Water and Sanitation Program

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

Sustainability Planning and Monitoring

in Community Water Supply and Sanitation

A Guide on the Methodology for Participatory Assessment (MPA) for Community-Driven Development Programs

Edited by:
Nilanjana Mukherjee
Christine van Wijk

IRC International Water and Sanitation Centre

This document is an update, supplemented with learning gained from MPA applications worldwide during 1999-2002, of the original MPA Metguide published in March 2000.

The Metguide (Methodology for Participatory Assessment with Communities, Institutions and Policy Makers) was developed by WSP and IRC in 1998 primarily for the purpose of conducting a global study in 15 countries, which investigated the links between the sustainability of community-marged water supply services and gender- and poverty-sensitivity of demand-responsive approaches used to establish the services.

Since the completion of the global study in 1999, MPA has developed further as a tool for mainstreaming gender and social equity in large scale projects. Its applications have expanded from evaluation and monitoring to designing and planning new project interventions, and from dedicated water supply and sanitation projects into the realm of multi-sector project designs.

This document presents the MPA as it is currently being used in Asia, Africa and Latin America. It consolidates the lessons learned in the process of its continuing development.

Section 1 of this book represents an extensively re-written and supplemented version of the original Metguide, by the editors Nilanjana Mukherjee and Christine van Wijk. Section 2 contains case studies contributed by Bruce Gross, Suzanne Reiff, Soutsakhone Chanthaphone, Santanu Lahiri, Christine van Wijk, Nilanjana Mukherjee, Nina Shatifan and Richard Hopkins. Photographs on the cover and inside were contributed by MPA practitioners in different parts of the world.

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THE WORLD BANK

Foreword

Access to safe water and sanitation lies at the very core of poverty reduction. Improved access gives the poor, especially women, control over basic aspects of their life and a sense of empowerment.

Within the context of the Millennium Development Goals for water and sanitation, interventions must be designed to strike more effectively at the roots of global poverty and involve more than the mere construction of facilities. The keys to success will be establishing pro-poor policies and institutional practices; promoting sustainable financing mechanisms; and sharing knowledge with and building capacities in institutions for scaling up sustainable and equitable water and sanitation services. Meeting these targets at the ground level will require infrastructure improvement projects that use appropriate targeting strategies, involve communities in decision making, and measure achievements in social equity and justice.

The Methodology for Participatory Assessment (MPA) offers the mechanism needed to track gender and social equity in large-scale infrastructure projects and measure progress of the goal to provide sustainable services for all. Increased investment flows can reach the poor. Community-driven projects–those that represent the needs and choices of each member of the community–provide the channel.

The Water and Sanitation Program (WSP) and the IRC International Water and Sanitation Centre developed the MPA through a global piloting and validation exercise in 18 large-scale projects in 15 countries. The study, *Linking Sustainability with Demand, Gender and Poverty*, found empirical evidence that community-managed water supply services, which employed demand-responsive approaches sensitive to gender and poverty issues, were more sustainable and more effectively used.

Since its inception in 1998, the MPA has gained wide appreciation and popularity with sector stakeholders in Asia, Africa, and Latin America. Country governments, donor agencies, and NGOs active in water supply and sanitation have invested in building institutional capacities for its use and in tailoring MPA applications to their work at the policy, institution, and community levels. In the process new applications have been developed and fielded, strengths and weaknesses of the MPA recognized and addressed, quality control measures identified, and knowledge generated from the field widely shared. In this book, WSP and IRC bring together the fruits of learning gained by and with partners worldwide during the period 1999 - 2002.

The MPA can empower poor communities to plan, manage, and sustain their water and sanitation services, and gain control over their life, health, and environment. This volume and its companion materials can ensure that the poor exercise their rightful voice and choice in community-driven development processes.

Jamal Saghir
Director
Energy and Water
Chair
Water Supply and Sanitation
Sector Board
The World Bank

Walter Stottmann
Program Manager
Water and Sanitation Program

Preface

The mission of the Water and Sanitation Program (WSP) is to alleviate poverty by helping poor people gain sustained access to improved water and sanitation services. WSP works with partners in the field to seek innovative solutions to the obstacles faced by the poor communities, and strives to be a valued source of knowledge with which to assist widespread adoption of these solutions. Over its 25 year existence the WSP has evolved into a major field-based learning and policy facilitation network, supported through a partnership of the world's leading development agencies. The WSP has a track record in advancing the understanding of gender, participation, institutional and policy aspects of poverty reduction.

In 1997 the WSP and IRC jointly launched the Participatory Learning and Action (PLA) Initiative, a global partnership of agencies to improve the understanding of the links between gender, participation, demand and sustainability of community-managed water supply and sanitation services. During 1998 and 1999 these links were investigated through action research in 15 countries using a common methodology developed for the purpose, the Methodology for Participatory Assessment (MPA). The results provided empirical evidence that better sustained and used services were significantly and positively associated with the use of gender- and poverty-sensitive demand-responsive approaches, in project implementation, institutional practices and policies *(Linking Sustainability with Demand, Gender and Poverty, WSP-IRC, 2001*)*.

Then began a capacity building phase to use the learning gained and the tools developed, to influence the way water - sanitation programs are designed, implemented and monitored, by stakeholders at all levels. Work has been underway since 2000, in a set of mutually reinforcing streams:

- Developing and institutionalizing national and local capacities in the use of MPA so that funding agencies, project and task managers may access such expertise without having to invest extensively in training every time such skills are needed. The MPA's analytical framework is focused on sustainability and integrates gender and poverty concerns at every stage of project planning, implementation and monitoring. This makes MPA easy to assimilate in project design and management processes. Institutionalization however needs to proceed with the understanding that the full potential of MPA can only be realized with proper training, even of those with long experience in participatory methods, and with quality control measures in scaling up.

* Also available on www.wsp.org

- Application of MPA to large-scale programs, with a tailoring of applications to project settings and needs, and building in safeguards for MPA's interactive learning and empowering characteristics. The very first applications fielded were for project evaluations. Now applications have also developed and are being used for project preparation, planning and monitoring. Additionally, applications have been developed for the facilitation of policy formulation/improvement and institutional change processes.

- Expanding the application of the MPA analytical framework to other sectors that work with community-managed services, by developing sector-specific indicators for sustainability and effective use. Potential areas that have been identified or partially explored to date include rural energy, watershed development and management, multi-sector CDD type projects.

- Establishing quality assurance mechanisms for a global community of practice that is evolving. MPA practitioners need periodic opportunities to meet, take stock of their learning, subject new developments to independent audits for validity, reliability and quality, and agree on some "core uncompromisable quality and ethical principles" to guide their work. This is a vital requirement for an open-ended methodology that has high potential for growth and institutionalization such as the MPA. Unfortunately, funding for such activities is more difficult to access than for project applications.

This resource guide consolidates the current knowledge about MPA in the form that it has now evolved, incorporating learning from all the above areas, since year 1999.

Section 1*(Methodology for Participatory Assessments)* consists of 6 chapters. The first chapter *(The Challenge of Sustained Water Supply and Sanitation for All)* establishes the rationale for new ways of measuring development effectiveness, since the global goals are now defined with respect to sustainability, poverty alleviation, gender equity and empowerment.

Chapter 2 *(A New Tool for Planners and Managers of Large Community-Driven Development Programs)* identifies who can use the MPA to accomplish what, and explains what new advantages it adds for project planners and managers.

Chapter 3 *(The MPA Framework and Process)* explains the analytical framework of the MPA, the variables and indicators to measure at each stakeholder's level, and the relationships among them.

Chapter 4 *(The MPA in Action)* is a process guide for implementing assessments with stakeholders at various levels.

Chapter 5 *(Organizing and Interpreting the Data)* describes, with practical examples, a range of ways in which results of MPA assessments can be organized, presented and analyzed by participating communities, implementing agencies and policymakers.

Chapter 6 *(Participatory Tools Used in the MPA)* contains brief, illustrated descriptions of the participatory tools used in MPA assessments at each level. This chapter however, is intended as explanatory and reference material, rather than a step-by-step guide. The latter can be found in the MPA fieldbook, provided during training.

Section 2 (MPA Application Case Studies) is a compilation of seven case studies of MPA applications for the purposes of: project planning, evaluation, monitoring and design; action research exploring links between policies, project rules and community level project outcomes; and an illustration of the MPA's potential as a catalyser of social change within communities.

The Appendices include a sample of a policy assessment exercise using MPA tools and contact information about institutions where MPA-trained facilitators and trainers can be found in Asia, Africa, Europe and Latin America.

Acknowledgements

The Participatory Learning and Action Initiative (PLAI: 1998-2000) brought together a global core group* of individuals and agencies into a partnership, which continues to work together for mainstreaming gender, and poverty concerns in water supply and sanitation.

This resource guide on the Methodology for Participatory Assessment (MPA) is a product of that partnership between the Water and Sanitation Program and the IRC International Water and Sanitation Centre. The Initiative, funded by the governments of Canada, The Netherlands, Norway, Sweden and the Africa region of the UNDP, concluded in early 2000 with the development of the gender-poverty-mainstreaming methodology, its validation through a global study in 15 countries, and the production of training materials and country reports.

Thereafter MPA has steadily gained popularity with sector stakeholders as country governments, external support agencies, national NGOs and training institutions in Asia, Africa and Latin America have discovered its potential and invested in building capacities for its use. They have funded the development of MPA applications tailored to their country contexts, languages and learning needs, allowing the global WSP-IRC core team to further refine the methodology and integrate it with institutional and policy reform efforts in a growing number of countries. This resource guide draws upon the learning gained in the post-PLAI period, by and with government and NGO partner agencies in Indonesia, Lao PDR, Cambodia, Vietnam, The Philippines, Peru, Bolivia, India, Nepal, Benin, Tanzania and Uganda. External funding for these MPA applications came from the governments of Australia, Canada, Denmark, Germany, Luxembourg, Sweden, The Netherlands and the United Kingdom.

This book draws substantially upon its predecessor, the *MPA Metguide* published in 2000 and co-authored by the present editors with Rekha Dayal. However, it is not merely a new edition of the *Metguide*. It is a synthesis of learning gained through field applications by MPA practitioners across the world, all of whom have contributed to its evolution to the current state as described in Section 1 of this book. Several of them have also

* Global steering group of PLAI: Bruce Gross, Christine van Wijk, Rekha Dayal, Nilanjana Mukherjee, Rose Lidonde, Noma Musabayane, Suzanne Reiff, Jennifer Francis, Shalini Sinha. A.J. James joined the group in 1999.

penned case studies of MPA applications for Section 2, namely, Bruce Gross, Suzanne Reiff, Nina Shatifan, Soutsakhone Chanthaphone, Santanu Lahiri and Richard Hopkins.

We deeply appreciate the support of the managements of the Water and Sanitation Program (WSP) and IRC. Specifically, we would like to express our thanks to Jamal Saghir, Director, Energy and Water Department, the World Bank; Walter Stottmann, Manager, WSP and Parameswaran Iyer, Senior WSS Specialist, WSP, for having faith that this product will be of value to sector professionals and therefore providing funds for its preparation. Our grateful thanks are due to Caroline van den Berg and Richard Pollard, the past and present Regional Team Leaders of WSP-East Asia (where most of the drafting and editing was done), for their keen interest, valuable advice and demand for rigor. Funds received from the World Bank for printing the book are gratefully acknowledged.

Within IRC, Jennifer Francis and Maria Lucia Borba were co-developers from the first hour onwards, later joined by Leonie Postma, Francois Brikke, Corine Otte and Michelle Moffat in NEWAH. Jan Teun Visscher, Director IRC and Eveline Bolt, Head of Research, ensured that the work was included in IRC's long-term program. Special thanks also go to Mariela Garcia Vargas in CINARA, whose critical review was the basis for continued operation and documentation.

The MPA flag-bearers who have led country-specific operationalization from within WSP are Rose Lidonde and Suzanne Reiff in WSP - Africa and Indrawati Josodipoero, Sisavanh Phanouvong and Hoa Hoang Thi in WSP - East Asia and the Pacific. Bruce Gross, former PLA Initiative team leader, has contributed greatly through deepening his hands-on involvement with MPA in East Asia following his retirement from the World Bank. Peter Feldman (Partners for Development) and Bouy Kim Sreang have opened up MPA chapters with sector partners in Cambodia.

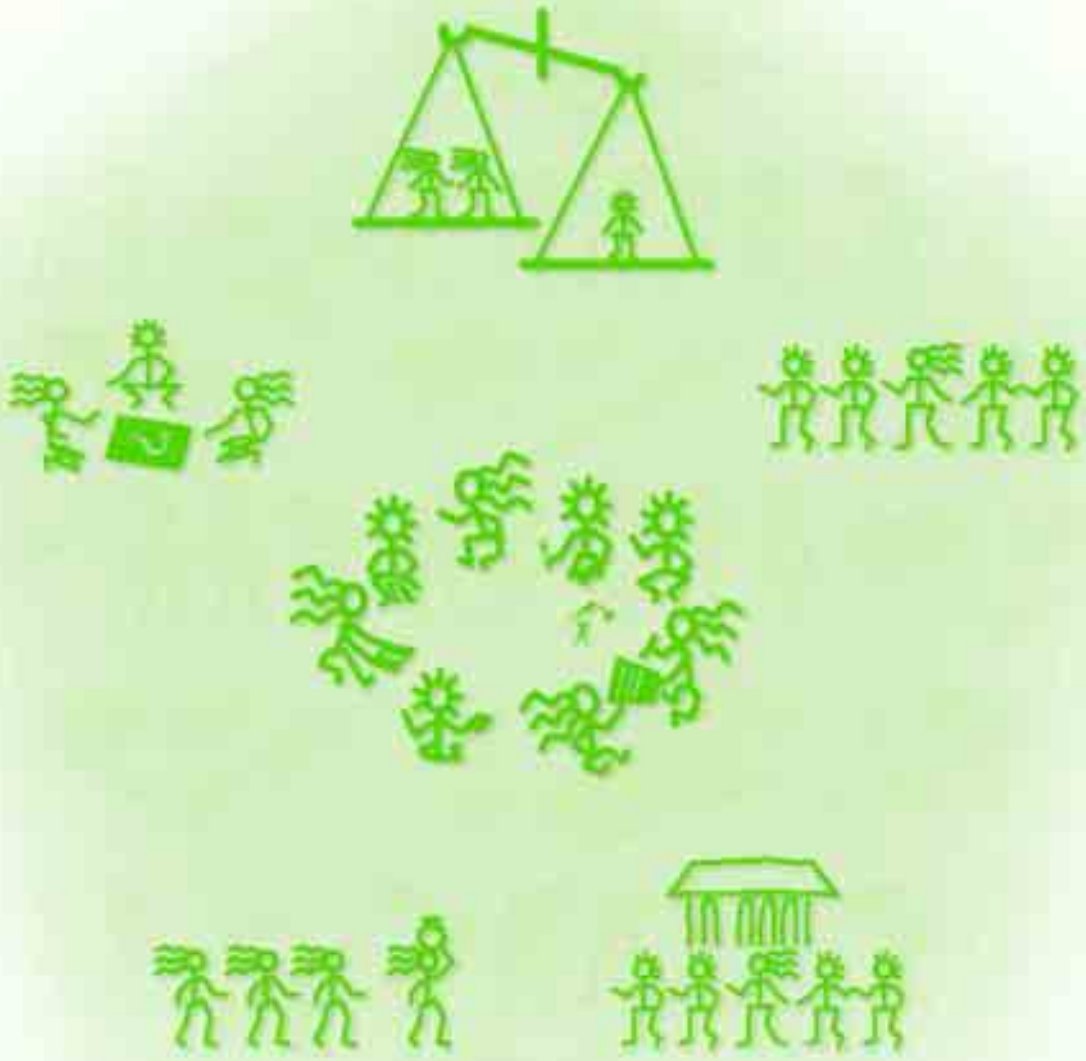
We owe much to our peer reviewers Michael Bamberger (retired Senior Sociologist, Gender and Development Group, World Bank), Josette Murphy Malley (ex- Senior Evaluation Specialist, ARD, World Bank) and Wendy Wakeman (Senior Community Development Specialist, PRMGE, World Bank). Their incisive comments, valuable criticism, detailed scrutiny and thought-provoking questions helped us immensely in bringing greater clarity and balance to our work.

All the photographs used in the book except two were contributed by MPA practitioners and enthusiasts including Bruce Gross, Leonie Postma, Ratna Indrawati Josodipoero, Devi Ariandy Setiawan, Kumala Sari, Thomas Meadley, Nina Shatifan, Suzanne Reiff, Andrew Whillas, SAWAC (NGO in Cambodia), CINARA (Columbia), NEWAH (Nepal) and the editors of this book.

Finally, and most importantly, we acknowledge with the deepest gratitude the time, energy, enthusiasm and resources contributed by thousands of women and men in poor rural and urban communities participating in MPA assessments worldwide, who are sharing their life's experiences and views with MPA practitioners, thus providing a wealth of learning for implementing agencies, policy and decision makers and funding agencies. We sincerely hope that they themselves are deriving adequately worthwhile returns from the process, both in the short and the long run.

