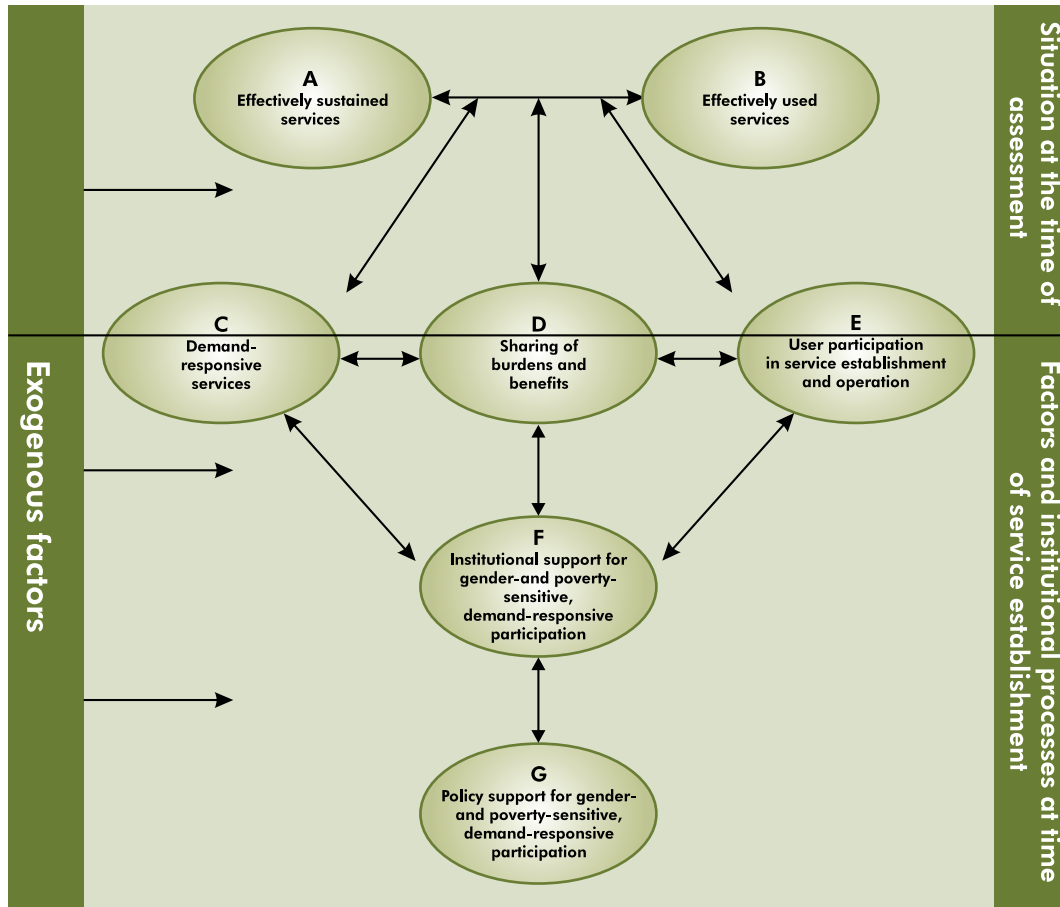


analytical framework for the assessments, the variables, and the indicators were initially conceived by the global PLA team, discussed and refined at a workshop with water-sanitation sector practitioners and specialists in gender and participatory approaches from Asia and Africa, at Bangalore, India, and then pilot tested in Kerala, India.

This methodology with which the study was carried out is now called the Methodology for Participatory Assessments (MPA)<sup>4</sup>. While it builds on earlier methods, notably those published by WHO and Deepa Narayan of

UNDP/PROWESS<sup>5</sup>, it is a new methodology for the participatory assessment of sustainability, use and gender- and poverty-sensitive and demand-responsive participation for planning, monitoring or evaluation. The MPA uses participatory tools and techniques at community, project agency, and policy levels. It enables community women and men, and project staff themselves to assess the sustainability of the services with gender and poverty aspects integrated into it. As such, its value goes beyond its use in a single study. The MPA also permits the data collected using participatory techniques to be coded into

Figure 1: Analytical Framework for the Assessments



<sup>4</sup> Rekha Dayal, Christine van Wijk, and Nilanjana Mukherjee, *Methodology for Participatory Assessments with Communities, Institutions, and Policy Makers*, Water and Sanitation Program, March 2000. It contains detailed information that is not presented here, including a much fuller description of the assessment process.

<sup>5</sup> World Health Organisation, 1983. *Minimum Evaluation Procedures*. Geneva, Switzerland, WHO. Narayan-Parker, Deepa. 1990. *Participatory Evaluation: Tools for Managing Change in Water and Sanitation*, New York: UNDP/PROWESS.





Table 1: MPA Indicators for Water Supply Services

Variables	Indicators and Sub-indicators
<b>A. Effectively Sustained Services</b>	<p><b>A1 System Quality</b></p> <ul style="list-style-type: none"> <li>❖ Construction matches design; quality of materials and workmanship</li> </ul> <p><b>A2 Effective Functioning</b></p> <ul style="list-style-type: none"> <li>❖ Service operation in terms of water quantity, quality, reliability, and predictability for M/W, R/P</li> </ul> <p><b>A3 Effective Financing</b></p> <ul style="list-style-type: none"> <li>❖ Coverage of investment and/or recurrent costs</li> <li>❖ Universality and timeliness of payments by users</li> </ul> <p><b>A4 Effective Management</b></p> <ul style="list-style-type: none"> <li>❖ Level and timeliness of repairs for M/W, R/P</li> <li>❖ Quality of budgeting and keeping accounts</li> </ul>
<b>B. Effectively Used Services</b>	<p><b>B Hygienic and Environmentally sound Use by Majority</b></p> <ul style="list-style-type: none"> <li>❖ Proportion and nature of population using the service by M/W, R/P</li> <li>❖ Degree of improvement of water use habits</li> <li>❖ Presence and state of waste water disposal provisions for R/P</li> </ul>
<b>C. Demand-responsive Services</b>	<p><b>C1 Initial User Demand</b></p> <ul style="list-style-type: none"> <li>❖ Type and proportion of contribution by M/W, R/P at start</li> </ul> <p><b>C2 Project Responsiveness to Demand</b></p> <ul style="list-style-type: none"> <li>❖ User voice and choice in planning and by M/W, R/P</li> </ul> <p><b>C3 User Satisfaction</b></p> <ul style="list-style-type: none"> <li>❖ Satisfaction of user demands, of M/W, R/P</li> <li>❖ Ratio of user-perceived cost-benefits for M/W, R/P</li> </ul>
<b>D. Gender and Poverty Perspective in Sharing of Burdens and Benefits</b>	<p><b>D1 Gender and Poverty Focus at Start</b></p> <ul style="list-style-type: none"> <li>❖ Nature of community payments in the establishment of the service (degree of equity in the system for payment, by M/W, R/P)</li> <li>❖ Cost sharing/contributions sharing between and within households at the time of service establishment, by M/W, R/P</li> </ul> <p><b>D2 Gender and Poverty Focus during Operation</b></p> <ul style="list-style-type: none"> <li>❖ Division of skilled/unskilled and paid/unpaid labor between M/W, R/P in operation and maintenance</li> <li>❖ Division of functions and decision-making between M/W, R/P</li> </ul>
<b>E. Participation in Service Establishment and Operation</b>	<p><b>E1 Equity in Community Management</b></p> <ul style="list-style-type: none"> <li>❖ Responsibilities for maintenance, management, repair</li> </ul> <p><b>E2 Participation with Empowerment</b></p> <ul style="list-style-type: none"> <li>❖ Degree of community monitoring &amp; control in construction schedules, quality of works, and community contributions, by M/W</li> <li>❖ Composition, status, rules and tools of control of managing committee, : extent to which present and gender &amp; poverty-conscious</li> <li>❖ Types of skills created and practiced among M/W, R/P</li> <li>❖ Transparency in accounts (shared with M/W, R/P)</li> </ul>
<b>F. Institutional Support for Gender- and Poverty-sensitive, Demand-responsive Participation</b>	<p><b>F1 Enabling Organizational System</b></p> <ul style="list-style-type: none"> <li>❖ Explicitness of Sustainability, Equity, Gender-sensitivity, Demand-responsiveness and Community Management in project objectives, strategies and performance evaluation criteria</li> <li>❖ Gender- and class-disaggregated planning and monitoring systems in operation</li> <li>❖ Expertise as reflected in the type of agencies involved, field teams, and team approach</li> </ul> <p><b>F2 Enabling Organizational Climate</b></p> <ul style="list-style-type: none"> <li>❖ Managerial support, staff capacity building, and staff performance incentives</li> </ul>
<b>G. Policy Support for Gender- and Poverty- sensitive, Demand- responsive Participation</b>	<p><b>G Supportive Sector Policy and Strategy</b></p> <ul style="list-style-type: none"> <li>❖ National sector policy for water and sanitation present with Sustainability and Equity as explicit goals</li> <li>❖ Degree to which national sector strategies are present to guide the achievement of policy goals and incorporate community participation and management; gender sensitivity and gender equity; poverty sensitivity; and demand-responsiveness in sector projects</li> </ul>

Note: "M/W" refers to women and men, and "R/P" to rich and poor.



ordinal scales, which can be fed into a program or project database and statistically analyzed. It thus provides a multi-level management tool for monitoring, adjusting, and predicting sustainability with a gender and poverty focus on community-managed water services in large infrastructure projects and programs.

Substantial effort and time went into checking and rechecking the data, and a number of discrepancies were found and corrected several months after conclusion of the field work. The global sample of 88 communities was sufficiently large for the purpose of statistical analysis. The correlations that appear in this report were calculated using non-parametric statistics, the Spearman's rho. Descriptive statistics such as frequencies and cross-tabulations were particularly valuable in producing country

and regional reports when sample sizes were too small for correlations to be run.

The correlations found show associations, not causation, between variables. Thus, for example, if better sustained services are found to be significantly associated with projects that were more demand-responsive (as was the case), it does not mean that demand-responsive approaches will necessarily lead to, or "cause," sustainability. The study did not attempt to show causation by showing that projects that were not demand-responsive were not sustained. The number and nature of the significant associations found, however, add measurably to the growing evidence supporting the hypothesis, namely, that projects that are more participatory, demand-responsive, and gender- and poverty-sensitive do indeed lead to better outcomes.

### Ordinal Data in the Assessments

Most community-level information generated in the assessments was ordinal. It differs from interval or ratio data in that it can be ranked, but it should be noted that the differences between scores are not proportional. For example, in Table 1 there are four indicators used to assess dependent variable A—effectively sustained services. One indicator of effective financing was an assessment of the revenue collected, scored as follows:

- 0 = no income or income covers only part of O&M costs
- 1 = income covers all O&M costs
- 2 = income covers all O&M costs and system expansion
- 3 = income covers all O&M costs, system expansion, and major replacement costs.



A ranking of 3 is most desirable for financial sustainability. While 3 is a higher ranking than 1, it is not necessarily 3 times better than a ranking of 1.



## Communities and Their Services



Why do some communities sustain their services better than other ones?

Communities that took part in the assessments came from 18 different projects. They had many different water technologies that were clustered into three general levels as shown in Table 2. The services had been managed by the communities for between 3 and 25 years and for an average of 5.5 years.

Eight of the 18 projects, with a total of 55 communities, also included a sanitation

component. In 54 of them the local sanitation had been improved, mainly by installing household latrines. One community declined to be included, but did take part in water service analysis<sup>6</sup>.

### A Ranking Produces Two Clusters of Communities

A ranking of communities from top to bottom shows communities differed markedly in how they scored on demand, gender, and poverty indicators. Ranking communities from high to low, according to their score on sustained and effectively used services (dependent variables A and B), produced a cluster of 13 closely scoring communities at the top and another 13 at the bottom.

**Top Cluster of 13 Communities.** The top 13 communities also scored higher on participation, gender- and poverty-sensitivity, and on services based on demand and response to demand. They present a clear picture of the more successful services in the sample.

<sup>6</sup>The PLA assessments established indicators for sanitation and set out to test the same hypothesis as for water. The results showed that the sanitation services in the sample were quite different from the water services: with some exceptions, they had not been established in response to demand and were not managed by the communities. Rather, sanitation frequently was taken up as a condition of getting water. The exceptions were 10 sanitation services in Kerala, India that were established in response to demand, and tended to be more gender- and poverty-sensitive than the water services in the same communities. Given the situation globally, however, there were insufficient numbers of communities to test the hypothesis, or the indicators proposed, and no further analysis has been done in this study for sanitation services.

**Table 2: Participating Communities**

Country	Project	External Funding Agency*	Number of Communities	Technology Type**
<b>LATIN AMERICA</b>				
Bolivia	PROSABAR	Regional Development Corporation of Santa Cruz, Social Investment Fund, World Bank, JICA	4	B1 (3) C1 (1)
Colombia	TRANSCOL	DGIS, Ministry of Health	4	C1 (4)
Ecuador	ETAPA	CARE	4	C2 (4)
Peru	APRISABAC	SDC, NEDA	4	A2 (2), C2 (2)
<b>EAST AND SOUTHERN AFRICA</b>				
Kenya	Kwale WSS Project	SIDA, UNDP/World Bank	4	A1 (2), B1 (2)
Malawi	Malawi National Rural Water Supply Program	DANIDA, CIDA, World Vision, Save the Children	9	B1 (9)
South Africa	Tisane and Laaste Hoop Water Project	African Development Bank; Community-Based WS Project	2	B1 (1), C1 (1)
Zambia	Northern & Western Province Water Supply Program	NORAD, Irish Aid	4	A1 (2), B1 (2)
<b>WEST AFRICA</b>				
Cameroon	Pro Village II HELVETAS Swiss Association Rural Water Supply Program	KfW SATA HELVETAS, African Development Fund, British High Commission	4 4	A1 (4) B1 (3) C1 (1)
Ghana	COWAP Volta Region Water Supply and Sanitation Project	CIDA, UNDP/World Bank DANIDA	4 4	A2 (2), C2 (2) A1 (4)
<b>EAST ASIA</b>				
Indonesia	WSSLIC	World Bank	4	A2 (1), B2 (3)
	FLAWS	AusAID	4	A2 (2), B2 (2)
Philippines	Central Visayas Water & Sanitation Project	AusAID	5	B2 (5)
<b>SOUTH ASIA</b>				
India	Kerala CWSSP	DGIS, DANIDA	4	B2 (10)
Nepal	RWSS Project	ADB	10	A2 (5), B2 (5)
Sri Lanka	CWSSP	World Bank, AusAID	10	A2 (7), B2 (3)
Total number of services			88	

\*National or local governments, or both, provided some type of funding support to all projects.