Nilanjana Mukherjee

Christine van Wijk



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Section 1

The Methodology for Participatory Assessment

1 The Challenge of Sustained Water Supply and Sanitation for All

- **Do they work?**
- **Are they sustained?**
- **Do they benefit everyone, including the poor in the community?**

These are the questions by which the effectiveness of infrastructure services funded by development assistance is now being judged. As we enter the new millennium, persistently high levels of poverty exacerbated by conflict, environmental and economic crises are ushering in a climate that demands greater accountability for results from development investments. It is no longer sufficient to define results in terms of creation of a targeted number of infrastructure facilities. Outcomes now must also prove to be sustainable as well as equitable, i.e., serving all sections of society fairly, including the poor and the less powerful.

Global sector experience and research has now established that services are better sustained when service delivery is done using approaches that seek to understand and respond to the demands of potential users of the service.[1] While this statement is broadly true, it represents an oversimplified view of reality. To understand what really decides ultimate sustainability begs a deeper examination of the question "whose demand?"

1 Katz, Travis and Sara, Jennifer. *Making Rural Water Supply Sustainable: Recommendations from a global study*. UNDP-World Bank Water and Sanitation Program, 1997.

In many community water and sanitation programs, it is common to find a substantial number of facilities out of order or functioning below expectations at any given time. It also happens frequently that a considerable number of people do not use the facilities either always or during part of the year. Often, they are reluctant to support the new provisions that do not sufficiently meet their demands.

There are also communities in which the households that benefit from the better facilities use and sustain them well. However, these facilities serve only a portion of all households. Often, the households that are excluded from basic services belong to the poorest groups with the worst living conditions. Public health benefits will not be realized in such cases, since achieving them would require a critical mass of use by all or almost all households (Esrey, 1994).

Well-sustained and used water supplies and sanitation facilities mean that, for a period that covers the design life of the technologies used to provide services, each member of all households in the project area has a regular and dependable delivery of water - acceptable in terms of quality and quantity, and practices safe disposal of waste 365 days per year. Better sustained services (in terms of those standards) were found to be significantly positively associated with gender and social equity in expressing demand for and managing services, in a recent study of 88 community-managed water supply systems in 15 countries.[2]

As a development goal and issue, therefore, sustainability is closely linked to social equity.

1.1 Defining sustainability and equity

To be meaningful, *sustainability* and *equity* need to be operationally defined for each development sector. Water and sanitation sector professionals have reached some consensus by the late 1990s that the following definitions offer a meaningful starting point for progress towards achieving the twin goals[3] (see Figure 1).

Five dimensions of sustainability

Sustainability of water supplies and sanitation has many dimensions. The following discussion looks at five different but interrelated dimensions of sustainability, all with specific equity perspectives.

- *Technical sustainability*. This refers to the reliable and correct functioning of the technology and, for water supplies, the delivery of enough water of an acceptable quality. Equity aspects relate to the technology meeting the demands of all user groups. Requirements for technical sustainability include: a technically good design, which is adhered to in construction and operation, and first-rate workmanship and materials.

2 Greater equity between women and men and between households that are economically better and poor, in sharing planning decisions, management and upkeep of community water systems, was positively and significantly correlated with better sustained services. (Gross, B., van Wijk, C. and Mukherjee, N., 2001).

3 *Improving Sustainability in RWSS Projects*. Report of the South and East Asia regional water sanitation conference, Chiang Mai. 1998. Water and Sanitation Program – South Asia.
Towards Sustainability with Equity. Report of the East Asia regional water and sanitation conference. Chiang Mai, March 2001. Water and Sanitation Program – East Asia and the Pacific.

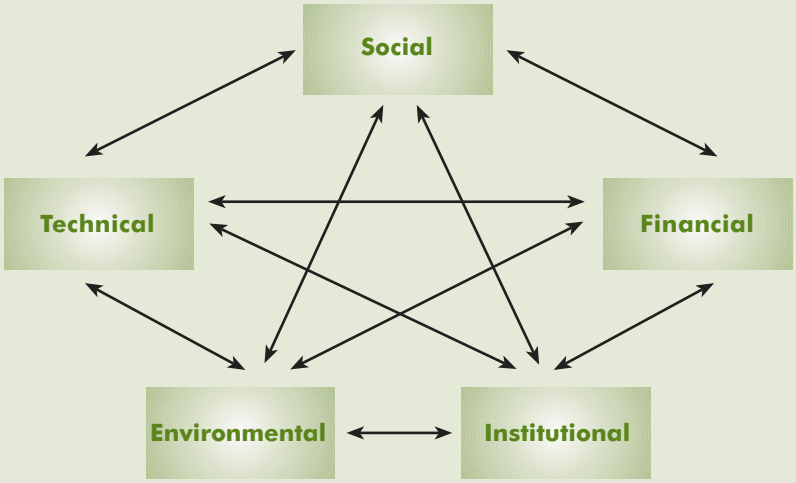
- *Financial sustainability*. Systems can only function if financial resources meet at least the costs of operation, maintenance, and common repairs. Equity elements relate to who pays for all this and how fairly payments are shared between and within households.

- *Institutional sustainability*. To keep systems operational, accessible and widely used, communities need institutions. Institutions have cultural characteristics, agreed and valued procedures and rules for operation, and varying capacities for management and accountability. Equity considerations require looking at the extent of voice of all the user groups, especially the poor and the women, in organizations that manage and control the services.

- *Social sustainability*. Users will only sustain services that satisfy their expectations. This means services which they can easily access, that are in accordance with their socio-cultural preferences and practices, and services that they consider worth the cost they incur to obtain them. Equity aspects include looking at how fairly the burdens and benefits from the services are shared across different socio-economic, gender, and ethnic or caste groups.

- *Environmental sustainability*. Water resources face multiple threats. Overextraction and contamination of water sources from irrigation, industrialization and waste disposal threaten reliable and safe drinking water supplies. Water supplies and sanitation facilities

Figure 1 Key aspects of sustainability of WSS services



SUSTAINABILITY = Continuous, satisfactory functioning and effective use of WSS services. (Effective use = use by the majority in a health-promoting and environmentally sound manner).

EQUITY = Everyone (e.g., women and men, rich and poor, social minorities, and majority groups) has equal voice and choice in decision making, equal access to information/external inputs/benefits from projects, and shares burdens and resposibilities fairly.

themselves threaten the environment through the unsafe disposal of wastewater and human and solid waste. In dry areas, lack of drainage of wastewater has created new risks of insect breeding that have brought outbreaks of malaria, dengue, and filariasis.

Equity aspects include fair sharing of responsibility among users for the protection of their environment and water resources.

1.2 Route to sustainability and equity

How do we know we are getting there?

There is not much point in finding out only at the end of a project whether or not it achieved sustainable and equitable outcomes. Effective water and sanitation interventions must have a plan for sustainability and equity built into their designs, and begin using some means of verifying the progress being achieved once implementation gets under way.

Measuring sustainability before it has actually resulted can only be hypothetical. However, given the evidence from global research about the positive links between sustainability, demand and equity, process indicators for equity within demand-responsive approaches can serve as the indicators of progress towards sustainability.

Planning for sustainability in projects can then take the following forms:

a. designing gender- and poverty-sensitive demand-responsive processes for working towards the five dimensions of sustainability (Figure 1); and

b. putting in place indicators and tools to track the quality of those processes.

The institutionalization and scaling up of demand-responsive approaches for sustainability would likewise call for:

a. explicitly recognizing sustainability and equity as the twin goals of sector policies.

b. recognizing gender- and poverty-sensitive demand-responsive operations as essential best practices in institutions providing community water supply and sanitation services.

c. establishing institutional accountability for gender- and poverty-sensitive demand-responsive operations.

What methods work best?

In the 1980s, it became clear that central project agencies are not equipped to manage large numbers of decentralized water supply and sanitation systems. Many experiences showed that with appropriate service delivery approaches,[4] local community organizations can more effectively and efficiently manage local water supply and sanitation.

This insight has had far-reaching implications for the planning and establishment of improved water and sanitation technologies. It has also greatly affected the development and use of local operation, maintenance, management and

4 The above refers to a departure from the top-down, externally funded and planned, target-driven, supply-oriented approaches of the past, toward approaches that begin by offering service options to communities and deliver services based on what the users want and are willing to pay for, i.e., demand-responsive or community demand-driven approaches.

financing systems. If local women and men and their organizations are themselves sustaining and managing improved water supply and sanitation projects, they can no longer be treated as mere recipients of government designed and built technologies based on the decisions of outsiders.

Instead, the community's women and men become the local planners and managers and the external project agencies become their facilitators. In this new set-up, the future users have the freedom and the responsibility to make their own well-reasoned decisions and management arrangements. They also have the right to receive the information and support that they need from the project implementing agencies to plan, implement and run their services in an effective and efficient manner.

This does not mean that the implementing agencies have a less important role. On the contrary, their role is now even more crucial. Agency managers and staff must develop processes of consultation and support. They must also help local women and men develop the additional capacities needed to plan, implement, and manage their community water supplies and their sanitation projects.

In their turn, the agency staff learn from the community members what may be the best fitting solutions in the given socio-cultural, economic, institutional, environmental, and technical circumstances. They also get useful insights from local users and managers as to whether and why certain approaches and choices have, or have not, worked.

In decentralized systems, because local women and men would operate, manage, and sustain the improved services, planning requires the use of participatory methods and tools. Only then is it possible for all parties involved to share their knowledge and experiences, learn from each other and make the best use of the pooled knowledge in planning new water supply and sanitation systems or improve existing ones.

The principles of participatory learning and action apply to all stages of a project cycle:

- When planning new services, they facilitate better decision making, based on experiences with existing water supply and sanitation conditions.
- During operations, they help monitor, and where necessary improve, the installed water and sanitation systems and project management approaches.
- While evaluating completed projects or programs, they make it possible to assess impacts of investments and make more effective decisions about new investments and strategies.

A range of methods and tools is available for participatory learning and action. PROWWESS, the project for the *Promotion of the Role of Women in Water and Environmental Sanitation Services* supported by the United Nations Development Programme (UNDP) and the World Bank, has developed tools for participatory planning, monitoring and evaluation of community water and sanitation facilities (Srinivasan, 1990).

More recently, they were supplemented by Participatory Hygiene and Sanitation Transformation (PHAST), a toolkit specially geared to community planning and monitoring of

Planning and monitoring for sustainability calls for indicators and tools to track gender and social equity in the way projects assess and elicit users' demands and respond to them.

Improving community-managed services requires participatory methods because such methods build local capacities of both user communities and project agencies, and facilitate partnerships between them for enhancing the sustainability of services.

improved hygiene and sanitation behavior (WHO, 1998). There is also a large family of more general PLA (Participatory Learning and Action) tools (Pretty et al, 1995).

Many of these general tools may be used in the assessment of community water supply, sanitation, and hygiene projects. The MPA builds further on these foundations.

Why participatory methods and tools are useful for working with the community's women and men

- They enable quick visual representation of local conditions and practices, minimizing biases in expressed information resulting from spoken language .
- Any person can participate, irrespective of their levels of literacy and education.
- Participants are free to present their own knowledge, views and interests on each subject. Larger sections of the population are able to express their views. Rich, insightful information is obtained.
- For the subordinated, self-expression with tools is easier than speaking in public.[5]
- The process is not limited or influenced by questions from outsiders, minimizing interviewer biases encountered in conventional surveys.
- The public process makes it hard to present and retain faulty information.
- Systematic overviews act as eye-openers for all regarding previously unnoticed problems.
- Outcomes are immediately shared, open to analysis and conclusions by all.
- People remain owners of the knowledge and can immediately act upon it.

Why managers of large programs are wary of using participatory methods

Despite the above advantages of participatory methods, managers of large scale projects often prefer social and technical surveys to meet their information needs because:

- Information collected with participatory tools is predominantly qualitative; the type of data produced is not suitable for aggregation, statistical analysis and for building up a program database over time.
- Comparability between and across communities on results and common factors is limited as indicators and/or ways of investigation often differ.
- Participatory methods typically use small samples. Data from a small number of communities does not satisfy all project monitoring needs.
- Participatory methods have a reputation of being slower and more costly than social surveys,[6] although this has never been

5 Proper facilitation is nevertheless essential to avoid domination by the more powerful participants. The importance of the quality of the facilitation process is discussed in Chapter 4.

6 There is a very wide spectrum of participatory methods ranging from a one-day community visit to an anthropologist living for years in a village - which may have given rise to such perceptions. MPA exercises for monitoring or evaluation generally take 2 – 4 days to complete in a community depending on the scope of investigation (a full sustainability study may not always be required). The actual length of time needed is related to the principles of participatory appraisal whereby assessment sessions are only scheduled at the convenience of community members who are usually available for only 2 – 3 hours a day, mostly in the afternoons or evenings after work.

Box 1 Cost comparisons for methods

In Thailand, Collinson (1981) conducted a week-long exploratory investigation on small scale farming, but then felt obliged to follow it up with a formal verification survey just to produce numbers. This survey invariably produced the same information, but took longer, was costlier, and delayed action.

A comparative study of participatory and survey methods recently conducted in a UNICEF-supported sanitation project found that both approaches can yield comparable results but the survey costs 25 percent more in terms of money and 500 percent more in terms of person-weeks to carry out. (Walujan, Hopkins and Istandar, 2002).

properly researched. There are some indications that the opposite may be true (see Box 1).

- Prevailing perceptions among some managers that there may not be anything worth learning from the views of poor people.

1.3 There is a middle path: MPA offers the best of both worlds

Participatory and survey methods both have advantages and disadvantages from the points of views of managers and community members. Social scientists have for many years been searching for ways to combine the advantages and limit the disadvantages of the two approaches.

The MPA, described in Box 2, has made some advances in this direction and broken new ground. Its main characteristic is that it quantifies qualitative data through participatory processes with communities and implementing agencies. The result is that managers and researchers acquire a quantitative database which they can analyze statistically at the project/program level, while community members and agency staff remain in possession of their own data and act on the basis of their learning, at community and agency levels.

Box 2 What comprises the MPA?

- **It is a framework for combining social equity analysis with the analysis of sustainability of locally managed water supply and sanitation interventions.**

- **It is a set of sector-specific indicators for measuring and monitoring sustainability and equity in community water supply and sanitation services and user practices.**

- **It is a sequence of participatory tools to assess the indicators with user communities, project agencies/institutions and policymakers.**

- **It is a scoring system to quantify data from participatory assessments into tested and validated ordinal and ratio scales, for building a database, doing statistical analysis, making graphic presentations and benchmarking for sustainability.**

Communities use the scores and qualitative findings to identify, analyze, and interrelate problems, plan improvements, and initiate new projects.

Project staff use the scores to compare between communities and across communities on common factors in order to evaluate and improve inputs, methods, and approaches.

At the program and international level, the MPA makes it possible to quantify and interrelate qualitative information generated through participatory methods across projects and programs both within and between countries.

2 A New Tool for Planners and Managers of Large Community-Driven Development (CDD) Programs

2.1 Who can use the MPA, for what?

The MPA is an innovative methodology for planning, monitoring and evaluation designed to enhance, and account for, the sustainability and effectiveness of water supply and sanitation project interventions by integrating participatory field studies with quantitative program analysis.

The methodology allows all stakeholders - from illiterate women and men in communities to program managers and investors to:

- use one instrument to assess strengths and weaknesses in water supply and sanitation projects,
- assess the social equity situation along with factors for sustainability and effective use,
- plan and monitor for more sustainable and equitable outcomes in development projects.

MPA allows participatory assessment data to be quantified by stakeholders at all levels

2.2 Uses of the MPA to date

The MPA, or selected parts of it, have so far been used for the following purposes.

- As a tool to plan new projects based on the participatory and comparative evaluation of existing facilities and approaches (Indonesia, Cambodia).
- Comparative evaluation of community level impact of one or more projects and their approaches in the same country for national policy improvement (Indonesia, Lao PDR, Nepal, Benin, Cambodia).
- As part of monitoring and impact assessment in two rural water supply projects and a project to develop sustainable watershed management practices (India).
- To link water and sanitation services with hygiene promotion (Lao PDR).
- Participatory assessment of sanitation

Box 3 Uses of the MPA

Who can use the MPA?	What MPA enables them to do
Community members (users of services) **Community organizations managing community services**	• Assess and monitor the sustainability of their services. • Assess and monitor how equitably the benefits and burdens from services are shared within the community. • Identify feasible community level actions to make their services more sustainable and equitable at planning and monitoring stages.
Project implementing agencies	• Assist communities to plan for sustainable and equitable project outcomes. • Monitor sustainability and equity of project interventions and factors influencing them in project communities. • Compare sustainability and equity situations in communities across districts, provinces, projects, and time, i.e., through project phases (see *Benin case study, Section 2*). • Identify cases for in-depth study *(see Java case study, Section 2)*. • Identify patterns and trends in progress towards sustainability and equity in projects, and institutional factors associated with high or low sustainability/equity situations *(see Box 6)*. • Take institutional level actions to promote sustainability and equity in project outcomes. (see *Section 2, Indonesia case study of application to two large scale project designs*).
Task/project managers	All of the above, plus: • Periodically obtain and statistically analyze data on sustainability and equity (poverty-targeting, gender equality) of project interventions, community demand and project responsiveness to demand, quality and quantity of community participation and empowerment. • Institutionalize the monitoring of all the above aspects in project agencies at sub-national and national levels.
Policymakers	Analysis of all of the above aspects across communities, geographic areas, projects, and over time - to draw lessons for scaling up and for policy actions needed to promote sustainability and equity goals (see *Lao PDR case study, Section 2*).