\*\*Key:

Project Technology: A = Simple (single point, gravity, or private standpost)  
 B = Middle (household connection and private standposts but no treatment)  
 C = Complex (various connection types plus treatment)

Project Type  
 1 = Water supply only  
 2 = Both water supply and sanitation



- ❖ In 12 cases the community itself had made the decision to initiate the project, either during a meeting of community women and men (5 cases), or during a meeting of community leaders with women and men (7 cases).
  - ❖ Both men and women felt they participated in choices about technology or service level and location of facilities (11 cases); local management organization (all cases); and local maintenance (12 cases) and financing arrangements (12 cases).
  - ❖ All groups—the better off, poor, men, and women—participated in planning decisions for the service.
  - ❖ Women participated on all of the committees, but one. Six committees were gender-balanced (female members between 40 and 75 percent). In four cases women were over-represented, and in two they were present but under-represented.
  - ❖ Poor and better off women felt they could influence decisions about service management in all but one community, which had, surprisingly, a gender-balanced service management committee. In the case with no women on the committee, women still felt they had a voice since major decisions were made during all-user assemblies.
  - ❖ In 60 percent communities, users felt that service and benefits were worth their contributions. There were hardly any differences between poor and better off, women or men.
  - ❖ Despite the generally high marks on specific aspects, only 25 percent of the communities in the top scores had a service that was adequate on all points. The amount of water available was especially problematic. Users rated water quantity as sufficient in only seven communities. In five, the quantity was insufficient to meet women’s needs for household and productive uses. Water quality was rated as good in all but one community.
  - ❖ Regularity and predictability of the supply was good for women in all but two communities, and year-round water supply was available in all but three communities.
  - ❖ Four communities covered at least the operation and maintenance costs of the service, and three made profit (data cover last three years). Two could not meet even full operations and maintenance costs (data missing in four cases).
  - ❖ Ten communities made budgets (one did not, two missing data), and ten shared accounts with both women and men users.
- Bottom cluster of 13 communities.** The bottom 13 communities with the lowest scores on the combination of sustained services and effective use also scored poorly on sustained services alone. They also fared poorly on gender and poverty and various management indicators.
- ❖ According to the users, the service had been initiated by all in only three communities. The others had been initiated by the project (four cases), local leaders (four cases) or the local male or female population (one case each). In the top 13, over 90 percent were initiated by the people and involved women and men.
  - ❖ In decisions taken during the planning process, local women and men had much less influence on technology and services levels in 23 percent of the cases, and in location of facilities and local maintenance and financing systems in 31 percent of the



- cases. In only half of the cases, women and men participated in choosing the local water committee.
- ❖ On average, planning decisions were made democratically with a process that included women's participation in only 34 percent of the communities with the lowest results. This contrasted with an average of 88 percent for communities with the best results on the combination of the two of the variables: sustained services and effective use.
  - ❖ Only seven communities had received training, compared to all in the top thirteen communities.
  - ❖ While 61 percent of the best performing service communities had either a gender balance or more women in the local service management organization, only 30 percent of the worst performing services had a composition that could be called gender-balanced. None had more women than men. Indeed, in almost half, women were underrepresented (compared to 15 percent in the best performing services) and in three committees there were no women (there was one without women in the top group). In only two cases did poor and better off women consider that women participated equally with men in decision-making.
  - ❖ Not surprisingly, in the lowest scoring communities, users were generally dissatisfied with their service. In ten of the 13 cases, users were either disappointed in their expectations or believed that they were contributing more than they got, or both. In half of the cases, women and men rated that the service met only half to three quarters of their various demands<sup>7</sup>.
  - ❖ For all but one service, funds were insufficient to cover even the day to day operating costs. In one situation, income was sufficient to pay for these costs, but could not meet larger repairs. Only one service organization prepared an annual budget and only two organizations accounted for the service and their management to those that were using the service and were sustaining (or are expected to sustain) its operation.

## A Mixed Picture Emerges of the 88 Communities

Findings from the sample at large are mixed with respect to current operation and prospects for continued operation of the system. The results clearly indicate that both communities and project implementing agencies need to understand better the multi-dimensional components of sustainability—technical, financial, institutional, social, and environmental. They must also work together better to address all of them more adequately in planning, operating, and maintaining community water supply systems.

Systems function, but the repair record is not encouraging for half the systems. At the time of the assessment, all services were functional. The increased emphasis worldwide on and training for community operation and maintenance is also apparently having a positive effect on community capacity to handle maintenance and repair. In one third of the services, the users reported that local maintenance and management staff usually succeeded in restoring the delivery of water within 48 hours of an interruption.

However, half of the services generally did not get repaired within two days when there was breakdown and in another 10 percent

<sup>7</sup>These demands varied greatly. They might have been practical, such as closer and safer drinking water. They might have also been strategic, such as more water and more time saved and the possibility of using these benefits for improving one's position, e.g., for domestic production such as livestock rearing and small enterprises, or for leisure and rest.



repairs took more than a week. Since women normally cannot store water for more than 48 hours, in 60 percent of the services they probably had to go to other and often unsafe sources until service was restored. Only a few local management organizations took measures to promote safe water uses in such cases.

Delivery of water is inadequate in many systems. Of the 88 participating services, 60 percent delivered water throughout the year, but 28 percent had seasonal shortages, and 10 percent never supplied enough water to meet the primary needs of the users. Access to water is also not adequate. All or virtually all households were being served in only 40 percent of the communities.

Financing poses a major stumbling block for sustainability over the longer term. None of the systems received any operating subsidy. Thus, to survive over the longer term, all systems needed to collect sufficient revenue to meet at least current operating costs. Yet, nearly half the services in the sample failed to meet even this basic requirement, or even plan for it. Less than half of the local service management bodies prepared budgets for the operation and maintenance of the service, and only slightly more

than half kept proper accounts. All services but one had a functional local management organization, usually a water committee (in one case the local chief ousted the committee). In one third, there were no rules guiding how this organization manages the services and how the users use it. These findings suggest that there is much more work to be done if services are to be financially sustainable over the longer run.

Use of water services has improved to the point that it can provide a basis for health benefits. Behavior changes by those with good access to water are promising from a public health perspective. Of those who have been served, more than 75 percent used only the improved water system at least for drinking water. This proportion has been cited as the minimum threshold necessary to achieve a reduction in diarrhoeal diseases.<sup>8</sup> However, these users also invariably used the drinking water source for production, such as growing vegetables, raising livestock, making shea<sup>9</sup> butter, bricks, snacks and drinks for vending (mainly women), processing palm oil and coffee, and growing cash crops (men). These activities raise potential conflicts between drinking and economic uses of water when supply is interrupted or limited.

<sup>8</sup>Esrey, Steven A, *Complementary Strategies for Decreasing Diarrhoea Morbidity and Mortality: Water and Sanitation*. Paper presented at the Pan American Health Organization's Celebrating 25 Years of ORT. Washington D.C., PAHO, 1994.

<sup>9</sup>Shea butter is made by women from the fruits of the Bassia tree, which resemble olives. It is valued as an article of food and of medicine, and is an important commodity in parts of West and Central Africa. It keeps for a year without salt and is also popular because it is whiter, more solid, and more pleasant to the taste than butter made from milk.



## Significant Findings



Service users in Indonesia assess how far the project process was sensitive to gender and poverty issues.

### Factors Associated with Sustained Services

Five factors emerged from the assessments as significantly associated with community

success in keeping services running, as shown by the correlations in Figure 2.

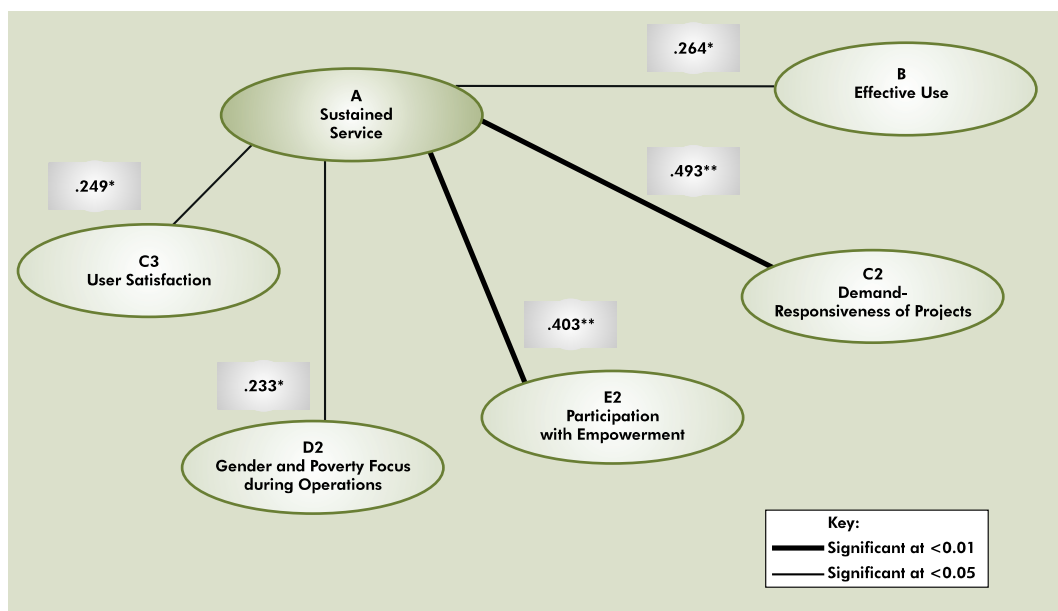
1. **Better sustained services are more effectively used by the majority of community members in a health-promoting manner.**

Services that had better scores on the various aspects of sustainability (dependent variable A, see the specific indicators in Table 1) scored higher on effective use. *Effective use* (dependent variable B) was defined in terms of use by the majority in a health-promoting manner: a higher percentage of households with access to the service, more year-round use for drinking water, and more environmentally sound upkeep of water points. The use of more water—also an important indicator of improved hygiene—was not included because of the difficulty in measuring it.

Among the variable clusters used for data analysis, *effective use* was significantly related only to sustained services. This suggests that the extent to which a community uses its service effectively is substantially related to the extent to which services are effectively sustained, but not to any of the independent variables. Indeed,



Figure 2. Correlations: Factors Associated with Sustained Service



Note: C2, C3, D2, and E2 are subsets of the independent variables C, D, and E that use one of more indicators to test for significant association with the dependent variables A and B. See Table 1.

services can be effectively used only if they are first sustained, but there are examples where the converse is true, such as, when improved services reach only the better off households in a community. But unless services are effectively used, a community cannot capture the full benefits of the improved service.

However, some individual indicators making up the *effective use* cluster did show significant associations with some individual indicators of the independent variables. These are further explained below.

Access of community households to services was higher when women participated in monitoring project implementation, and when potential user contributions during construction were more equitable (within communities as well as within households). Equity in community contributions was scored from low to high: no contribution, voluntary contribution as people see fit, flat rate for all, and all contribute, but the amounts were adjusted to their capacities (for example, communities sometimes chose to exempt certain very poor households or allowed

them to pay less or pay in installments). Within households, highest equity in contribution meant labor and material contributions by both men and women, whereas a low score meant labor contribution only by women. Interestingly, men did not always recognize women’s contribution of food and drinks for construction workers as a contribution of women’s labor or materials, whereas women invariably did so.

- ❖ Final access to services achieved by a community’s households was significantly higher when: the project was initiated by the user households, and not by external agencies or local leaders; men and women from intended user households participated in deciding sites for facilities, the local financing system, and the composition of a local organization to represent users in decision-making; and the local management organization had a higher percentage of poorer community members.
- ❖ Health-promoting use of the improved services was higher when: women participated in decisions regarding location



## Divisions of Burdens and Benefits between Men and Women

Communities still have a way to go to achieve a better division of burdens and benefits between women and men. *Voluntary* maintenance work is either done by women or shared. When maintenance is *paid*, men do it. Upkeep of hygiene and sound environmental conditions around waterpoints is almost exclusively the unpaid work of women. It is this cleaning work that makes women tend to spend more time on the preservation of the water service than men. Service management is much more a voluntary job, and when it is, in 40 percent of the cases women and men do it together. However, one in ten local water management organisations have no women members, and in one third women are under represented. On the positive side, when management is paid, e.g., for the administrative work involved, women have a better share than they do for paid maintenance.

of water points; both women and men were able to choose representatives for their service management organization; and the poor constituted a higher proportion of the local management organization.

### **2. Better sustained services are significantly associated with a better gender- and poverty-sensitivity in demand-responsive projects, user influence and control over project implementation, sharing of burdens and benefits during operations, and user satisfaction.**

Four of the independent variable clusters were significantly associated with a community's keeping its services in operation.

❖ The more demand-responsive the project, the better the service is sustained. Demand-responsive projects offer community members a say in local design and planning decisions. The projects in the sample were not consistent in terms of offering options. Typically, they tended to offer more financial and management options but fewer choices in terms of technology types or levels of service.

When local choices were possible, who had a say, and who made choices? Using the PRA

technique of matrix voting, local women and men brought out how the decisions on the water supply had been made. In over 85 percent of the services at least one decision was taken in a democratic and gender-sensitive manner, in that it involved not only the formal leadership but also common women and men. Joint decisions were most common on service management. In three-quarters of the communities, women and men jointly made decisions on the membership of local water management organizations; in two-thirds, on the location of the facilities and the local financing arrangements. Participatory planning was least common in the choice of technology and/or service level. Yet such participation happened in almost half of the services, and in 41 percent of the cases men and women took part.