Box 4 Participatory, rapid... what's the difference?

Other participatory methods	MPA
• Often case-specific	• Same analysis with all
• Data are not comparable	• Data are comparable
• Aggregation in the mind	• Aggregation in practice
• Duration varies	• Duration fixed
• Mostly qualitative information	• Qualitative quantified
• No statistical analysis	• Statistical analysis possible
• Scaling up is difficult	• Designed for large programs
• Sampling procedures not essential	• Requires sampling criteria and procedures to ensure representativeness

promotion policies and strategies (Indonesia, Cambodia, Vietnam).

- Stakeholder assessment of poverty-sensitivity and gender dimensions of national sector policy and strategies (Peru, Bolivia, Indonesia, Cambodia).
- Participatory stakeholder assessments of benefits reaching the urban poor through past water supply and sanitation interventions and services currently being provided by urban utilities (ongoing in Vietnam).
- Sustainability assessment of urban sanitation services and water supply models for small towns, to draw lessons for sector policy improvement (The Philippines).
- To improve policymaking and program planning by adding to the knowledge on linkages between demand-responsive and gender- and-poverty-sensitive approaches and sustainability (15 country study).

The use of the MPA has led to the improvement of training on budgeting and financial management (DANIDA-supported project in Ghana), greater gender balance in community management in Kerala, India, Cameroon and Indonesia, and more equitable water distribution in an integrated water management project (also in Kerala, India).

2.3 What is new about the MPA ?

The MPA is not just a new acronym for yet another set of participatory tools. It is a methodology consisting of systematically sequenced investigation focusing on specific community groups and is designed to obtain and analyze quantitative and qualitative information on community-managed services. Box 4 gives the differences between the MPA and other participatory learning methods such as Participatory Rural Appraisal (PRA) and Participatory Learning and Action (PLA).

2.3.1 Quantification of qualitative data

Because no methodology existed that used participatory tools and also provided large programs with easily comparable data, the Water and Sanitation Program (WSP) and the IRC International Water and Sanitation Centre developed the MPA. In this endeavor, the team built on two existing methodologies: the Minimum Evaluation Procedures (MEP) developed by the London School of Hygiene and Tropical Medicine (WHO, 1983) and the participatory evaluation tools and indicators which Deepa Narayan developed for the Water and Sanitation Program in 1993 building further on Lyra Srinivasan's work on the SARAR[7] methodology (PROWWESS/UNDP, 1990). Their characteristics are compared in Box 5.

The MPA combines the advantages of these two previous methodologies and adds quantification. It was developed in 1997-98 by a team from the WSP and the IRC.

The MPA quantifies participatory assessment data and allows statistical analysis at the program level.

The MPA was validated in a global study in 1998 and 1999 that covered 88 community-managed water supplies from 18 projects in 15 countries. The study was implemented by local teams from universities, the private sector, national and local NGOs, and the project agencies. WSP's regional offices in South-Asia, East Asia and Pacific, and East and Southern Africa, and IRC with its partners PAID and CINARA in West Africa and Latin America, provided training and support.

7 SARAR stands for Self-esteem, Associative strengths, Resourcefulness, Action planning, Responsibility. *Tools for Community Participation*. Srinivasan, Lyra. (1990) PROWWESS/UNDP.

Box 5 The MPA built on two existing methodologies

Methodology	Advantages	Limitations
Minimum Evaluation *Procedures* (WHO, 1983)	• Uses the same standard procedure for every location and technology. • Covers technical and behavioral factors. • Has few indicators (17). • Has been widely used.	• Implementers are outsiders only. • No participatory methods and tools. • No process indicators included. • No gender perspective included. • No poverty perspective included, except for latrine ownership.
SARAR and Participatory Evaluation: Tools for Managing Change in Water and Sanitation (Narayan, 1993)	• Implementers are a multi-disciplinary team of outsiders and local women and men for inner/outer perspectives. • Uses participatory methods and tools. • Includes process and institutional factors at community and agency level.	• Tailor-made designs with communities; no general procedure for comparability. • Many indicators (over 130) if all aspects are assessed. • No systematic gender and poverty perspectives.*

* Later applications of Narayan's participatory evaluation tools have had a stronger gender focus in the "Voices of the Poor" studies (World Bank, 2001).

Box 6 Main findings from the use of the MPA in a global evaluation in 1998/99

- Communities with projects that were more demand-responsive had also better sustained water supplies.
- Communities with more empowering kinds of participation in service establishment (i.e., with some rights, control of decisions, and capacity building for local management) had better sustained services.
- Household contributions to construction were significantly associated with better sustained water supply services only when such contributions were combined with empowering kinds of participation.
- Having a local water management organization with both women and men members correlated with greater access for all, especially when there were more poor people among committee members.
- Poor women felt that they had more influence on the water service when the representation of women and poor people in water management committees was higher.
- The more democratic and gender sensitive the planning of the technology/service levels and maintenance system (i.e., with women and men representatives from poor and wealthier households), the higher was the recovery of service operation costs, through user fees.
- Cost recovery was better with more community control and accountability.
- Projects with more demand-responsive policies were more demand-responsive in practice.

Gross, van Wijk and Mukherjee, 2001

2.3.2 Combining sustainability assessment with gender and social equity analysis

Studies have shown that gender and social equity approaches optimize results and impacts of water supply and sanitation improvements. Such approaches may also improve the relative positions of women and poor people (Fong et al., 1996, van Wijk, 1998, Woroniuk, 1994). The outcomes of the global study summarized above support these conclusions with quantitative evidence. A gender and social equity analysis is thus of great relevance for projects, communities, families and individual women and men, girls and boys.

However, gender and social equity are two of the many issues that managers of water and sanitation programs have to address. Particularly in large infrastructure projects, managers must realize a wide span and variety of objectives within limited time frames, with fixed resources and regular funding flows. The objectives may range from achieving efficiency, effectiveness, sustainability, people's participation, decentralization and

Box 7 Social equity analysis in the MPA

Level	Issue	Indicators	Tools/Techniques (see Chapter 6)
Community (Micro) level	Access for disadvantaged community groups	The number and distribution of facilities over the settlement by social class; characteristics of unserved areas; characteristics of non-users; reasons for non-use.	Social map, transact walk, focus group discussion, open interview, welfare classification.
	Equity and demand	Contributions to investments in kind and/or cash from better- and less well-off; type of tariffs; payment adjustments for the poor; payment history.	Card sorting, interviews with members of water committees, review of payment records, welfare classification.
	Meeting demands	Satisfaction of demands in relation to perceived costs of contributions according to the poor and the non-poor.	Focus group meeting, card sorting and ranking, welfare classification and ladders.
	Decision making and control	Representation of the poor in management organizations; participation of the poor in planning decisions; representation of the poor in training and paid jobs, as compared to the non-poor.	Social map, interviews with water committees, matrix voting with focus groups, welfare classification.
Agency (Meso) level	Institutional policy, strategies, and staff characteristics	Presence of objectives of access and affordability for all in agency water policies; agency strategy regarding participation of the poor; staff expertise and training includes poverty aspects which are practiced in the field; management is aware of and supports poverty sensitive approaches.	Open discussion, card sorting and various voting techniques and tools during stakeholders meetings.
Policy (Macro) level	Sector policy	Presence of objectives of access and affordability for all in water sector policy; differential pricing policy which protects the poor; gender policy also aims at closing gap between rich and poor (women and men).	Analysis of policy documents, semi-structured interviews with card selection and scale scoring or participatory policy analysis workshop.

Box 8 Gender analysis in the MPA

Level	Issue	Indicators	Tools/techniques
Community (Micro) level	Division of work between women and men	Work of women and men in constructing, operating, maintaining and managing water supply/sanitation facilities and program. Gender-specific knowledge resulting from gender division of tasks.	Card sorting, matrix voting and scoring, ladders.
	Domestic and productive uses of household water	Adequacy of water service for domestic and productive uses of water by women and men; relation with conflicts and gender participation in planning and management.	Rating scales, group discussions, ranking, transact walk.
	Access to and control over resources and benefits	Access to information, training, water, sanitation and high/low status and paid/unpaid jobs for women and men; control over water/water delivery/user contributions/quality of construction. Association with sustainability/use.	Social map, pocket voting, matrix voting, group scoring.
	Community level management and decision making	Decision making by women and men on project initiation and in planning and management. Decision making functions held by women and men; influence of women in management. Associations with sustainability/use.	Pocket voting, matrix voting, open interviews with committee members.
	Experienced benefits versus experienced costs	Benefits from the facilities and the project processes by themselves and in relation to costs in time, labor and cash by women and men; experienced negative effects.	Card sorting and ranking, ladders.
Agency (Meso) level	Gender policies and strategies in implementation	Presence of gender in the agency's implementation policy; Nature of gender strategies in implementing agencies. Associations with results on the ground.	Open discussions, mixture of ranking, and scoring techniques.
	Institutional arrangements for implementation	Gender-desegregated data in planning, monitoring and reporting; type of staff and awareness of women/gender issues; cooperation of technical and social staff; gender issues and strategies included in training; management attitudes and support for women/gender issues. Associations with results on the ground.	Various voting techniques and tools during stakeholders' meetings.
Policy (Macro) level	Gender and gender approach in sector policy	Presence of women/gender issues in sector policy and nature of policy (welfare/effectiveness/gender equity/gender as part of social equity). Reflection of policy in project approaches by implementing agencies as found by agencies and in communities.	Analysis of policy documents, semi-structured interviews or policy analisys workshop with card selections and scales.

A combined tool makes it easier for communities, staff, and managers to address equity as integral to assessing sustainability.

devolution of central government authority, to the reduction of gender and poverty inequalities, the protection of the environment, and the integrated management of water used for different and often competing purposes. In consequence, separate gender and social equity investigations are rarely carried out.

The two previous methodologies for analyzing and improving community water supplies and sanitation (the Minimum Evaluation Procedures and the Participatory Evaluation Tools) did not systematically include the analysis of gender and social equity aspects. Projects that wished to analyze such aspects had to therefore use a separate study by a social researcher with specialization in gender studies. In practice, this came to mean that equity assessments often did not happen.

Equity assessment is more likely to happen when it can be investigated along with other issues of major interest to the program. Having a combined set of tools to analyze sustainability and gender and social equity aspects makes it easier for community women and men, project staff and managers to analyze and improve these aspects concurrently.

MPA training sessions on gender and social equity (see Chapter 4) help future facilitators to identify and practice measures that make implementation more equitable for women and the poor. Bringing out gender and poverty aspects in contents and analysis and bringing together negatively affected groups, are first steps in a process of change. Assessing these aspects further serves as a baseline for action planning and monitoring and provides benchmarks for measuring progress in programs, as illustrated in the case studies in the second section of this book.

2.3.3 Addressing gender and social equity in a sector-specific way

The gender analysis in the MPA builds upon frameworks that were developed by Overholt and others in 1984 and Moser in 1993. These frameworks were a breakthrough in the analysis of gender in development, but they also have some limitations:

- They are not sector specific;
- Analysis is usually through case studies by external specialists; and
- The focus is on gender inequalities without addressing social equity issues.

The gender and social analysis frameworks included in the MPA are specific for the drinking water and sanitation sector, as shown in Boxes 7 and 8. They use participatory methods and address differences in gender and social welfare divisions and benefits.

The main equity issues that community groups and program staff and managers may jointly discover and use to act upon relate to:

- whether women and poor people have the same access to water and participation as men and the wealthier households;

Figure 2 The process of an increasingly specific focus

In an open meeting, women and men identify, with the help of drawings of poor and wealthier households, the characteristics of low, medium and upper class households in their community.

In an open meeting, the group draws a social map of the community. They use their readings of the three classes to mark the socio-economic level of the households. In the map, they delineate the households with and without access, or with poor access to the service.

The facilitators use the map to plan a transect walk to a sample of water points and meet with groups of women and men at various points in the system to assess the quality of the service. They also meet with women and men in the unserved area.

The facilitators use the map to organize separate meetings with women and men from poor and wealthier/middle class households. In these meetings, the groups assess their participation, sharing of benefits and contributions, use of services, and impacts on their lives.

Practicing gender and poverty sensitiveness is part of training and field procedures.

- to what extent the demands of each group are met;
- how access to water and the benefits and burdens from, and control over, local participation and management are divided between the socio-economic groups and between women and men;
- the relationship of these divisions with the sustainability and use of the water supply and improved sanitation.

Other differences on which hierarchies and discrimination are based, such as caste, ethnicity, religion, and nationality, may be taken into account locally. Being situation-specific, they have not been highlighted here.

2.3.4 Empowerment through self-assessment and action

The MPA differs from many other gender and social analysis frameworks in that local women and men participate in the analysis of equity and sustainability in a gender- and poverty-sensitive, empowering mode. A systematic procedure enhances the participation of all stakeholder groups in the process, as illustrated in Figure 2.

All of these potential benefits can be realized only if the MPA application is tailored to the project and the purpose for which it is used, with attention and resources being devoted to quality assurance mechanisms, as explained in Chapter 4.

2.4 What do MPA assessments cost?

Typically, using the MPA for sustainability assessment requires two facilitators that spend a minimum of four to five days in a village, and at least one day in a stakeholder meeting at district or province level. This does not include time for planning, data analysis, and reporting, which would vary with the size of the project, objectives of assessment and therefore, the required sample. Generally, MPA assessments for project design may require a sample of only a few communities which together represent the major design-influencing variables for a new project, e.g., geo-hydrological conditions or relative poverty and diarrheal morbility rates. Using the MPA for micro-planning community interventions implies assessments in every project community, and their costs should be built into routine project implementation procedures. Monitoring and evaluation applications are likely to use stratified or purposive sampling of 5-10 percent of all project communities at similar points in the project cycle.

Following the global assessments, the MPA is now being applied on a larger scale. Budgets prepared for its application for planning and monitoring in a large scale project in Indonesia suggest that costs of the MPA can be comparable to those of other community-based approaches, when the MPA is integrated in project implementation. The MPA seems to best fit projects aiming at community-driven development, which typically allocate 20-30 percent of total project costs to software investments.

More cost-related information can be found in Section 2, in the case studies from Lao PDR and Indonesia - the Flores project evaluation.

3 The MPA Framework and Process

3.1 MPA framework for analysis: linking outcomes with processes

The MPA tangibly links processes and results. Processes refer to the ways in which communities and project agencies have established the facilities. Results relate to how well communities sustain and use them.

A community water service is sustained when its users keep the service going at a level satisfactory to most users. The service is "effectively used" when accessed and used by a substantial majority (a critical mass of at least 80 percent) in a health-promoting and environmentally sound manner, without explicit exclusion of particular user groups.

Sustaining a sanitation program means keeping individual sanitation facilities maintained and effectively used and continuing the installation of new ones to preserve coverage.

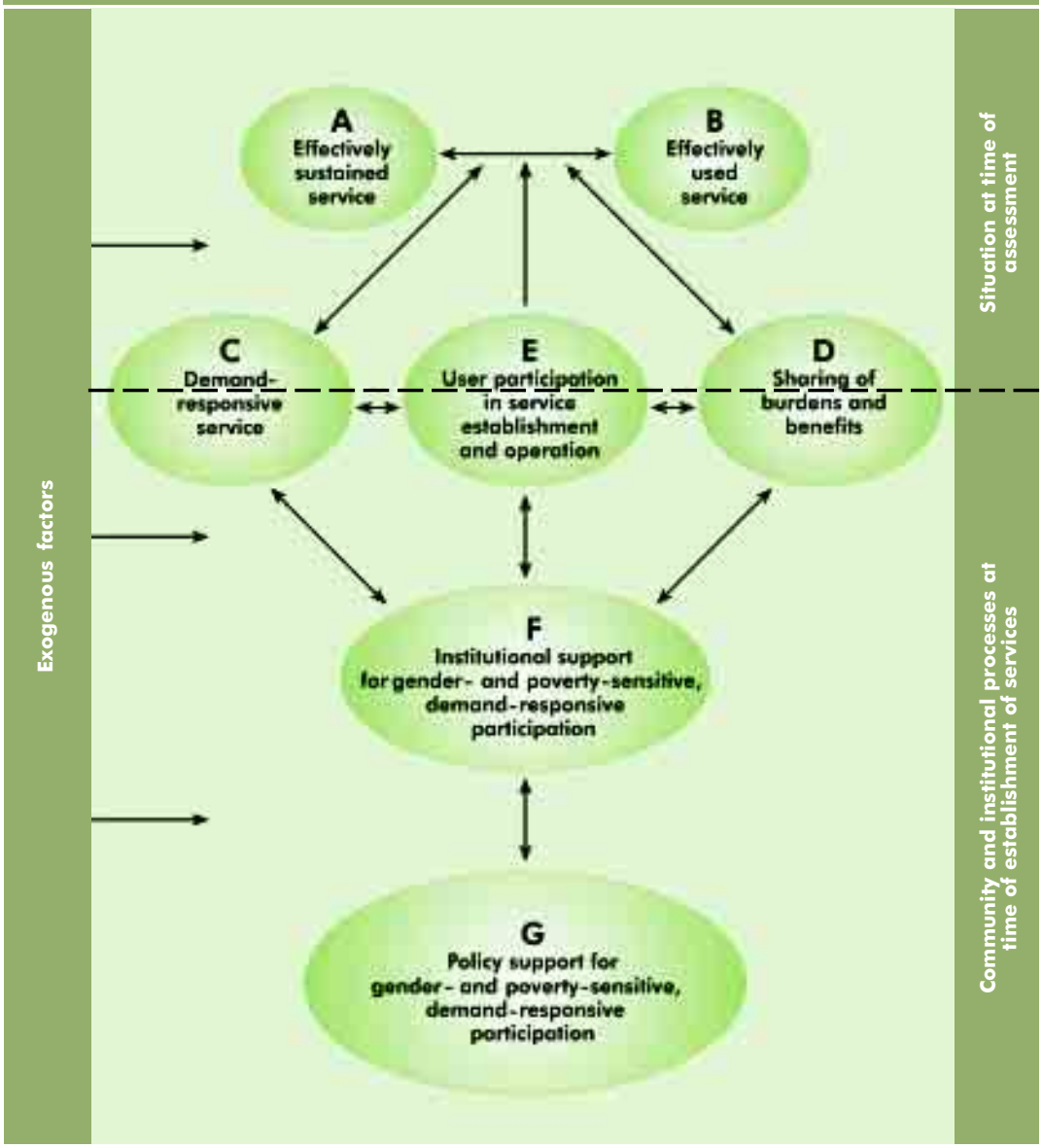
An MPA assessment in Latin American

All assessments - whether to monitor or evaluate existing water supply and sanitation projects or plan new ones - are based on the analytical framework that is depicted in Figure 3. The framework summarizes relationships between the

key variables. The degree to which a community sustains community water supply and sanitation facilities depends upon:

- The degree to which its population - women and men in better and poor households, and, for sanitation, also the different age groups - have access to and use the facilities.
- The degree to which the water supply or sanitation facilities meet the demands of the major population categories - women and men in better and poor households.
- The ways in which burdens and benefits are shared among these categories.
- The degree of gender- and poverty-sensitive user participation in the establishment and management of the service.
- The nature of the "enabling institutional environment," or the agency policies and

Figure 3 Analytical framework of the MPA



institutional arrangements and culture within which the water supply and improved sanitation services have been established.
- The "enabling policies," or the nature of the sector policies under which the project or projects have been carried out.