❖ The better the gender and poverty focus during operations, the better the services are sustained. In the sample, gender and poverty focus included the perception of the division of payments and labor within households, sharing of labor within communities, and the sharing of functions and decisions within the water management committee. Communities that had a more equitable division of burdens and benefits along gender and poverty lines during operations scored higher on sustainability.



- ❖ The greater the participation with empowerment, the better the services are sustained. Services were better sustained when communities participated in establishing the services not just by contributing, but also by exercising a degree of influence and control on the quality and pace of project implementation. This was particularly true where women participated with men in monitoring and control of financing and construction. Local men and women have a wealth of local knowledge about what works and can be sustained and have the greatest personal interest in jobs well done. This knowledge and interest can best be utilized by projects when the project agency is willing to consult and listen to them, and give them some responsibility for and influence on the quality of project implementation.
- ❖ The more satisfied the users, the better the services are sustained. The more that the users perceived that the service had met their demands about its direct and indirect benefits, the greater the sustainability of the services. This included assessment of the degree to which different user groups felt the benefits from the service were worth what they paid for them, in cash, kind, time, or labor. This finding was not surprising, given the WSP's earlier global study of demand-responsiveness and sustainability, which also found that more satisfied users were more likely to keep their services running.

### The Kind of Participation That Leads to Sustained Services

In the past, water projects that aimed for “community participation” took a fairly narrow

#### Participatory stakeholder meetings spark awareness and trigger change



At a stakeholder meeting on Flores Island, Indonesia, the participants were evaluating the efficacy of gender training given to project functionaries for enhancing women's participation in project processes. Several women representatives from user communities in the project were present at the meeting. As project functionaries and the manager were discussing ways to make the training more effective, the women began to whisper agitatedly among themselves. The meeting facilitators encouraged them to discuss what they were thinking among themselves. A while later, they gathered enough confidence to address the whole meeting to point out that the problem of low participation of women in project processes had much to do with the fact that project functionaries worked only through the community leaders. Women were never directly invited or consulted by project personnel. Community leaders traditionally ignored and excluded women from all decision-making. They said:

"If you are giving any gender-awareness training, give it first to our community leaders! They are the ones that keep us out of everything. And why doesn't the project worker talk to us to find out what we want? Why must we always speak through our leader?"

The project manager and functionaries admitted during the meeting that they needed to change some things about the way they work. The women suggested what and how they could change.

PLA Field Team, Flores



view of participation. The project generally decided about technology and service levels, sometimes decided sites and numbers of facilities in consultation with communities, proposed certain management structures and user payments, and then got community leadership to create the necessary structures and raise the necessary funds. Construction proceeded, using contractors not accountable to communities. Constructed facilities were handed over to user committees for operation and maintenance. Some training was given, usually to selected users or village functionaries, generally with no attention to gender or poverty.

The PLA assessments found that this passive user involvement is not the kind of participation that leads to sustainability. Participation that links with sustainability provides an avenue for users to influence, if not control, the process of establishing services, and it does so not just for the local leaders, but for both men and women from all major potential user groups. The significant findings associated with the major variable clusters—gender and poverty in operations and participation with empowerment—are shown graphically in Figure 3.

**1. Services are better sustained when projects offer informed choices to both women and men, both poor and better off, thus empowering them to influence the process of service establishment.**

The impetus to move from a “supply” to “demand” orientation in the water sector began in the 1990s following an international conference in Dublin and the Earth Summit in Rio de Janeiro in 1992.<sup>10</sup> The first generation of projects seeking to make the shift started by emphasizing willingness-to-pay—what a community is prepared to contribute towards

costs. Findings from the WSP’s rural water supply study in Indonesia showed that community contributions were often mandatory and decided by project personnel in consultation with the village chief, not in consultation with the users themselves. As a result, people saw their contributions as a kind of tax, rather than a payment that they elected to make in return for a service over which they had some control.<sup>11</sup> In such situations, a high initial contribution could indicate a greater voice of the better off in establishing services, with possible inequities in later access by the poor. This could be an explanation for the only significant negative correlation found in the PLA assessments between user demand (initial contributions) and gender and poverty focus during operation of the systems (see Figure 3).

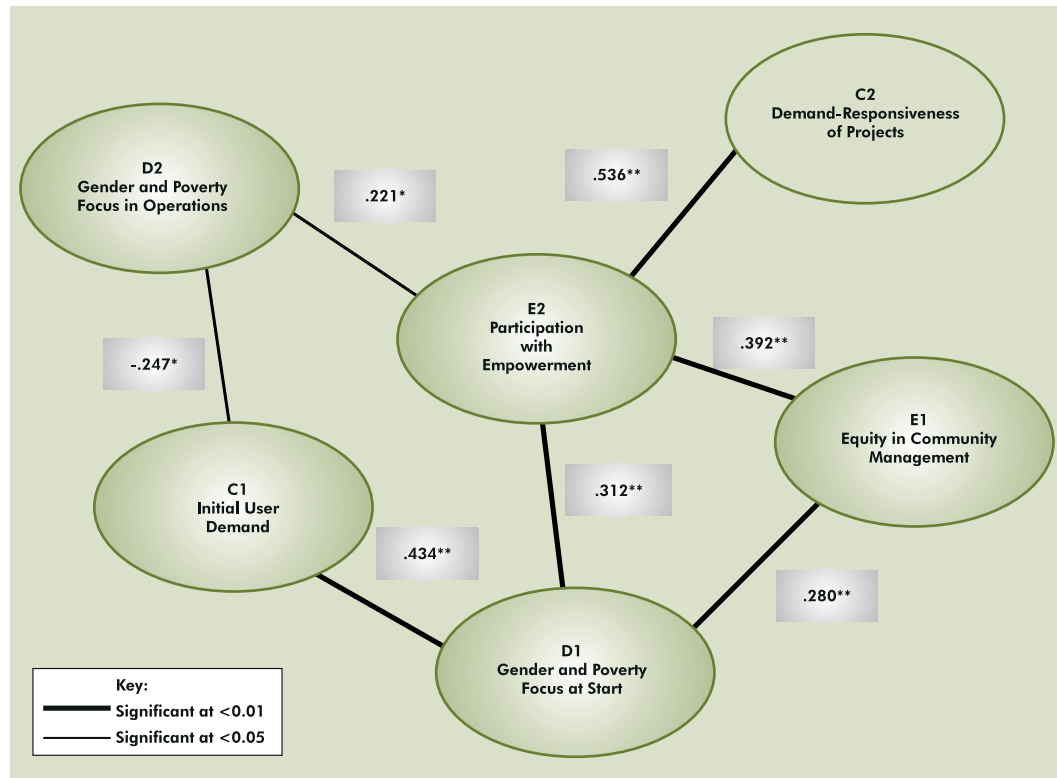
A demand-responsive service needs to be defined not only in terms of who in the community and the households pay and how equitable the payment system is, but also in terms of who makes informed choices in planning services. These choices do not just concern the type of system, but cover all key decisions relevant for sustainability and use, such as how the system will be financed and managed and involves not only costs, but also aspects of health and social justice. Demand-responsiveness does not stop when services are implemented, however. Only when the perceived benefits equal—or exceed—the costs to the users will the users go on supporting in cash, kind and labor a water supply service which they helped plan and install. The PLA assessments found sustained services to be strongly associated with demand-responsiveness of projects (user voice and choice in planning decisions), and user satisfaction. No relationship was found,

<sup>10</sup>From these two conferences emerged a set of principles for development in the water sector generally. Among the most important for water supply and sanitation are the recognition that water is both an economic and a social good and that water should be managed at the lowest appropriate level, with stakeholder—in particular women’s—involvement.

<sup>11</sup>Brown, Gillian and Richard Pollard, *Experiences with implementing demand-responsive approaches: the case of Indonesia*, Paper at Global conference on Community Water Supply and Sanitation, 1998, The World Bank, Washington D.C.



Figure 3. Factors Associated with Gender and Poverty Focus and with Participation with Empowerment



Note: C1, C2, D1, D2, E1 and E2 are subsets of the independent variable C, D, and E that use one or more indicators to test for significant associations with other variables. See Table 1.



Women and men assess how equitably burdens and benefits are shared once the new services are in place.

however, between sustained services and initial user demand as measured by initial user contributions. This suggests that these contributions could have been viewed as a kind of tax rather than as contributions adjusted to options and benefits.

Users derive their sense of ownership and responsibility for sustaining their services from exercising control over planning, financing and constructing the facilities, and then having the services managed to their satisfaction. This kind of participation, defined in this study as participation with empowerment, was found to be clearly associated with sustained services. The pattern of associations found suggests that gender and poverty focus at project start and the demand-responsiveness of the projects can bring about such participation with empowerment.

Despite good intentions, however, the extent to which the community is ultimately able to sustain



its facilities also varies with two factors: how well project staff could and do inform them on the implications of the various options, and to what extent the project provides training both to men and women for technical, financial, management, and hygiene aspects of their services.

The findings of the study confirmed this broader relationship between contributions, influence over planning, and subsequent satisfaction with the services and other perceived effects of the services. The more projects offer users choice in technical, financial and managerial aspects and enable both women and men to make decisions, the more they will later exert control over service management.

## **2. Services are better sustained when both women and men, poor and better off, participate in the management of the service.**

All but one of the 88 communities in the assessment had a water management organization. The presence of this organization, who participates in it, and the way in which it operates are indicators of equity in management of the service.

The variable cluster *participation with empowerment* includes indicators such as whether the management organization has a recognized status and operates by rules; whether women and men participate in monitoring and control of the construction process; the influence male and female members exert over the timing and quality of system design and construction; whether or not women and men in the committees and community have been trained for technical, managerial and hygiene tasks; and whether financial management is accounted for, and if so, whether accounts are shared and with whom (local leaders only or with community women and men).

This kind of community and user influence and control over the services throughout the project

cycle turned out to be a central concept. Not only was it significantly related to sustained services, it was linked to initial demand, demand-responsiveness of project, user satisfaction, and equity in community-management in terms of who does the maintenance and management work and who gets paid for it. In other words, the greater measure of control both women and men and better off and poor have in the management of the service, the more likely the users will perceive the value of the benefits of the service to equal (or exceed) the costs, the more satisfied they are, and the better they sustain their services.

## **Gender- and Poverty-Sensitive Agency Policies and Practices**

Enabling institutional environments and supportive agency policies and practices are widely accepted as essential ingredients in successful development programs. The PLA assessments looked explicitly at a number of key factors to better understand the linkages between agency policies and practices and results in the field. These factors were assessed in stakeholder meetings that brought together women and men who represented the communities in which services were established with social and technical agency staff that supported the service establishment.

### **1. Agency policies and objectives influence results on the ground.**

Although policies must be translated into actions through agency practices, four significant associations with results on the ground emerged:

- ❖ The presence of agency objectives for demand-responsive projects was significantly related to the demand-responsiveness of the project, to the empowerment of communities to influence and control their services, and to user satisfaction.

- ❖ Gender- and poverty-focused agency policies were clearly associated with the level of community participation at project start, community participation with empowerment during operations, and higher user satisfaction.
- ❖ Agency objectives for sustainability and greater equity in access to service were associated with higher user satisfaction and greater gender- and poverty-sensitivity during operations.
- ❖ An agency policy encouraging community ownership and management produced greater user satisfaction.

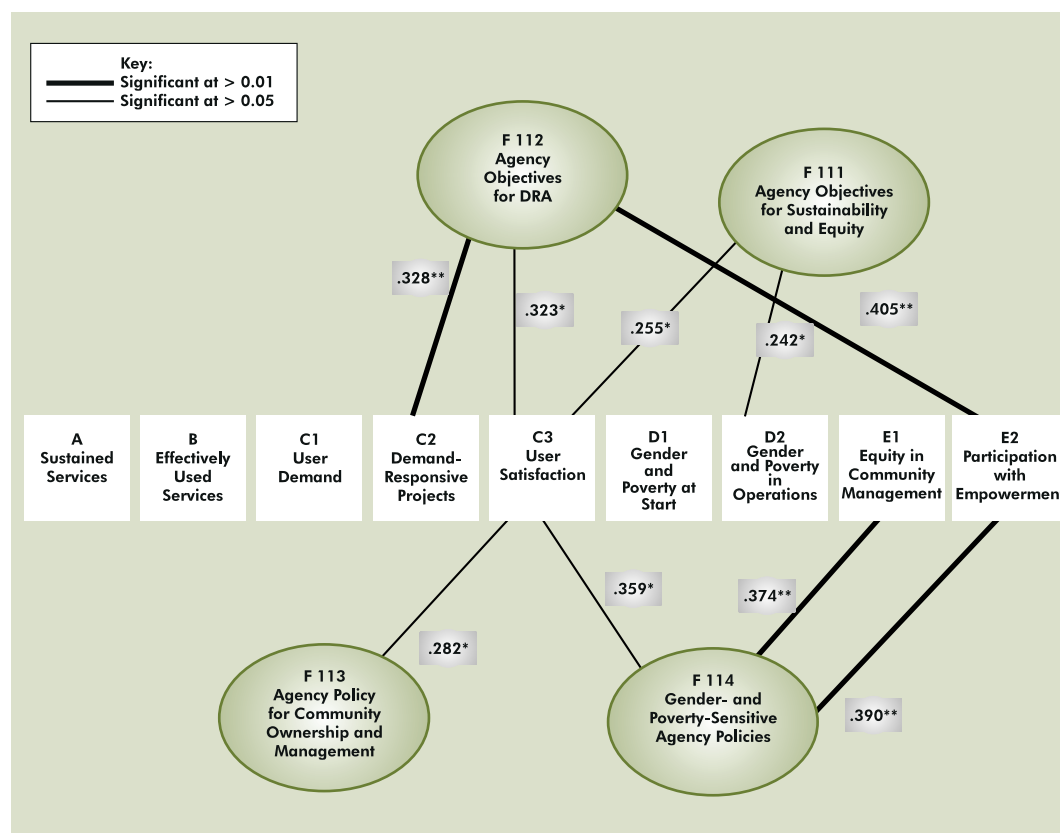
Figure 4 shows correlations between factors associated with gender and poverty and agency policies and practices.