The analytical framework provides an overview of the situation and processes at the time of establishment of the systems and at the time of their assessment.

Clusters A and B are assessed with the community's women and men and their water and sanitation management organization. They represent the analysis of the current situation. Clusters C, D, and E are also assessed with these groups, but their variables, and their indicators and sub-indicators span both current and past situations. This is indicated by the dotted line in the figure.

Apart from the analyzed factors, there may also be "exogenous factors" that influence the relationships between the clusters. They include the type and complexity of the technology, age of the system, ecological differences (e.g., drought conditions and availability of alternative sources), local mobility and access to spare parts and other resources, communications, leadership situations and gender and poverty conditions specific to the area. They are captured in the initial Community Data Sheet and through qualitative data recorded by the assessment team as part of the participatory analysis of the different factors. They may be controlled through sampling if their presence is known in advance. If not, data may need to be grouped by the factors to analyze their influence on the results.

3.2 Types of systems to assess

The MPA looks at generic qualities. Projects can therefore use the methodology to assess and compare between various types of water supply or sanitation systems irrespective of the technologies used or service levels.

Subjects of investigation are systems that have been in existence for some time. To state with some confidence that they are sustained and used, they must have functioned for at least 1-2 years, preferably longer. It is not necessary to have a participatory assessment and analysis with all communities which have installed new systems. It is sufficient to carry out the study in a sufficiently large randomly selected sample. This is discussed in greater detail in Chapter 4.

For representativeness, the sample will preferably also include non-functioning systems. The analysis of non-functioning systems is an important source of information about why systems fail and how to avoid those mistakes. However, conducting MPA assessments in communities with non-functioning systems assumes that some means for assistance are available for correcting the situation. It would be unethical to ask the community's women and men to spend several days of their time in assessing the situation when the underlying problems turn out to be beyond their influence or control and no support can be given. Sometimes such communities may not be interested in participating in assessments. In such cases full MPA assessments cannot be conducted, but data should be gathered to avoid gaps in the database through several other methods less dependent on group participation involving

The MPA can help analyze any type of community-managed water and sanitation system at community, institution, and policy levels.

several days of time, e.g., key informant interviews with project functionaries and willing individual villagers and technical observation checklists for water systems. The problem of non-functioning systems cannot be overcome by excluding them from the sample because doing so would yield assessment results that are positively biased and do not represent reality.

3.3 Sustainability indicators

The variables in clusters A-G, and the indicators through which they are measured, are presented in Box 10. In total, a full MPA assesses 15 main variables, each with several sub-variables and indicators. Sanitation can be included when projects are integrated, or assessed separately.

Cluster A:

Sustainability is measured by indicators for effective design and construction, system functioning - environmentally, technically and to the satisfaction of users - effective financing and management.

Cluster B:

Effective use is assessed in terms of access to services and hygienic and environmentally safe use by all.

Cluster C:

Demand-responsiveness relates to three aspects: user demand, responding to demand, and satisfaction of demand.

- *User demand* is measured by the contributions of the different user groups in cash and/or kind to initiate and sustain operation.
- *Responsiveness to demand* is measured by the degree to which the different communities and user groups had opportunities to make informed choices about the technologies and service levels that they desire and can sustain, and about financing and management arrangements for them.
- *Satisfaction of demands* relates to the extent to which demands of women and men in wealthier and poor households are met by the system, and the satisfaction of these groups with the system and system management in relation to their contributions.

Cluster D:

Sharing of burdens and benefits is measured for two points of time: during the construction of the facilities, and during operation and maintenance.

It refers to the sharing at household and community levels:

Box 9 Some key questions answered by the MPA

- How effectively are the facilities sustained and used?
- How equitable is the access gained by all groups?
- How equitable are the voice, choice and control exercised by all groups in the establishment and operation of services?
- How equitably are the burdens and benefits divided among the groups?
- To what extent do agencies practice gender- and poverty-sensitive approaches?
- To what extent do sector/project policies support gender- and poverty-sensitive participation and demand-responsive approaches?
- Do policies make a difference on the ground?

Box 10 MPA indicators for community water supplies

	Clusters	Variables and Indicators
Dependent Variables	**A. Effectively sustained service**	***A1 System quality*** ■ Construction matches design, quality of materials and work good, source management. ***A2 Effective functioning*** ■ Operation in terms of water quantity, quality, reliability and predictability. ***A3 Effective financing*** ■ Coverage of investment and/or recurrent costs. ■ Universality and timeliness of payments by users. ***A4 Effective management*** ■ Level and timeliness of repairs for M/W*, R/P**. ■ Quality of budgeting and accounts keeping.
	B. Effectively used service	***B Hygienic and environmentally sound use by majority*** ■ Proportion and nature of population using the service by M/W, R/P. ■ Degree of improvement in water use habits***. ■ Presence and state of waste water disposal provisions for R/P.
Influencing/Independent Variables	**C. Demand-responsive service**	***C1 Initial user demand*** ■ Type and proportion of contribution by M/W, R/P at start. ***C2 Project responsiveness to demand*** ■ User voice and choice in planning by M/W, R/P. ***C3 Satisfaction of demand*** ■ Satisfaction of user demand of M/W, R/P and range of benefits users pay for, by M/W, R/P. ■ User-perceived value for cost for M/W, R/P.
	D. Sharing of burdens and benefits	***D1 Gender and poverty focus (social equity) at start*** ■ Equity in community payments in the establishment of services by M/W, R/P. ■ Percentage of women and poor in local management organization at start. ***D2 Gender and poverty focus (social equity) during system operations*** ■ Division of skilled/unskilled and paid/unpaid labor between M/W, R/P. ■ Percentage of women and poor on local management organizations. ■ Division of functions and decision making between M/W, R/P.
	E. User participation in service establishment and operation	***E1 Equity in community management (community responsibilities)*** ■ Responsibilities for maintenance and management. ***E2 Participation with empowerment (rights, control, capacity built)*** ■ Presence, status and composition of managing committees. ■ Control over construction schedule and quality of work for M/W. ■ Control over household contributions for M/W. ■ Types of skills created and practiced among M/W, R/P. ■ Rules on water/sanitation/management for M/W, R/P. ■ Transparency in accounts and accountability to M/W, R/P.
	F. Institutional support	***F1 Enabling organizational system*** ■ Explicitness of sustainability, equity (gender and poverty inclusion), and DRA**** in project objectives, implementation strategies and performance criteria. ■ Gender- and class-desegregated planning and monitoring systems in use. ■ Mix of staff expertise. ■ Extent of team approach. ***F2 Enabling organizational climate*** ■ Capacity building, managerial support, and staff performance incentives.
	G. Policy support	***G1 Supportive sector policy and strategy*** ■ Presence and nature of national sector policy for water and sanitation. ■ Presence of sector strategies to set in motion community participation, demand-responsiveness and gender and social equity.

* *M/W – men and women*
** *R/P – rich and poor*
*** *At minimum, using protected water sources for water for drinking and food preparation, throughout the year.*
**** *DRA – Demand-Responsive Approach.*

- of work, and, where applicable, of cash contributions between the genders within households;
- of decision making, paid and unpaid work for local construction, maintenance and management, between genders and social classes.

Cluster E:

The cluster on participation looks at two types of participation:

- the responsibilities, or the work done by community members done by in maintenance and management;
- the rights, capabilities, and controls (empowerment) for these tasks.

Here again, the assessment distinguishes between responsibilities and power of the genders and different socio-economic classes.

Cluster F:

Institutional analysis has two entry points:

- the enabling organizational system for approaches that are participatory, demand-responsive and gender- and poverty-sensitive, and,
- the enabling organizational climate in which implementing agency staff operate.

Cluster G:

Policy analysis looks at two areas:

- How explicitly sector policies define sustainability and equity as their goals.
- To what extent strategies are defined and available, in support of those goals.

The community level indicators for sanitation, in Box 11, are somewhat different than those for water supply. Only clusters E, F, and G are the same as for water services. The indicators apply only to community-managed sanitation programs.[8]

3.4 Other factors to explain differences

Apart from the above, users of the MPA look at other local and common factors that may explain the differences found.

- In the communities: percent poor, ethnic/religious homogeneity, availability of alternative water sources, strength and unity of male and female leadership, and level of development/communications.
- In the project: complexity of technology; availability spares and technical support, type of funders, type of project (water or water and sanitation), unit cost, age, number of times upgraded.
- In the state or country: the GNP and human development indicators.

3.5 Demand, demand-responsive approach and participation

Past research has revealed the pitfalls of using purely economic definitions of demand[9] and demand-responsiveness.[10]

8 For programs that work directly with individual households, somewhat different indicators and scales will be required. It should be noted that a sanitation component was included in only a small number of water projects/programs in the first assessments. As such, no statistical relationships were tested for the sanitation component determined in the global study. Only frequencies were recorded and analyzed. Application in a larger sample for sanitation may show that some of these indicators and clusters are not statistically significant.

9 Katz and Sara (1997) define demand as "the quantity and quality of water community members will choose to consume at a given price".

10 Responding to demand means giving users choices as to how much water they want to consume at a given price. This implies that a project "allows communities to make informed choices about the level of service they want, with an understanding of the implications of their decisions" (Katz and Sara, 1997).

Box 11 MPA indicators for community-managed sanitation

Clusters	Sanitation Variables and Indicators	Measurement Tools *(see chapter 6)*
A **EFFECTIVELY SUSTAINED SERVICE**	Quality of design, installation, maintenance (functioning) of latrines according to men/women. Quality of design, installation, maintenance (functioning) of drainage at water points according to men/women. Continued installation of facilities over time.	Rope rating scale, latrine self-scoring (by a representative sample number of user households). Social map, matrix table of households covered under project(s) and through self-financing, welfare classification.
B **EFFECTIVELY USED SERVICE**	Access to safe excreta disposal facility, by social class.	Welfare classification, social map.
	Percentage in use for intended purpose; percent used for other purposes; observed hygiene condition.	Transect walk with observation checklist, self-scoring.
	Consistency of latrine use; behavioral change by gender and age.	Pocket voting.
	Hand-washing knowledge and practices.	Latrine self-scoring, F-diagram, role-play, pocket voting.
	Knowledge/practices about diarrhea transmission and prevention, by gender and social class.	Contamination routes and blocks (PHAST).
C **DEMAND RESPONSIVE SERVICE**	Initial demand for latrines (degree and nature of user contributions for construction) by R/P, W/M.	Card sorting in focus groups (better and poor).
	Project responsiveness to demand (users' voice and choice in design/materials/location for sanitation facilities, and for modes of payment).	Matrix voting.
	Benefits of latrines, reasons for demand, by R/P, W/M.	Ladders 1.
	Value for cost perceptions by R/P, W/M.	Ladders 1.
D **SHARING OF BURDENS AND BENEFITS**	Ownership of latrines, by type of system and social class.	Welfare classification, social map.
	Degree and nature of user contributions for operation and maintenance (public/shared facilities) by R/P, W/M.	Card sorting in focus groups (rich and poor), ladders 2.
	Division of paid and unpaid work in O&M between women and men.	Matrix voting, ladders 2.
	Access to and nature of training (technical, health and hygiene) for W/M, R/P.	Matrix voting, welfare classification.

R/P = Rich and Poor; W/M = Women and Men.

The MPA uses a basic definition of "demand" as the "willingness to pay, *based on informed choice.*"

Inherent in this definition are equity concerns related to the questions "whose demand?" and "whose willingness to pay?" In the MPA, demand is understood as the aggregate demand of all sections of communities, i.e., both women and men, both the poor and the wealthier, both minority and majority groups. "Payment" includes all forms in which the users may contribute, i.e., in cash, in kind, and with time and energy for obtaining, operating, maintaining, and managing services.

Also inherent in this definition is the understanding that "choice" means a lot more than technology or cost options. The MPA uses the term to mean who participates in which choices, i.e., which groups within the communities and households make which of the several key decisions, such as:

- initiation of the projects;
- the type of technologies and service levels;
- the location of the facilities;
- the local management, maintenance, and financing systems; and
- the candidates for training.

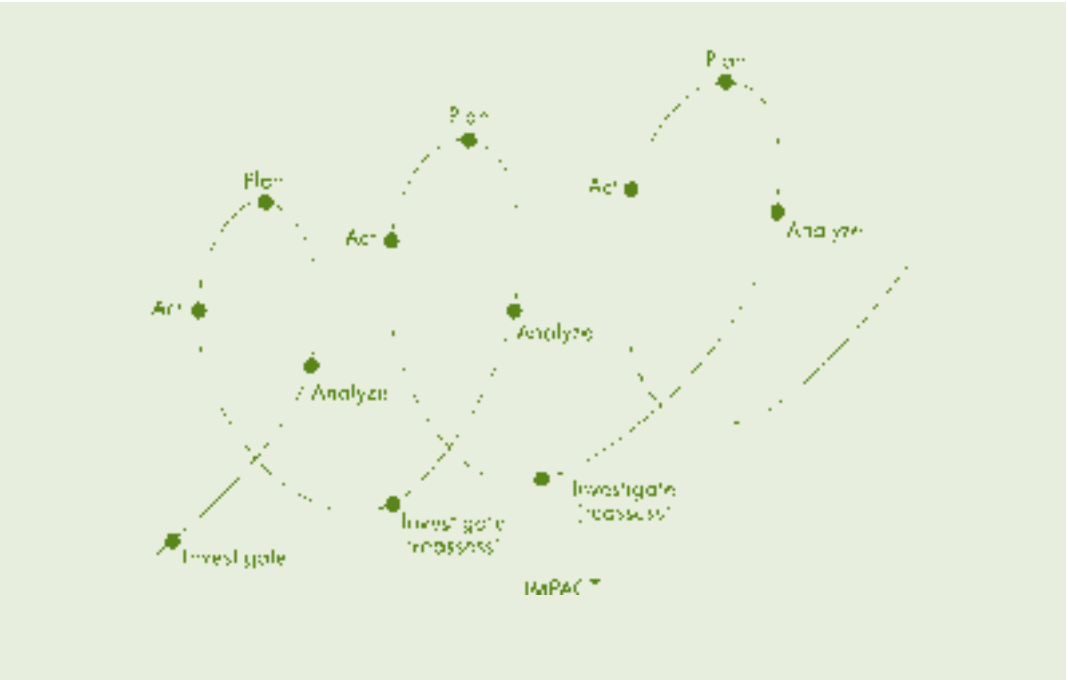
The "capacity to pay" gets verified through the process of facilitating informed choice - an essential requirement of the demand-responsive approach. It is not possible to assess "willingness to pay" with any accuracy in the absence of choices and full information about choices being offered and discussed with potential consumers. Both willingness and capacity to pay can be surprisingly elastic, depending on what options are being offered, at what immediate and longer-term costs, and how clearly this information is communicated to and discussed with women and men from wealthier, intermediate, and poor groups, who are all potential consumers of services. Gender-sensitive methods play an important role in assessing the overall demand for services (see example in Java case study, Section 2 of this report).

While assessing demand, it is also important to investigate and control for incentives in the potential users' environment which may distort their willingness or capacity to pay. For example, if people believe that services might be provided free of charge, they may have an incentive to say that they are too poor to pay. In such cases it may not be possible to get an accurate assessment of demand until the initial stages of project implementation are under way. At this time potential consumers can begin to see the real terms under which the services are finally being provided.

Demands and meeting demands are not static issues. Continued maintenance and use of services and user payments depend on how well the improved facilities continue to match the expectations and resources of the different groups. Users also continually compare how benefits relate to the costs of obtaining them.

To understand "demand" in relation to sustained services, the MPA measures the satisfaction of women and men (in wealthier and poorer households) with the improved facilities, the operation and management of the facilities, and the effects of the same on their lives (extent of demand met). It relates these levels of satisfaction to what each group has contributed to construction and now contributes in the post-construction phase, not only in cash but also in time, labor, and any other form (perceived value for cost). The analysis of these processes is done across time and at community as well as agency levels. This reveals how processes at different levels and phases in the project cycle determine the final results of water supply and sanitation projects.

Figure 4 Experiential learning cycle



(Kolb, 1984 and Pfohl, 1986)

3.6 Three-step participatory assessments

The MPA uses a three-level system approach in its quest for sustainability and equity, linking the levels in mutually reinforcing ways (see framework diagram, section 3.1). The design of the MPA links community level outcomes to institutional practice and institutional practices in turn to national sector policies. Asssessment of how water and sanitation projects are implemented, is the first level. Assessment of institutional factors and approaches that shape implementation strategies constitutes the second level. Assessment of the policy environment in the water and sanitation sector that regulates institutional practice, is the third level in the MPA's bottom-up learning approach.

When well applied, participatory tools not only provide reliable data for outsiders but they initiate experiential and mutual learning spirals for all parties at all levels. MPA uses this characteristic of participatory tools to connect stakeholders at all three levels, including policymakers, staff from local governments, service delivery agencies, and user communities. The resulting common insights are a first condition for action where action is needed. Scoring results together provides opportunities for crosschecking correctness, completeness, and predictive value through a transparent process.

In introductory dialogues with communities, the elite, the extrovert and the male usually dominate. Therefore, as with all other participatory approaches, care must be taken initially that the groups are sufficiently homogeneous to encourage free expression of ideas and opinions, and that the activities are facilitated skillfully to ensure that all have equal voice. The MPA does this through a sequence of participatory tools used with at least four types of gender and class-

segregated groups, namely, poor women, poor men, wealthier women and wealthier men. Results are then shared and discussed in mixed gender and class groups in large community gatherings, where the differences among the groups can be understood and appreciated by all. The MPA makes transparent the voices and choices of all groups so that they can all be accommodated in the community's plan for improving services.

For community groups, the use of the MPA community analysis tools is a first step to analyze situations, identify areas for change, and take collective action. For implementation, the groups use further participatory processes and the MPA monitoring tools. They may then repeat the analysis to evaluate their progress, generate new knowledge to plan further, improve implementation or take up new activities as a follow-up, as illustrated in Figure 4. Community analysis is also a learning opportunity for program staff. Dialogue and negotiations help pinpoint the changes that local groups will make, and those required from agency staff.

Agency staff members then use participatory institutional analysis tools from the MPA to rate the enabling environment in their agencies. Representatives from user communities participate in the institutional assessments to assess the styles of working the staff has with women and men in communities. (See *Stakeholders' meeting* in Chapter 6.)

An inventory and analysis of the overall policy aspects takes place with the sector policymakers or program managers, using the MPA tools for participatory policy assessment. Doing this at the end of the sequence, after the results of the other levels are known, makes it possible to see if and how results on the ground and in the institutions are influenced by the prevailing policies, and where action must start to bring about changes in institutions and at ground level.

Participatory methods and tools have been in use at micro level since the 1980s. In the last few years, they have also been used to gain insight into organizations and the qualitative aspects behind economic figures at the macro level. The World Bank has, for example, recently used them in a 22-country study to learn more about poverty from poor women and men worldwide.[11]

The MPA now provides a way to apply participatory tools in programs and projects at the meso (intermediate, between macro and micro levels) level. How to implement these assessments in programs is described in the next chapter.

MPA fills a gap at the meso level.

11 *Voices Of The Poor Crying Out for Change*. Narayan, Chambers, Shah and Petesch. World Bank. 2000.

4 The MPA in Action

Steps to conduct the assessments include establishing the partnerships for the assessments, the selection and training of facilitators, the sampling procedure for determining which communities will be contacted for participation, and the preparations for and implementation of the fieldwork. Three important elements of the fieldwork are the data gathering and analysis, the self-scoring, and the action planning based on assessment results.

Assessment with separate groups of poor and wealthier men in Nepal

4.1 Establishment of purpose and partnerships

Although MPA by its very nature is participatory, it can be carried out with varying degrees of emphasis, some more internal and some less so in projects. An external emphasis may be stronger when government planners or external support agencies use MPA to gather policy lessons (see Section 2, East Asia sanitation policy studies *Achieving Sustained Sanitation for the Poor*). The internal emphasis is stronger when projects use MPA to build capacities of women and men in communities or of project staff (see Section 2, experience of institutional capacity building for gender and social inclusion in large scale projects in Indonesia). Partnerships established for specific MPA applications thus vary with the purpose. While user communities and agencies delivering services to them are always involved as partners, specific MPA applications can require partnerships to extend to provincial or central government agencies, donor agencies, NGOs active in the sector, private sector agencies, academic and research organizations and mass organizations. Examples of purposes and relevant partners are:

Comparative participatory evaluations of different projects in a country, a region, or globally.

They give planners, program managers, and financers insight into the most and least successful approaches, the factors which contribute most to the results, and the strengths, weaknesses, and

action points in individual communities and projects.

Participatory baseline studies of approaches and results in areas where new interventions are planned.

Baseline studies give insights to project designers and implementers into what the new program can build on or has to improve. They also make it possible for project managers to classify communities into those which already have good capabilities to manage improved water supply and sanitation, those with great situational and institutional problems, and those which are in-between. The first group may mainly need funds to improve or expand their infrastructure and Terms of Reference to account for outputs and financial management. The second group obviously needs the longest and most comprehensive technical support and a more flexible time frame than the other groups. Participatory baseline studies make it possible for users and implementing and funding agencies to evaluate the results and impacts of new interventions.

Participatory monitoring, mid-term, and end-evaluations.

Mid-term evaluations are undertaken halfway through a program or project. They show what has been achieved with the given inputs and resources and where improvements are required. Doing them in a participatory manner gives staff and community groups the opportunity to share their experiences of program realities in a structured manner. One or two external evaluators may be added for combining internal and external perspectives.

In periodic monitoring the methodology provides managers and staff with quantitative data for every community that has carried out an MPA assessment. These data are entered into a simple database using standard software of Excel, Access, and/or SPSS. These packages make it possible for any manager or agency staff with a basic knowledge of statistics to combine and analyze information according to his/her needs. They can also present this information in graphic forms that a wide range of stakeholders can understand - from community groups to program financers, local government personnel, and policymakers (see examples in Chapter 5).

End-evaluations take place at the end of a program or project. Using the MPA for end-evaluations is the least satisfactory because it leaves communities to address improvements on their own. It is still useful though, since it helps communities identify changes in their own management of their services, which are necessary to ensure sustainability. Funding agencies and borrowing governments (in case of loan-funded projects) may be learning partners in such evaluations in view of forthcoming projects.

One-time participatory studies by external facilitators

While MPA can be used for this purpose, such studies have several limitations:

- They do not build or strengthen capacities of community groups and staff.
- Most staff and community groups do not continue applying participatory analysis and action planning after a study has been completed.
- Horizontal spread to other communities and groups in the program does not take place.
- There are no opportunities to link participatory analysis with participatory planning and implementation.
- After having identified the areas for action, other participatory methods and tools are

needed to continue the work. Undertaking studies as single and separate interventions reduces the possibilities for continuing the process.

- No program database is built up.

4.2 Selecting the assessment teams

The assessment team usually comprises female and male members from the community, field staff from the agencies involved in the program, a sociologist, anthropologist, or participatory development specialist with skills on gender analysis and training, and a water or sanitary engineer. The latter two need to be skilled trainers in the use of the MPA and have experience with, and commitment to participatory approaches with gender and social equity perspectives .

In cases where a statistical analysis is intended, a development economist, sociologist or statistician familiar with non-parametric statistics and participatory methods is needed on the team.

For the preparation or adaptation of the participatory tools, a local illustrator is helpful. However, groups can also use their own materials and inventiveness, and rely on real life symbols, own sketches and drawings, and locally drawn or written cards. Using their own or local materials encourages ownership and creativity. It also makes it easier for community groups to continue using the participatory tools and techniques introduced.

Personal values and attitudes are as important as skills

Training teams of MPA facilitators constitutes a considerable investment for the organizations that undertake or finance MPA assessments. Such organizations may be local NGOs, consultancy firms, program support centers, and training institutes. They may also be water supply and sanitation implementation agencies that have decided to train their own staff members.

Within these organizations, not everyone has the right values, attitudes, and skills for facilitating the use of participatory tools. Many facilitators with skills in the use of participatory tools are not automatically conscious of gender and social inequalities. It takes the accompanying values, attitudes, and skills to deal with these inequities. The composition and hiring of facilitation teams therefore requires a great deal of care.

Organizations have improved the selection and capacity development of facilitators in several ways:

Box 12 The assessment team

An MPA assessment team consists of:

- Male and female members of the community and the local WSS management organization, which, ideally, should represent different socio-economic groups in the community.
- Field staff who have been with the program long enough to have experience with approaches at the time of planning and establishing the community systems.
- A sociologist/ participatory development specialist with skills in gender analysis and training.
- A sanitary or water supply engineer with experience in and commitment to participatory approaches with gender and social equity perspectives.
- At the program level, a data analyst with experience in using non-parametric statistics.

- Program agencies, and agencies that finance assessments, work with teams that continue practicing over time. They do not accept teams that have been formed "just for the occasion" by inexperienced employees;
- Selection is by a committee which includes persons with considerable field experience with participatory tools and gender and social equity;
- During interviews, candidates are asked to provide examples of their experience of participatory work, including work with women and poor people;
- Selection committees ask the candidates to provide some kind of skills demonstration, e.g., in a role play or a problem solving exercise;
- Candidates are asked to give examples of their creative use of participatory methods, e.g., variations in materials and methods or development of own tools, as evidence that they are not applying participatory tools and techniques mechanically as a "ritual";
- Community groups - especially women, poor people and other marginal groups - recommend particular staff members for training;
- The training doubles as a selection process; only the best candidates will qualify, or qualification is graded;
- Peer review and community reviews on attitudes and skills are part of the training and fieldwork;
- Structured observations on facilitation and communication attitudes and skills are part of the training and fieldwork.

The women and men from the community participating in assessments should represent the various socio-economic groups and not just the elite. The trainers/facilitators help the other members of the assessment team focus on contextual issues, ensure objectivity and monitor the quality of the work. A mix of respected female and male community members and project or government representatives at the start helps pave the way for the assessment in the communities.

In case of a series of assessments at country or inter-country level, the establishment of a Gender Assessment Committee (GAC) comprising representatives from sector line ministries and partner agencies, and including persons with field experience in participatory water and sanitation programs may be useful. The role of such a committee will include defining the scope of the assessment, quality assurance, peer reviewing and selecting of the assessment team. The GAC does not conduct the assessment but maintains a supervisory role.

Box 13 Not everyone has the personal attitudes to work with participatory methods and practice equity

Experience during the global PLA study showed that technical people sometimes feel uncomfortable using participatory tools. "Let me come for training when you finish the visual exercise."
Training program needed to focus first on attitude development for community-driven approaches before embarking on MPA tools.

East and Southern Africa regional synthesis report on the PLA Initiative. WSP - East and Southern Africa, 2000.

4.3 Training preparation

In the preparation phase, a team of regional trainers, well-vesed in the methodology, helps the participating project(s) to plan the assessments and prepare for the training of the staff members on assessment teams. During this phase, the team of trainers and project managers defines what the training will entail. It has to be jointly determined, for example, how much training may be needed on participatory methods and gender and gender analysis and whether the assessments will include a statistical analysis.

In some Water and Sanitation Program field offices and in IRC, trainers are available who have hands-on experience with the methodology and have taken part in the development of a Training Of Trainers course.

Box 14 The MPA is a process-oriented methodology

When working with the community, facilitators must recognize that the community has its own knowledge and creativity, and that gender relations affect participation, control and benefits. Hence those selected need to have extensive experience in the use of the participatory tools and activities and know how to do a gender analysis.

If the team has had no prior experience in participatory approaches and gender issues, it is important that the training is extended, to develop skills and attitudes for dealing with these aspects of the methodology.

4.4 Training implementation

The duration of the training depends on the level of skills and experience of the staff, but generally, it lasts some two weeks. Training events are structured to cover the three levels of the assessment: community, program agency, and policy level. The development of attitudes and skills for dealing with gender and social equity issues at every level is an important element.

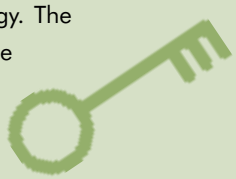
During the first few days of training the participants become familiar with the concepts and tools of the methodology and gain experience in its application, using problem identification and analysis from role plays. Structured peer and trainers' observations are used for generation of awareness and improving skills. An important part of training is the experiencing of each tool through hands-on applications and role-playing. This allows the participants to internalize the tools and identify and address bottlenecks and limitations. They are also encouraged to be creative and vary application, tools, and techniques to adjust to differences in the field.

The second week is spent on completing one sequence in the field to gain hands-on experience, and to allow observation and evaluation of content and process, attitudes and skills. Fieldwork includes practicing how to analyze outcomes of individual sessions, and how to summarize and analyze the outcomes of a community assessment as a whole. It also covers the use of the fieldbook, data entry, and scoring.

The final two days of training focus on ways of compiling data across communities, critically reviewing aggregated findings, practicing how to present the information to management, and discussing follow-up recommendations.

Box 15 Key elements of MPA training

The training helps the team assimilate the application of the methodology. The data collection and analysis is a learner-centered participatory process. The aim is not to extract information, but to generate discussions to facilitate community analysis and action planning. Elements in the training are:



- Sharing experiences on sustainability, use, and participation. Understanding and appreciating different perspectives and opportunities of community groups.
- Relating the understanding to the roles of the MPA to assess and enhance these aspects.
- Conceptual understanding of the methodology and its core features.
- Objectives, implementation, and uses of the assessments.
- Expectations of the participants from the methodology, the training, and other issues.
- Definition of terms and concepts to ensure consensus on issues of interpretation and perceptions.
- Facilitation process and skills, including awareness of gender and social equity issues. Practice to deal with these issues in processes and contents of assessments.
- Emphasis that the team will be expected to help bring out insights and disaggregated information on gender and social equity in processes (participation, demand responsive approach) and results (sustaining and use of services), and analyze with community groups and program staff how these issues are related and may be enhanced.
- Development and adaptation of tools to local contexts.
- Hands-on experience with participatory tools and scoring matrices. Clear understanding of the purpose and application of each tool, the means for application and adjustment (e.g., in mapping and pocket voting), the types of information expected from the tools, subject areas for group analysis, and planning of follow-up action.
- Documentation of fieldwork and reporting of results.
- Locating communities for hands-on practice, preparation and planning logistic arrangements.
- Open-ended and structured observations. Feedback sessions at various points.
- Defining scope of study and sampling criteria. Reviewing preparations.
- Team building for working in a mutually complementary learning mode with team members having diverse skill-profiles and experiences.

Key outputs of the training:

- Conceptual understanding of the assessment framework and issues.
- Consensus on objectives of the assessment, implementation, monitoring, and evaluation aspects, and gender and poverty aspects.
- Skills to apply the methodology, including participatory analysis at the three levels and qualitative and quantitative analysis afterwards.
- Sampling criteria defined.
- A skilled assessment team, sensitized to the need to work in an interdisciplinary team mode for best results.
- Assessment tools and fieldbook adjusted for local context.
- Defined roles and responsibilities, including data entry and report writing responsibilities.
- Action plan for fieldwork, including logistics.

4.5 Selecting the communities

When used for monitoring or self-evaluation, the MPA helps its practitioners assess services already operating. When used for planning of new projects, the assessments will establish how existing systems have been established and are managed. MPA is most appropriate to use in the following situations:

- The water and sanitation systems that will be assessed should have been functioning for some time, at least 2-3 years or longer.
- If they are still functioning, various aspects of their functioning will be assessed. If not functioning, reasons leading to the system's failure will be investigated and documented.
- The service should have some form of decentralized management, i.e., it should not be exclusively managed by an external agency. If the services are entirely externally managed, tools in addition to MPA will need to be used.
- The project organization and community should further be willing to participate in the assessments.[12]

In large programs, the assessments will usually be carried out with a random sample of communities. A random sample gives every community in a project or program the same chance to be included in the assessment. In a random sample, each community has the same probability of being approached to participate in an assessment. Each potential community is also selected independently from others. Those eligible would be all communities in a particular program area when the program makes no distinction for size and type of communities that may participate. Usually, however, programs have specific selection criteria for communities. The "sampling pool" (known in statistics as the universe) will then consist of all communities that meet the selection criteria and have water supply and/or improved sanitation facilities installed under the ongoing or completed program. Alternatively, when MPA is used as a project planning or baseline building method, the selected communities may have older service provisions, either made by themselves or under earlier programs or both. The incoming program will be aimed at enabling these communities to update, expand, improve, or replace the systems.