**2. Agency staffing patterns, skills, and teamwork are more significantly associated with service outcomes than agency policies.**

As might be expected, the ways in which an agency operates and is staffed are more directly associated with outcomes at the community level. Figure 5 shows the factors that help to explain the results on the ground. Among the most important factors include:

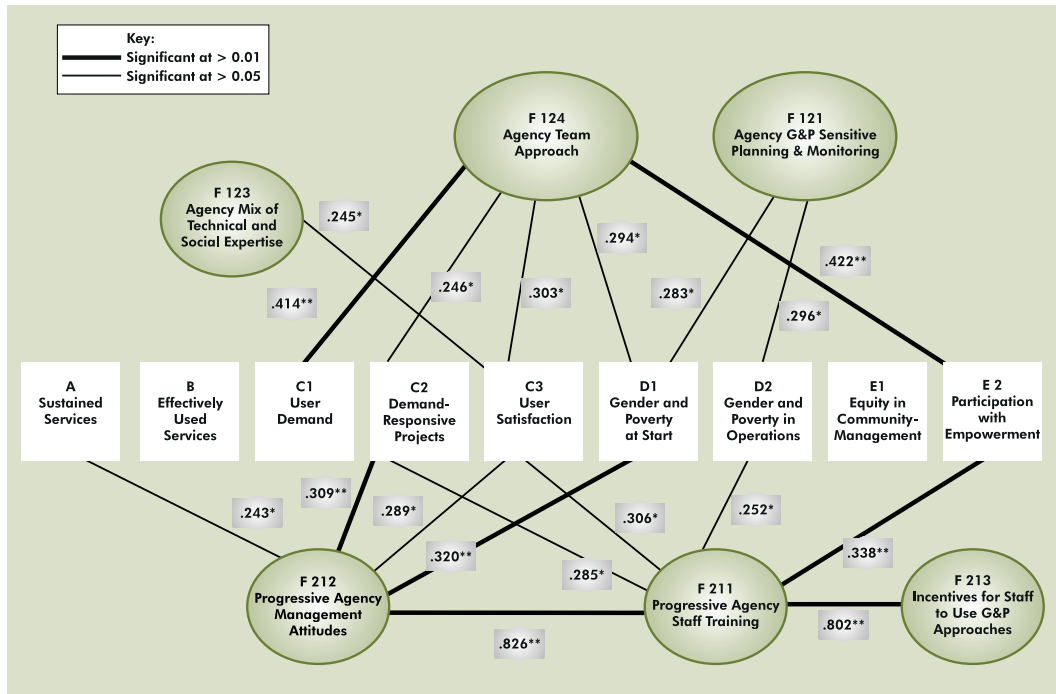
- ❖ Agency approaches for staff use in field operations make a difference. When both technical and social expertise was available among project staff and their availability was combined with their use in a team approach, significant positive associations were found with five other variable clusters: gender and poverty focus at start, initial

Figure 4. Correlations: Agency Policies and Results on the Ground



Note: F111, F112, F113, and F114 are subsets of the independent variable F1 used to test for significant associations with other variables. See Table 1.

Figure 5. Correlations: Agency Skills and Practices and Results on the Ground



Note: F121, F123, F124, F211, F212, and F213 are subsets of the independent variables F1 and F2 used to test for significant associations with other variables. See Table 1.

user demand, demand-responsiveness of projects, user participation with empowerment, and user satisfaction with services. When only technical and social staff expertise was available but not used in a team approach, the availability was weakly correlated only with user satisfaction.

- ❖ Supportive management and progressive<sup>12</sup> agency staff training programs are important ingredients linked to better results on the ground. Progressive agency management was the only aspect directly and significantly (though weakly) associated with sustained services. It was better associated with the demand-responsiveness of projects, with gender- and poverty-sensitivity at the outset of service establishment, and with user satisfaction. As might be expected, progressive agency

management had a significant association with the presence of gender- and poverty-sensitive agency staff training. This in turn was strongly associated with the presence of incentives for staff to employ gender- and poverty-sensitive approaches in their work.

- ❖ A planning system that enables an agency to collect gender- and poverty-disaggregated data is significantly associated with a gender and poverty focus at the start and during operations of the project. An agency's capacity to use gender- and poverty-sensitive approaches depends, among other things, on a system that enables it to collect and analyze gender- and poverty-disaggregated data. Without such a system, it can neither effectively plan for nor monitor progress towards gender and poverty objectives.

<sup>12</sup>"Progressive" in this context means that training on social aspects, including on gender in the highest scoring option, is a regular feature of the program and involves the use of modern training methods, such as participatory tools.





## Implications for Development Practice



Sector agencies need skills and approaches that offer choices to communities and let users' voices be heard.

**T**he goal of community-managed water supply and sanitation is communities that can sustain and will use their services effectively. The past decade has seen a lot of progress in understanding how better to reach this goal by offering more demand-responsive services. A demand-responsive service is one in which the users, in exchange for making contributions (in cash or kind), have a voice and choice in technology, level of service, service provider, financing arrangements and management systems, arrangements for sharing benefits and burdens, and decisions on service adjustments and expansions.

Demand-responsive projects that are more gender- and poverty-sensitive give voice and choice to more potential user groups including

both women and men and the poor and better off. Findings from the community assessments add to the mounting evidence that these approaches result in services that have a greater likelihood of sustainability and lead to greater equity if complemented by other inputs. The findings point to some important implications for development practice:

1. The right policies can leverage agency practices in the direction of demand-responsive approaches that are more gender- and poverty-sensitive, i.e., that offer more options and information to all major user groups. Although the linkages between policies and field results were less extensive than those between agency practices and skills and field results, projects sponsored by agencies that mandated demand-responsive and gender- and poverty-focused approaches were more likely to incorporate those approaches than projects from agencies that had not.
2. Agencies need the right staff, skill sets, and practices to make their interventions more demand-responsive and gender- and poverty-sensitive. The emphasis on shifting from supply-driven to demand-responsive approaches is less than a decade old. While some water supply agencies now have



experience with a first generation demand-responsive project, most are only now beginning to grapple with the implications. While some policies are in place, strategies, practices, staffing patterns, and training programs still are geared to an earlier era. The associations in Figure 5 demonstrate graphically the importance of agency-level capacity and actions in shifting gears, from supply to demand:

- ❖ Achieving sustainability takes both social and engineering staff, working together in a team approach that uses balanced interventions at the project and community levels. Staff training is essential.
  - ❖ Planning and monitoring systems should be in place that enable staff to employ demand-responsive, gender- and poverty-sensitive approaches at the project and community levels.
  - ❖ Agencies, projects, and community-level intermediaries need tools and methods, of which the MPA is an example, and the capacity to use them to undertake gender and poverty-disaggregated planning, data collection, and analysis. This is necessary, at minimum, at the community and project levels. This includes assessing and responding to the demands of often excluded groups who are potential consumers such as the poor, women, and religious and cultural minorities that often live in separate enclaves. It also includes the means to identify members of these groups, to provide them with information, and to engage them actively in order to give them both voice and choice when service improvements are contemplated.
3. The more that gender- and poverty-sensitive and demand-responsive approaches can be used from the beginning in interactions with communities, the more the community members have the opportunity to influence the service delivery process, and the more

it helps to build community ownership and the capacity to manage the services effectively. This suggests that projects and programs need to focus on empowering communities to sustain their access in the processes of design and technology choice and in the training of community members. Expecting that agencies can continue to come back to served communities to replace or expand services is unrealistic, inefficient, and reduces the resources available for the unserved poor.