In a non-random sample, the findings and conclusions from selected communities only hold for the specifically selected cases, and are not applicable for all communities in the program(s) from which they were selected.

Special caution is required if organizations or communities take part in comparative studies based on an open invitation from the organizers. Chances are that in such cases of self-selection, the sample will have a bias towards more participatory, socially inclusive, and gender-aware communities. In such situations, the variation in approaches and results between individual communities may still be large enough to bring out differences that are significant, that is, to be due to more than pure chance. However, in a skewed sample, e.g., when selection procedures have led to an overrepresentation of more

12 In keeping with participatory research principles, evaluation exercises may not be imposed on unwilling or disinterested communities. However, working only with eager and willing communities can seriously bias the sample and results of assessments. It is therefore important to develop a rigorous sampling plan including an alternative reserve list with additional communities, numbering at 20 percent of the required sample. Sample communities from the primary list are first contacted as planned. In case resistance or lack of interest in participating is encountered in a community, a genuine attempt should first be made to ascertain reasons by contacting secondary sources of information and key individuals. If by doing so trust can be established, MPA assessments can be carried out as planned. If not, the case should be documented and another comparable community selected from the reserve list. Such documentation usually provides valuable learning about past project approaches and their consequences.

successful or unsuccessful projects, regression equations can not be applied to help predict which inputs lead to better sustainability and use of services.

4.6 Sampling procedures

The sample size and rigor of sampling procedures will vary with the purpose for which the MPA is being used, e.g., as a part of training for managing water-sanitation projects, for case studies, program planning, monitoring or evaluation, or research purposes, and depending on whether a statistical analysis is required.

For most evaluation research and monitoring purposes, the number of communities in the sample would vary with the size of the project and the types of interventions it makes. The aim is to involve enough communities to provide a good cross-section of the typical technical, social, economic, cultural, political, administrative, and environmental conditions in the project area, without confounding biases in selection.

If overall conditions are homogenous, a simple random sample can be drawn. To do so, each community in the program(s) being sampled gets its own number, beginning with number one. Each number is written on a separate slip of paper which is tightly folded. The slips are placed in a box or bag. They are stirred well until all have mixed. The required number of communities for the sample (see below under sample size) is then drawn from the container.

The alternative is to use a table with random numbers. Assuming that a sample of 40 communities needs to be drawn for a program with 600 communities, a numbered list of names is prepared from 1 to 600. To draw the sample, one can start reading numbers in the table that consist of any three figures. The starting point may be anywhere in the table. The first 40 numbers thus generated between 1 and 600 are the numbers of the communities that will be contacted. Continuing until one has 50 communities thus identified will provide a reserve in case of later refusals to participate.

When conditions are heterogeneous, communities are grouped (stratified) according to their main characteristics. They are then selected at random in numbers proportional to their presence in the program. Box 16 lists some factors that may be of

Box 16 Possible factors for consideration in decisions on type of sampling

- Environmental and technical conditions: type of water sources (ground and surface water), availability and quality of fresh water, water resources, developments in water and land use, technologies used for water supply and sanitation.
- Demographic conditions and developments: population size, density, growth, and migration.
- Economic conditions: economic base (e.g. subsistence, cash crop, or industrial or services economy), communications (near major cities, well-connected or isolated), character of the settlement (rural village, small market town, or low-income urban), economic growth.
- Socio-cultural conditions: religious, caste and ethnic composition, male and female literacy levels, heterogeneous or homogeneous society, seclusion of women, etc.
- Political and administrative conditions: decentralization and devolution, types and legal status of water and sanitation management organizations.

(See example of sample selection criteria in the Lao PDR case study, Section 2 of this report.)

relevance in the classification of the different groups.

The way in which the sampling has been done must always be reported. Data that illustrate the representativeness of the participating communities must also be collected and reported as part of the assessments. Only then can it be assumed that the information is representative of the sampling universe.

To ensure representativeness of samples drawn, it is necessary to define the sampling universe carefully. For instance, if the sample is to represent all communities covered in past water supply projects, all communities that have ever received interventions from any water supply project must be included in the sampling universe. If instead the sample is intended to represent only those communities that received interventions from project X, the sampling universe will have to exclude communities that received interventions from any other project. Such considerations need to be combined with ethical and practical ones. For example, this implies that the final sample may include communities where services were finally never built, partly built, or have broken down. Reasons have to be documented in each case. Secondly, while working with communities whose systems are incomplete or seriously out of order and where the communities want to revive them, the MPA practitioners should be prepared help resolve the situation in some way, or at least link such communities with resources that can help them revive their services. **The MPA was not designed to be a tool for purely academic research. Its sole use for such purposes would defeat its fundamental objective, which is equitable empowerment of all levels of stakeholders to enhance the sustainability of their services.**

Larger samples improve the chance of detecting significant differences (that is, the likelihood that they are due to real, rather than accidental, differences), because there is more consistency in the possible outcomes. It is thus always advisable to take as large a sample as possible. For larger programs, going below a sample size of 35 to 40 communities is not recommended, particularly if statistical analysis is desired.[13]

4.7 Preparation for fieldwork

After having drawn the community sample, the assessment facilitation team approaches the selected communities to gauge their interest and willingness to participate in the assessments. During these preliminary visits, the team explains the purpose and general nature of the assessment and its costs and possible benefits for the community. Before the visits, as part of overall preparation of the fieldwork, the team will already have determined if, and in what ways, the time and effort of the community members who participate in the assessments will be compensated. It is important to realize that, just like the time of

13 As common in social research, MPA scores consist predominantly of ordinal data. Statistical analyses most appropriate for such data are graphical presentations and non-parametric statistical tests. Non-parametric statistics include a range of tools with varying powers of accepting or rejecting research hypotheses. Very small sample size limits the usefulness of some non-parametric tools. Greater applicability and choice of tests is possible when sample sizes are above 35, e.g., at a sample size greater than N=35 the normal approximation of the binomial distribution can be used; the Spearman's r test of association needs sample sizes of at least 35-40 to accept or reject rank-order correlations of at least 0.3 at 95 percent level of confidence; the Chi-square test of association requires expected frequencies to be 5 or more per cell for test results to be interpretable, which means that any cross-tabulation of the sample beyond the basic 2X2 table needs sample sizes of at least 30.

external facilitators, time of the community's women and men has value. Visiting teams should therefore adjust visits to when people are available. In cases of longer visits and/or lenghty cooperation, some form of compensation for the work, such as snacks, a meal, or a small fee, will need to be considered. The visits are continued until the required number of interested and willing communities has been found, with a date and time for the first visit set that are convenient for the community as well as the external assessment team.

Depending on what is feasible, the team may make an advance inventory of the general community situation from secondary sources, then verify it with the local authorities during this first visit. These data make it possible to assess, during analysis of the overall data, whether a particular external or system-related factor, rather than community factors, explains the linkages found. Examples of such factors are age of systems ("do newer systems perform better than older ones, irrespective of responsiveness to demand, gender and class?''), availability of support ("does distance from the nearest town where spare parts, tools and technical support skills are available matter?") and poverty ("are services better sustained in richer communities than in poorer ones, irrespective of other factors?").

4.8 Implementation: procedures, fieldbook and data templates

Community level assessments

The actual participatory activities start with the second visit, arranged with the community leaders. With the progress of MPA activities, the participation of formal community leaders should begin to decline. Activities are increasingly carried out in informal gatherings with specific groups such as poor women and men. The schedule presented in Figure 5 and Box 17 is only indicative. Actual schedules and arrangements are made with the women and men in the communities. Tools and materials will also vary according to local conditions and creativity.

Participatory assessment with the community consists of several types of activities:

- Observations of physical conditions**,** together with a representative group from the community during the transect walk, linked with key questions to households living near the facilities that may have direct knowledge of the service, e.g., maintenance, repair, and use. Both female and male community representatives should take part in the review visit and discussions on the technical service aspects.

- Participatory activities with focus groups in the community (male and female, rich and poor, users and non-users), using a specially designed sequence of participatory exercises diagramming local conditions, practices and preferences.

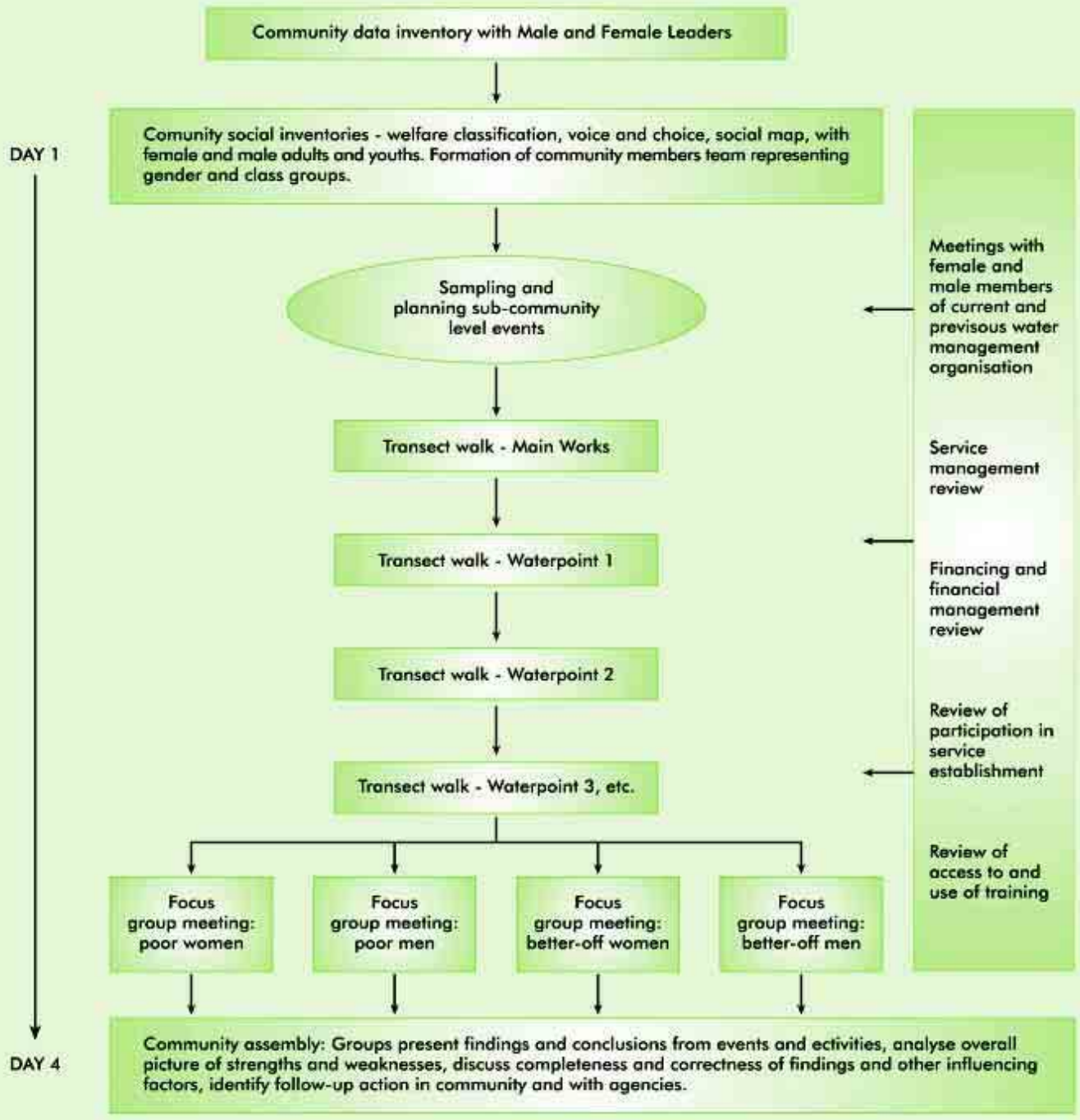
- Open-ended interviews with key respondents (male and female members of relevant committees and the operator and/or other persons involved in operation and maintenance).

- Review of written records (e.g., logbooks, minutes of water committee meetings and general assemblies).

Sampling of communities and groups is used to make the participatory analysis more representative.

The following diagram illustrates the typical flow of activities during an assessment in a community over a period of four to five days.

Figure 5 Flow diagram of MPA assessment at community level



Box 17 Indicative sequence of work with a community*

Preparation. Contact with male and female leadership. Explanation of assessment objectives and request/invitation to participate. When positive, dates are set and logistics arranged.

Day 1, a.m. Arrival. Review of general approach and topics with male and female local leaders, WSC (see abbrevation below), and spontaneous gathering. Filling in general data sheet. Organize for social mapping in afternoon/evening at convenient time/place with women and men from wealthier and poor groups. Lighting to be arranged as required.

Day 1, p.m. Start records review and open discussion with WSC and craftsmen/women on project functioning, administration, finance, management.

Start recording and scoring activities with community members. Cross-check validity of data from WSC in open discussion with community groups.

Day 1, late afternoon/evening. Welfare classification, to define categories of wealthier, intermediate, and poor. General social mapping on location and distribution of water and sanitation facilities; location of rich/poor/ intermediate households; areas with access to (and, where feasible, use of) water supply, sanitation, drainage and solid waste disposal; contributions for service usage and for construction; households with WSC office bearers and service workers (M/W, paid/unpaid). The map is later used to plan the transect walk routes and participants (M/W, R/P). The team assists community to transfer the map to paper if needed. Social mapping may be done before Welfare classification, as an icebreaker. Groups then return to the map to mark households as wealthier, poor and intermediate. Recording, scoring and open discussion for other factors with community members continue. Peer review of process including handling of gender and social equity aspects.

Day 2, a.m. Transect walk and contacts with households near water points on: functioning of system, service operation, repairs, range of access. For sanitation: transect walk and joint scoring on sanitation checklist for quality of installation, maintenance and use, in samples for old and new latrines, drains. Separate comments from female and poor transect participants, to ensure their views are included.

Day 2, p.m. Team splits in two. Start open discussions with focus groups (RM, RW, PM, PW) on explanatory factors for findings on sustainability and use. Participatory assessment activities on service operations (cross-check), use/ non-use, contributions; patterns of use (pocket voting); demand-responsiveness and cost/benefits perceptions (ladder); time budgets for M/W (listing and scoring); income/expenses for M/W (100 seeds); history of participation in terms of information received, decisions, contributions (matrix voting). Scoring with groups. Cross-check on validity, relevance, and other factors. Evening: recording and peer review.

Day 3, a.m. Continue committee interviews, records review, skills demonstration (capacities built) with committee, operator, etc. Continue focus group sessions, scoring, reviewing with groups. Evening: recording and peer review.

Day 4, a.m. and p.m. Complete committee interviews, records review, skills demonstration (capacities built) with committee, operator, etc., and focus group sessions. Team records process and outcomes of Day 4. Team analyzes total scores of Days 1-4 and discusses key issues. Prepare for community review assembly with reporting by community groups.

* Actual schedules will vary depending on the convenience and availability of community members to meet in groups. Busy periods such as agricultural planting or harvest seasons and festivals are best avoided. Even so, it may not always be possible to have assessment activities for several days at a stretch. Field teams should be flexible and resourceful in making time use plans for fieldwork.
WSC = Water-Sanitation Committee
RM, RW, PM, PW = Rich Men, Rich Women, Poor Men, Poor Women
M/W = Men/Women

Getting representative focus groups

Because the MPA is based on participatory inventories and analysis with focus groups, adequate representation of the various sections of the community is critical. Ensuring this during fieldwork requires sensitivity to local culture (as explained in section 4.10) and careful sampling. To ensure a good representation, purposive sampling through social mapping is used. The way this is done varies in small and large communities

Small communities

In communities of up to a few hundred households, during the first day, available members of the community assisted by the facilitators' team draw a social map of their settlement. This map is not to scale and consists of a bird's eye view of the local roads, paths, compounds or houses and facilities.

Maps may be drawn in sand, on floors (using chalk) or on paper (using felt-tipped pens or fingerpainting or cut- and paste-techniques). In the map, the participants mark the compounds or houses of lower, upper and middle class families, using colored powder, crayon, paint, colored pins, or some other local material. The definitions of the three categories are relative and based on the people's perceptions of rich and poor status. (Details in Chapter 6, Welfare Classification.)

If all three categories exist in approximately equal proportions, one wealthier and one poor neighborhood are subsequently chosen at random for a visit.

If the intermediate and poor categories are approximately the same size and there are only a few wealthier families (<10 percent) sessions involve randomly chosen intermediate and poor neighborhoods.

The team also discusses with both groups in what ways the few wealthier families differ and adds this as qualitative information to the data. If the elites differ only marginally in their characteristics from the intermediate group, the two groups are taken together.

If there are only a few (<10 percent) households who are particularly poor, focus group discussions involve randomly chosen intermediate and wealthier groups, but qualitative data are added where the contributions and benefits differ for the worst off households. This is done by either interviewing them separately or, where socio-culturally possible, inviting them to take part in the discussions in the randomly chosen intermediate group and indicating where their situation differs.

Large communities

In large communities with 1000 or more households, social mapping of the whole community is not practical or feasible. Here the recommended procedure is to divide, with the help of the local authorities, the overall community into lower, upper and middle class localities (as defined by the leaders, who either use an existing map or draw a map not based on individual households but on community sections). Again, the definitions of poor, intermediate, and rich are their own. The team assigns numbers to each type of locality, puts the numbers of each type on folded pieces of paper in a box and draws three times: one rich, one poor and one middle-level locality where the fieldwork is to be done. In these three localities, social mapping then takes place as above.

In both cases, special care is needed to ensure that the selected areas include non-users. If this is not the case, e.g., because non-users live in one specific area not included in the sample, the team

visits and conducts a participatory review with this area separately.

Single parent households

In defining and classifying who are poor, intermediate, and rich, the position of single-headed households needs special attention. A high percentage of female-headed households in the community has been known to have both positive and negative effects on gender burdens and benefits in water supply services.

The positive effects could be that, in female-headed households, women's access to decisions, and new maintenance and management roles may be easier. These women sometimes have a good income and control of that income from their own enterprises. Negative effects have been that often, many female-headed households are poor and may have less capacity than other poor families to contribute labor in addition to or instead of cash payments.

Institutional assessments: stakeholders' and policy meetings

The first level institutional assessment is usually at a project implementing unit level, which is generally the district, but in small provinces may even be at the province level. The stakeholders' meeting examines the agency approaches that were used to achieve the results in the field. Female and male field staff from different project agencies, and women and men from the community representing the users, get together for this one-day meeting. They assess what, in the experience of all stakeholder groups, are the strengths and weaknesses at the agency level and identify areas for improvement.

It is necessary to conduct these meetings in the language that is understood and spoken regularly by women and men representatives from the community, and to ensure an environment in which they do not feel inhibited about expressing their views. During the meeting, the participants again use participatory tools and techniques and score their group's outcomes. Although literacy is generally required for the use of the institutional tools of the MPA, in cases where community representatives are not sufficiently literate, the tools can be made more participatory through the use of visuals and symbols devised on the spot to replace written words.

After the agency level meetings are over, a similar meeting takes place with policymakers and project managers to assess various policy aspects that guide, or have guided, implementation (see Chapter 6 for details).

4.9 Visualization and self-scoring

All assessments use open-ended and visual methods to make local situations and practices visible. Most of these methods do not require literacy and so allow those with low or no literacy - often women, and poorer and older people to participate.

Since the outcomes are visible to all, they generate transparency, discussion, and the emergence of one or two consensus viewpoints. However, the latter usually does require separate meetings with different class and gender groups. If not, the opinions of only the more powerful would likely prevail.

Even within separate groups certain individuals, with vested interests, may exert pressure overtly or covertly for the group to choose a score even when it does not reflect reality. MPA facilitators are sensitized to this possibility during training. In such situations, it is advisable to complete the visual analysis but postpone scoring to a later session

and develop strategies to neutralize the pressure. MPA facilitators need to be observant and sensitive to unspoken aspects of group dynamics specially during scoring. When consensus is difficult to reach, it is advisable to postpone scoring and probe the issue later through interviews with women and men members of different socio-economic categories. Divergent views of different groups can be reported at the final community review assembly for a public discussion of the variances and their causes, aimed at reaching an "average" score, if not a consensus, on the situation.

Based on the visualized analysis and agreed viewpoints, the groups of women and men are asked to identify where their community belongs on a scale or "ladder" of scores (see Box 19 for an example) for particular indicators being measured through the relevant participatory tool. During institutional and policy assessments, agency personnel or policy formulators follow the same process of joint scoring on MPA scales for institution and policy levels.

Self-scoring by stakeholders at every level is a significant departure from the conventional methods of assessment. It is carried out in three steps:

1. Women and men in project communities (or agency personnel in sector institutions, or policy formulators at national level) assess various aspects of their services, institutions and policies respectively, using participatory tools and producing a visualized summary of their assessment.

2. The groups use their outcomes to agree by consensus on their score on the ordinal scale associated with the assessed aspect. Colorful bar graphs are created on the spot summarizing the scores on measured issues and displayed for discussion by all (see examples in Chapter 5).

3. The groups analyze the data to identify patterns, causal factors, and follow-up actions needed for improvement.

The participating groups present the results in a *community review assembly* at the end of the MPA assessment. Here, the overall scores, issues, and follow-up action are presented and discussed, and a process of decision making and action planning is started.

During the participatory activities the facilitators make copies of the maps, diagrams, and matrices that the groups produce as part of their inventories and analysis, or document these in photographs and/or videotapes. The products remain with the community, which may continue to use them as a database, planning or monitoring tools and as examples for further work with participatory techniques.

Box 18 The advantages of self-scoring

- Self-scoring minimizes biases of "desirable" answers by individual respondents.
- It eliminates biases due to coding by different researchers.

- The process of arriving at a consensus about the score allows conflicting views to surface and be resolved, and for hitherto unexpressed information to be revealed. The final scores are only those that are confirmed by the whole group sharing the relevant experience.
- By its very nature, the process empowers groups of stakeholders to analyze and improve their situation.

Scoring principles in the MPA[14]

Ordinal scales are routinely used to convert qualitative data into numbers for comparisons of performance within and across samples and sub-samples in social research. The ordinal scoring tables developed for the MPA have the following added advantages.

1. *Increasing accuracy through the use of 0 – 100 scales with "gaps."* The MPA uses 5 point scales, which are convertible to 0-100 scales, with the 5 points at 0, 25, 50, 75, and 100. A description of the indicator being measured accompanies each scale point. In case the assessing group thinks its situation is not correctly reflected by any of the five points, but that it falls somewhere in between two consecutive points, it can choose to score the situation midway between the points concerned. Their reasons for doing so are always recorded. This provides valuable insights to the project manager or monitoring unit about field realities behind quantitative scores.

2. *Capturing hard-to-measure issues more meaningfully through descriptive ordinal categories.* It is difficult to compare scores from people's value judgments, as are common in ordinal rating scales (e.g., Good = 100, Average = 50, Poor = 0). To overcome this difficulty, each MPA scale uses descriptive categories arranged in a graduated order with reference to one particular indicator/dimension being measured. For instance, the example in Box 19 measures the quality and extent of

Box 19 Scoring scale or "ladder" for community level assessment of *gender equity in service management*

Score given by community	Score description	Score converted to 100 point scale
0	No woman in management functions at all, or only in name.	0
1	Women are members of lower-level management organization, but do not attend meetings regularly.	25
2	Women members take part in meetings of lower-level management organizations, but not in decision making.	50
3	Women members attend meetings of lower-level management organizations and make decisions together with men.	75
4	Males and females both participate in meetings of lower and higher-level management organizations and make decisions jointly.	100

14 This sub-section draws upon the paper *"MPA: An improved methodology for participatory assessments"* by A.J. James, presented at a workshop to produce a resource book *Participatory Approaches to Project Design, Implementation and Evaluation*, organized by the Institute of Rural Reconstruction (IIRR), the Philippines, and Mysore Relief and Development Agency (MYRADA), Bangalore, July 2000. A.J. James was a member of the team from WSP and IRC that developed the MPA and contributed substantially in the areas of quantification of qualitative information and quantitative analysis.

women's participation in the community water management organization more meaningfully than a measure like " the percentage of women on management committees." Using the same scales for different points of time (such as "before" and "after" project intervention) serves also to measure the extent of change in the situation as perceived by stakeholders concerned.

3. *Impact assessment without baseline information*: Since the MPA measures community perceptions, it can be used to assess project impact even when baseline information is not readily available. For instance, assuming 100 as the baseline (pre-project) situation, user communities can define the current (post-project) situation as a number less than, more than, or equal to 100, and explain reasons for their answers. A series of figures and reasons thus obtained from a sample of project communities provide a clear picture of whether the intervention had an impact, whether the impact was positive or negative, and the extent of the impact. Although not sophisticated in terms of evaluation literature, such methods have proved to be time- and cost-effective, and their margin of error may compare with full-scale evaluations using baseline data and case-control designs.

4. *Benchmarking of scales for sustainability monitoring*: Since the fundamental objective of developing the MPA was to enhance the sustainability of development interventions, the MPA scales were designed with a central focus on what constitutes the minimum condition necessary for sustainability.[15] The mid-points of all MPA scales represent this minimum condition, for the indicator being measured. This feature enables all stakeholders to evaluate where they stand with respect to the minimum conditions to be satisfied for achieving sustainability, in their communities, projects, institutions, districts, or countries.

The MPA fieldbook and data template

The MPA fieldbook is a repository of information on the individual activities, processes, and tools, along with the scoring scales and sheets to document the discussions of the outcomes of each activity. Copies are provided as part of the MPA training course and are used during the training. The MPA fieldbook has been translated into local languages wherever local MPA applications have been developed and country teams trained.

The fieldbook contains introductions on the methodology, its gender and social equity focus, the scope and the need for ongoing development. It then presents, in a systematic way, the purpose, materials and process of the participatory activities. Each activity comes with its own record forms to note date, duration, number and types of participants, scores, qualitative information, and outcomes from group discussions on the findings from that particular activity.

After the fieldwork, the outcomes from the datasheets are entered into a database template in MS ACCESS for analysis and presentations of data across communities and projects.

15 Initially these represented a series of consensuses achieved among a global core group of sector professionals and academicians, which were then validated through testing in 15 countries in a global study during 1998-99, documented in Gross et al (2001), *Linking Sustainability with Demand, Gender and Poverty*, and van Wijk-Sijbesma (2001), *Best of Two Worlds?*, WSP-IRC.

4.10 Quality control

Participatory tools are visually interesting and exciting to work with. For new users of these tools it is easy to get carried away by the novelty of outputs generated while losing sight of the process and the environment that generate them. The latter, however, are crucial to the authenticity of the results. A few points that are critical for ensuring the validity of results of participatory assessment and analysis are mentioned here.

The MPA tools function only in the hands of people that have experience in, and values and attitudes for, using participatory approaches with gender and social equity.

Participatory analysis requires more than participatory tools. All members of teams undertaking participatory learning assessments with community groups need to have experience in the application of participatory tools and techniques, such as PRA, SARAR, or PHAST. It is not enough if only one or two members of the team are so trained, because team members must be able to complement each other's work during field application of the tools.

Bias due to inappropriate facilitation styles is one of the most important threats to quality and validity of resulting data. Facilitators with knowledge of participatory techniques and some application experience may still distort field level results with inappropriate facilitation styles and attitudes. Like all participatory methods, MPA is vulnerable to facilitators who are directive, judgmental, insensitive to gender and social status imbalances within groups, being mechanical and hurried or rigid, and unable to adapt to local situations. While MPA training can emphasize building the required attitudes and openness to learning, it is always a good investment to have specialized facilitation and quality monitoring observers for the first 1-2 assessments after training. The observers can provide immediate feedback to facilitator teams for course correction if necessary.

The MPA has a sequence of activities that is carried out with different groups in a community over a period of 4-5 days. When and where each activity takes place is determined in consultation with the groups which will participate.

The first activities, in the first 1-2 days, are planned with the local leaders and members of the community water and sanitation management organization. These activities give the facilitators the time and information to plan further activities with other groups, such as poor women and men and non-users, at times and places of their convenience. Fixed workshop schedules are not appropriate. Sessions must be planned so as not to disrupt livelihood-related activities and domestic routines. Also, it is necessary to avoid periods when communities experience seasonal stress or heavy workloads, such as agricultural planting and harvests, or festivals.

Factors that may inhibit participation have to be anticipated and problem solving strategies planned and practiced by the facilitators' team.

Very often, women hesitate to speak up in front of men and figures of authority in male-dominated cultures. Gender-segregated settings are then essential. Helping each group to present its results to other groups afterwards and then discuss conclusions and action promotes two-way understanding and collaboration.

The presence of government officials, the village chief, or the Water Committee chairman may prevent the poor, women and/or non-users of services from freely expressing their views. In such cases, sessions are planned without inhibiting presences or a team member tactfully takes the

inhibitor(s) away, e.g., to inspect some water or sanitation facility, review records, or start an individual interview somewhere else. A dominant participant who keeps speaking on behalf of everybody else needs to be treated the same way or given a different role, e.g., as a recorder, or a photographer.

Establishing trust is essential.

The team has to approach the community in a culturally appropriate manner, e.g., by introducing themselves to the village elders and seeking approval for the assessment. Participating in community functions and group activities helps break the ice. Intermediaries who are known and trusted by the community can also introduce the team. A particular challenge is to make marginalized and subordinated groups, that may have rightfully become distrustful, feel respected and safe so that they will open up and participate effectively.

Quality control in scaling-up.

With some experience in scaling up MPA applications to date (mainly in East Asia), the following lessons have emerged about safeguarding consistency of procedures for quality. Whenever multiple field teams are used, prior agreements need to be reached with all and documented for field use about: a) sample selection procedures up to and within communities, and preferred alternative strategies to use when the sampling plan cannot be adhered to; b) a "basic minimum" body of quantitative and qualitative information to be recorded per community, which enables checking the adequacy and completeness of the MPA process followed; c) the forms in which raw data (including copies of visual analysis) are to be made available for data entry and analysis at levels higher than the community; and d) an "essential set" of tables, graphics, and visual outputs to be produced from the sample.

In addition, triangulation procedures need to be used within each field team on a daily basis, to cross-check the validity of emerging information and conclusions. Some form of referral and feedback facility must be established between field teams and their coordinator to ensure consistency in the functioning of all field teams. Spot checking visits by the coordinator to each field team at least once during fieldwork is another good practice, resources permitting. When field teams are expected to use MPA applications in consecutive phases of a project (e.g., the WSLIC 2 project in Indonesia), review workshops of facilitators at the end of each phase can provide a wealth of learning for project agencies and field facilitators about how to maximize the benefits from MPA for enhancing project quality.

Box 20 Quality enhances validity

Adhering to representativeness and triangulation resulted in learning that:

- in one project, construction work was paid without completion;
- in another project, program staff had asked for bribes;
- in a third project, water committee members had installed illegal house connections; and
- a group of poor households had been left out. After the assessment revealed this, they were finally included.

Experiences with the use of the MPA in general give rise to a number of cautions and insights

- Agencies financing assessments have sometimes tried to cut the duration of training and/or fieldwork. They do not always accept that by doing so, the quality of the work may become so superficial that it is no longer useful, and process and outcomes may become mere tokenism.
- Some managers have selectively picked up the MPA sustainability indicators, but replaced the use of participatory methods by a conventional survey, thus reducing the methodological merits and the validity of the derived scores. The users became passive respondents in such cases and the power of learning and control shifted to outside researchers and the all-male water committees with whom they discussed the results. Local women disappeared as actors from the learning process in those cases.
- Changes in the scales and parameters have been made without testing whether these were valid. Subsequently, the methodology was used to make predictions for which no sound methodological foundation existed.
- Especially when used for one-time studies, there is a tendency to focus on quantitative data collection and analysis, to the detriment of the equally important qualitative aspects.
- Not all facilitators have the required aptitudes and attitudes for participation or are sensitive to gender and social equity issues.
- Application may become automatic and "ritualistic" because facilitators do not consider and adjust to local situations.
- Participatory tools and techniques for investigations are not one-time "add-ons" to otherwise unchanged programs. They need to be linked to the use of participatory approaches and processes in all other stages and activities.
- Participatory approaches require changes in existing structures, procedures, and climate in agencies that give technical and financial support, from engineering and social development departments to contractors and donor and lending agencies.
- Empowering women and men in communities to take charge of their own development means accepting different ways of working for all parties concerned, not just the communities. Empowering women and men in communities to take charge of their own development means accepting different ways of working for all parties concerned, not just the communities. External assistance agencies must delegate funds and power; adopt flexible time schedules that accomodate communities; and let sanctions for not meeting contract terms apply to all parties concerned, including themselves.

How managers can prevent problems and protect quality

It is important to involve managers at the earliest possible stages of projects in discussions about the use of the MPA to add value. They will be more likely to appreciate its potential benefits, accept its principles and support its proper application when they have been a part of the process of deciding how to use it.

The quality of MPA assessments is as good as the understanding and practice of, participatory and qualitative approaches with gender and poverty perspectives by the people who use it.

Since misconceptions or incomplete understanding of participatory methods are often at the root of bad practice, managers can be encouraged to better understand the strengths and limitations of the use of participatory tools and techniques. They can further enhance the quality of applications by checking whether:

- field teams have spent the full time period with the sampled communities;
- there is evidence, such as copies or photographs of the outputs from tools, that the scores are based on participatory assessments;
- poor women and men, and groups normally excluded for other reasons, have taken part in the activities;
- the full range of data has been recorded;
- qualitative information has been recorded and analyzed;
- facilitators have assisted community groups to analyze the outcomes and identify actions; and
- facilitators have developed variations in existing tools and processes and developed new tools in response to field conditions and as a sign of ongoing creativity and commitment.

At a more general level, WSP and IRC seek to protect the quality of the work in several ways:

- by working with a known group of experienced organizations that trains facilitators in the use of the MPA. The group is large enough to meet requirements and avoid monopolies;
- by seeking the introduction of internal and external peer review for quality preservation and further development; and
- by organizing periodic experience audits with MPA practitioners from different parts of the world.

5 Organizing and Interpreting the Data

The information that emerges from MPA assessments can be analyzed at several levels. Different types of analysis are possible, qualitative as well as quantitative. This chapter provides a brief overview of how to process the data and present the findings to those who need to know them in order to make decisions and take required action.