A community's capacity to participate with empowerment in the management of and control over their service emerged as a central concept in the findings, and significantly related to demand-responsiveness, gender and poverty focus at project start and later on, to user satisfaction, and sustained services. Projects that were initially more gender- and poverty-sensitive in inviting and in meeting demands from more segments of the community, performed better over time, and the communities were more empowered to later take control of the management of their services.

Project agencies can contribute to empowerment throughout the project cycle by bringing out and being responsive to different demands and by using gender- and poverty-sensitive interventions at every stage. Both men and women in communities need to understand the implications of the potential technologies and service levels—in terms of cost, ease of maintenance, repayment and management, extent of access (and what this implies in social and health respect), their differing potential for upgrading, their implications for the uses of water for other than domestic purposes. They need to make informed choices on the locally best-fitting forms of water management and financing, assisted to set up rules for its operation and for managing the accounts. Early establishment and training of the water users committee also helps to build community ownership and control from the beginning.



This kind of participation leads to sustainability. It is also the kind of participation that might require more time and more flexible implementation schedules, so budget provisions, timelines, training programs, and selection of consultants and NGOs have to be planned accordingly.

4. Projects should strive to provide more options to all major user groups in the community. Doing so will make for more satisfied users, lead to a better division of the burdens and benefits of the water and sanitation service, and promote greater sustainability. Community groups often have different demands for service. Users also support water services for more than water alone, and women and men have different reasons for doing so. The ways in which they do so, and the resources they have also vary, for poor and better off women, and for poor and better off men. These demands have to be considered and evaluated for the various user groups. The project should respond to these different patterns of demands by giving various groups choices related to technology, level of service, and the purposes for which water is used. Where choices cannot be accommodated, for example, because the desired solution is not technically feasible, the users need to know the reasons, so they can make another choice, or opt out of the project altogether.
5. Cooperation and mutual understanding at all stakeholder levels—from the users up to agency management—contribute to sustainability. Facilitated meetings during which stakeholders from different groups can visualize their needs and concerns and understand how their demands interrelate with others can help to foster dialogue at every stage of the project. In particular, they can give communities a much more direct say in the process than they would have if they are only represented from afar by

intermediaries or project staff. If findings from participatory assessments are available, they will reinforce the community voices and give the communities an even stronger opportunity to make themselves heard.

6. Participatory social mapping and welfare/wealth classification are valuable tools for planning, monitoring and evaluating the degree and equity of access to services and other project inputs and outcomes, for women, the poor, and other marginalized community groups. Communities are not homogeneous, and projects must have means to identify and engage a cross-section of community members throughout the process of service establishment. The more participatory the social mapping process, the more awareness is created of the importance of finding equitable ways of providing access to women, the poor, and other marginalized groups.

The Methodology for Participatory Assessments (MPA) developed to conduct the assessments has demonstrated that it can generate information useful to all stakeholders for enhancing sustainability. It also provides tools to make demand-responsive approaches a practical reality. The MPA integrates gender and poverty and uses participatory tools and techniques at community, project agency, and policy levels, thereby enabling community women and men and project and agency staff themselves to assess the sustainability of the services. It also permits the data collected using participatory techniques to be coded into ordinal scales, which can be used in databases and statistically analyzed. Applied systematically and in sequence, the participatory tools and techniques of the MPA are a way for communities and agencies to plan for and monitor sustainability, access, use, benefits and user satisfaction in a poverty and gender-specific manner.



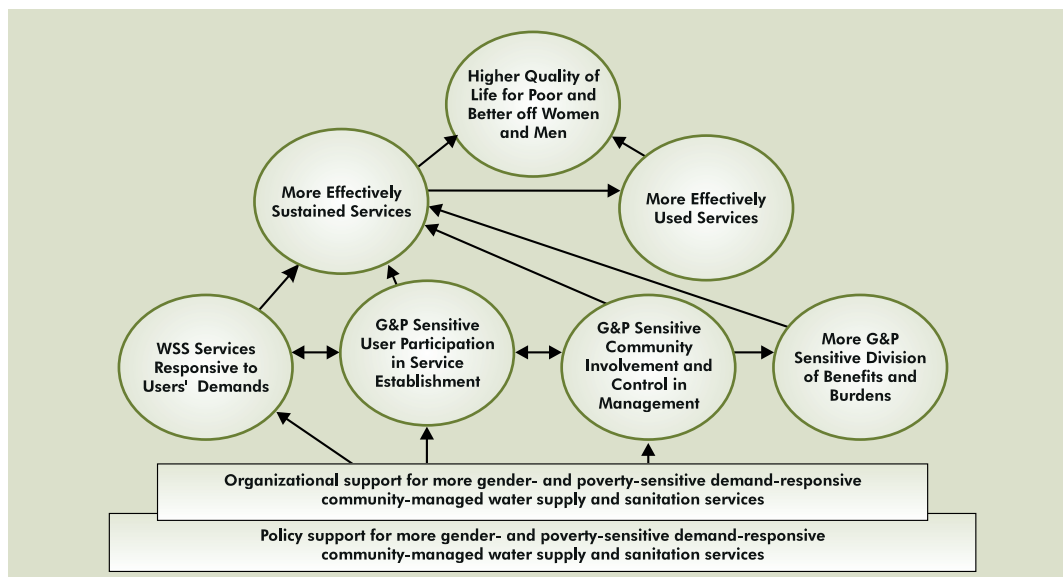
## Towards a Framework for More Equitable and Sustained Services

The findings from the communities suggest strongly that demand-responsive approaches that integrate gender and poverty are the route to sustainability of community-managed water supply and sanitation services. From the findings and the significant associations among the dependent and independent variables, the following framework for sustained and more equitable community-managed water supply services emerges.



Services are better sustained and have a greater health impact when they are equitably accessed by all sections of the community.

Figure 6: A Framework for Sustained and More Equitable Services





The framework is related to the analytical framework developed for the MPA, but adds improved quality of life of the poor as an ultimate goal. Although the PLA study did not assess the contribution of water and sanitation services to quality of life, water and sanitation are basic services. Those who have them must be seen to enjoy a better life than those without.

Sustained services are more likely to result from project interventions when they respond to the demands of all potential users—the poor, better off, women, and men—and empower the users to take greater control over their services throughout the cycle, from design to operation and management.

Effective use of the services, which is necessary for improved community health, is

linked significantly to effectively sustained services, and to equity through gender and poverty approaches in eliciting demand and in managing the service. Agency staff, skills, and practices have a significant impact on service outcomes. Agency policies guide business processes and are an indispensable underlying support, one that will help attract the right management and help obtain the resources necessary to bring about changes in agency operation.

The challenge at hand is now how to translate this framework into practice. The next steps will be to apply the MPA to large-scale programs with the ultimate goal of leading to better sustained and more effectively used water supply and sanitation services.



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