Data summarization and presentation at community level by a villager in Java, Indonesia

5.1 Analysis of outcomes per tool

The first outcomes of a sequence of participatory activities are the pictures, diagrams or maps that the participants produce. They present visually various aspects of the local water or sanitation situation for all participants to discuss, analyze, draw conclusions, and plan actions.

The most basic analysis is at the level of every tool. The outcomes – a social map, a series of smiling faces, a drawing, a diagram, pictures with voting cards of women and men, etc. – are displayed often on the ground, or on walls, so that all can see them.

To help the group draw conclusions, the facilitators may ask probing questions such as:

- What does the picture say?
- Does it reflect the real situation?
- Are aspects or situations missing from the picture?
- What can we learn from it?
- Does it say something about differences between women and men, or between those who are well-off and poor?

Box 21 Analysis leading to correction

In Sewukan, in central Java, Indonesia, women and men each assessed the technical quality of the existing water supply prior to constructing another system. The headman thought women's participation was useless, because "women do not know about technology."

Afterwards, however, the women had pinpointed most errors: inlets of reservoirs too low, pipe laying too shallow, wrong cement-sand ratio in concrete mixing, and so on. As a consequence, the women in each *dusun* (neighborhood) will, for the first time, form committees to monitor the contractor's work on a new project. The men will include a clause on quality norms in the contract and will take up any problems up with the private sector contractor.

Sometimes, the facilitators can help the group to better focus on gender and class differences by helping the group draw up and fill in simple two-by-two tables. An example from Cheriyananad, in Kerala, India is given in Box 22. This learning process may lead to collective, corrective action, as happened in Sewukan (Box 21).

5.2 Analysis of relative performance

By factor

Analysis of the scores on the scales helps community groups compare their own situation with other options. The facilitators use previously hand-written scoring options (score descriptions or "scenario") in the local language on separate cards. In the analysis of the situation, the assessing group chooses the scenario that reflects its situation most closely, or an intermediate situation between consecutive scenarios. At this point the participants may decide to immediately discuss their score and begin to consider changes for better sustainability, effective use and equity. They may also analyze specific factors during the assembly at the end, when all scores for that community are reviewed comprehensively.

For project managers simply comparing raw scores for individual factors across a number of communities grouped by project, geographic area or project rules can provide revealing trends and insights, since all MPA scales are benchmarked for sustainability, as further explained below.

Benchmarking for sustainability

Score descriptions in MPA scales have been benchmarked so that the middle point of each scale represents the minimum score expected when services/systems are likely to be sustainable. This is illustrated in the examples of selected scales about the adequacy of financing and management, in Box 23. If scores fall below this mid-point, the services/systems are unlikely to be sustained. This benchmarking allows a powerful visual illustration of where a community system stands on the sustainability scale. When community groups can see where their systems are doing well and where they are at risk, they are able to focus on correcting the situation in order to enhance sustainability.

By aggregation

Most of the scores from MPA assessments are ordinal, with the exception of a few that are ratio scale measurements such as the *performance rating by users*. Ordinarily it is not valid to aggregate ordinal scores, since it may not be assumed that intervals between scores are equal. Two underlying design characteristics make it possible to assign a degree of meaning to rudimentary forms of aggregation using ordinal MPA scores, as explained below.

a) **Benchmarking for sustainability**: as explained earlier in this section, all scales have the same range of scores and mid-points of all scales are comparable, as the mid-points are designed to indicate the minimum condition

Box 22 Gender and poverty analysis of activities profile

The activity is preferably done with several female and male focus groups in the poor and well-off parts of the community. Alternatively, it is done with the full local water and sanitation committee and other community leaders, both female and male, but this limits the information and analysis to a smaller group.

Purpose

To visualize the division of skilled and unskilled work between women and men, rich and poor, in constructing and maintaining the water supply and/or sanitation facilities.

Process

Through discussion, the group determines which jobs members of the community perform for the water supply or sanitation services, such as hand pump caretaker, tap attendant, hygiene promoter, treasurer, secretary, chairperson or member of the water committee, water system administrator, operator, or latrine mason.

The facilitator then asks participants to lay out a table (matrix) on the ground. It may be done with the help of cards (for labels), pictures (depicting women and men and skilled and unskilled work) or real life symbols (e.g., implements indicating the various types of work). Lines are drawn or laid out with the help of thread or rope. One column is for men, the other for women. On the right hand side the two rows are labeled, or marked with pictures illustrating "unskilled, low-status work" and "skilled, high-status work."

Through discussion, the participants divide the identified local jobs into work that is mainly physical and has a low status and work that is skilled and has a high status. The participants agree on the jobs that belong in a certain category and enter the job names or pictures or symbols in the unskilled/low status and skilled/high status categories.

Using colored slips, beans and other materials, the participants then place the number of women and men who carry out the respective functions in the respective boxes (see drawing below).

	Men	Women
Skilled, high-status work	■■■ ■■■■■■ ■■■■	■
Unskilled, low-status work	■■■	■■■■■■■■ ■■■■■■

■ Wealthier households ■ Poor households

Analysis

Participants review who does skilled work and who does unskilled work and what the gender implications are. For example, are most poor women doing unskilled work while skilled work is done by men? They reflect on the amount of time and labor involved and on the value of the work for the community and the implications for the person(s) involved and their families. Discussion is facilitated on underlying reasons and what can be done to make the situation more equitable.

NB: For skilled work, such as operator, it is important to check who carries out this work, the operator him/herself or also some of his/her relatives, e.g., when operator is absent. The same exercise (separately or in a combined table) may be done for paid and unpaid labor and for jobs without and with training.

required for sustainability. Since every scale follows this principle, when several scales making up a particular variable are aggregated, the mid-point of the aggregation still represents the minimum aggregate score for sustainability (as done in case of 4 components of sustainability, shown as stacked bar charts in Figure 8. Each stacked bar represent a community water system and is composed of the aggregate scores the system received on the four sustainability components: system quality, effective functioning, effective financing, effective management.

b) **Score descriptions as points on a continuum:** each score description in a scale differs from the previous or subsequent one on the same scale, on a single dimension. This provides an approximation of equal distance between score categories, as illustrated in Boxes 19 and 23.

In the MPA, all components of sustainability are deemed to have equal weight as all components are interlinked and influence one another (see Figure 1 in Chapter 1). It is rarely meaningful and practically implausible to isolate the effect of any single component on ultimate overall sustainability.

The MPA indicators table in Chapter 2 showed how sustained services, effective use and the variables affecting them are measured through a specific set of indicators. With this list, the facilitators help community groups add up scores for indicators to arrive at an aggregate score for each variable. The score for 'effective financing'

Box 23 Two examples of MPA scales benchmarked for sustainability

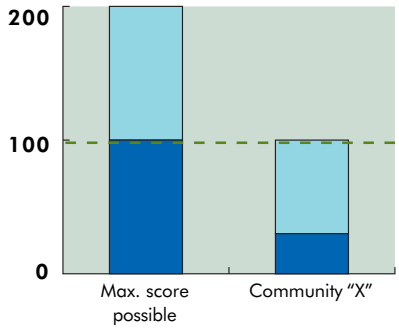
Score given by community	Score description for FIN 2 (Adequacy of user financing of operation and maintenance)	Score converted to 0-100 scale
0	No user payments	0
1	Payments made but do not cover annual O&M* costs	25
2 (mid-point)	**Payments just enough to cover annual O&M costs**	**50**
3	Payments cover all annual O&M costs and repairs	75
4	Payments generate annual surpluses, over and above annual O&M and repair costs (for possible future expansion/ replacement of system)	100

Score given by community	Score description for CM2 (Level of repairs carried out by community water management organization)	Score converted to 0-100 scale
0	No repairs done by the community or done only by external agency.	0
1	Some minor repairs organized by the community, not any major repairs.	25
2 (mid-point)	**All minor repairs done/organized by the community, but not major repairs.**	**50**
3	All minor repairs done/organized by the community, also some major repairs.	75
4	All minor and major repairs done/organized by the community.	100

* *O&M - Operation and maintenance*

Figure 6

Example of maximum and actual aggregated community score for effective financing in one community



in community "X" shown in Figure 6 is, for example, derived from adding the two scores for *coverage of operation and maintenance costs* (lighter section of bars) and *universality and timeliness of payments* (darker section of each bar). The facilitator helps community "X" to see that their aggregate score for *effective financing* barely makes the mid-point (in this case at 100 out of the aggregate maximum score of 200), and that unless the users of the water system improve their financing performance, the system is likely to become unsustainable. The relative length of the sections of the stacked bar shows that what they need to most improve is the *universality and timeliness of user payments*

The facilitators help the groups to visualize the outcomes of the aggregation and compare the result with the maximum score. Visualization may take the form of a simple bar diagram, a pie chart, or any other visual that is easily understood. The diagram is drawn on paper or created on the floor with different lengths of rope, pieces of paper or cloth, depending on what is locally available and what the group can easily understand.

Once the group grasps the idea, repetition of the process is easy. Groups have even come up with better alternatives to express the analysis visually.

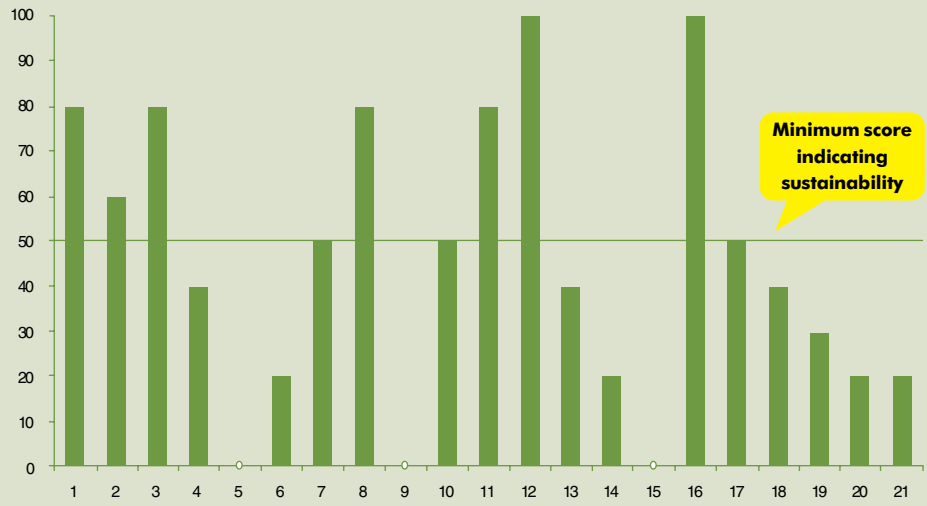
The facilitator then encourages the group to consider why the achieved scores are high, low or in-between as compared to the maximum possible. When a degree of consensus begins to emerge, the facilitator steers the discussion towards what can be done to improve the situation.

5.3 Strengths and weaknesses analysis

To obtain an overall picture of strengths and weaknesses in a particular community system, the assessment team presents the overview of the respective community scales and scores (see Figure 7) to a community review assembly at the end of the process. The facilitator helps identify where strengths and weaknesses are, by asking people to identify which scores are considerably higher and lower respectively than the benchmark at the mid-point, which is the minimum score level required to indicate a sustainable system. Facilitators crosscheck with the community gathering whether the picture correctly summarizes the situation. Discussion then proceeds to how the weaknesses can be addressed, what local groups can do to improve the situation, and what resources and opportunities may be available to tap, both locally and further afield.

Community score for system quality converted to bar chart by villagers in Indonesia

Figure 7 Strengths and weaknesses in sustaining domestic water supply in community "X"



Different aspects of sustainability and effective use in one community

5.4 Comparison with other communities

To help a community compare its performance with that of others in the project or region, the facilitator aggregates the results for all sustainability indicators for that community and depicts the results along with those of several others in the project area (see Figure 8).

The variations in scores across communities usually raise useful ideas about what has worked, where, and why. In response, the facilitators can provide information gained from the other communities to help specific participating groups identify how something could be done better in their own community. Out of such analyses emerge specific ideas about how a community may enhance the sustainability and effective use of its services. At this point, facilitators take a back seat and leave the group to turn its ideas into plans for specific action.

An additional task of the facilitators is to ensure that someone from the community assumes responsibility for the safekeeping of the produced maps, diagrams, scoring sheets, etc. They should also ensure that the plans and agreed responsibilities are recorded so that the group can later monitor their progress. Facilitators should take away only their own notes and copies they make of the outcomes. The originals remain in the community.

If the results have not been analyzed with the community at large, the facilitators and the other members of the team (local women and men, project staff, local authorities) should organize an assembly with all heads of households, female as well as male. This allows the participants to present a summary of the results and explain proposed actions. The meeting also serves to invite public discussion, provide clarifications and develop wider support for further action. It helps ensure that the results of the work are fully transparent to all and that no potential conflicts and misunderstandings are left behind.

Since not everyone can attend and speak out equally well at such meetings, special effort is usually needed to ensure effective community review assemblies. Some good practices to follow are:

- Information: using information channels that will reach both women and men from different socio-economic groups (women and men often have different communication channels) with advance notice of the time, place and purpose of the meeting.

- Access: holding the meeting at a time and place convenient for all, particularly for the poorer households and for women; explaining that the meeting is for both male and female heads of households; encouraging and facilitating that women and the poor attend.

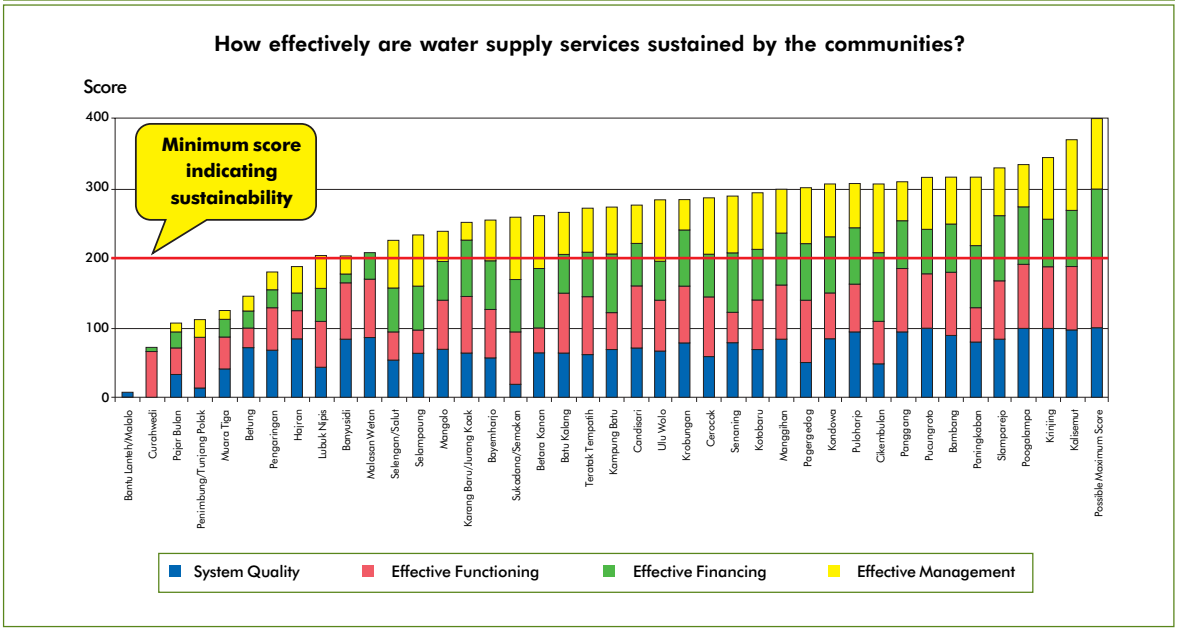
- Participation: ensuring that all can see and hear proceedings well (tools on ground or walls, use of vernacular language, arranging the place so that women and poor people will not be at the back); stimulating reactions from all, e.g., through breaks-out and small group discussions, grouping people by gender, neighborhood, etc; inviting groups to appoint both women and men as spokespersons; holding separate meetings with isolated groups if needed.

5.5 Analyzing community level results with agencies

Summarizing community level results in various ways at the project agency level can provide project managers with valuable insights about project implementation approaches that influence different components of sustainability.

The first type of analysis at the project agency level can be a comparison of scores across groups of communities, sorting communities by highest to lowest scores on specific aspects, and looking for factors on which scores are consistently low or high across the sample, as in Figure 8.

Figure 8 Comparison of scores for four sustainability components across 40 communities



Typical questions in this kind of analysis are:

- Which are the high, medium and low performing communities on sustainability? On effective use? On gender and social equity? On demand-responsiveness of services?
- Do these results match our own monitoring information? If not, why?
- What factors come out as strengths and weaknesses in the communities assessed? Are some common to all or most communities?
- What do they indicate about the agency's project implementation approaches?

An example of how the information presented in Figure 8 can be analyzed and interpreted is provided here.

Assuming that the 40 communities in Figure 8 constitute a representative sample of communities served by project Z, the bar charts indicate the following trends:

- About 20 percent of the water supply systems provided are unlikely to be sustained (i.e., have aggregate scores below the sustainability benchmark score) and another 7-8 percent are borderline cases.
- It is difficult for community water supply systems to be sustainable unless they achieve a certain minimum (about half of the maximum score) score on all four components, i.e., *system quality, effective functioning, effective financing,* and *effective management*. Those that fall below the benchmark usually score either zero or very low on at least one out of the four components. This trend, supported by field level findings in MPA assessments to date, reflects the assumption made in MPA scoring (Section 5.2) that all four components of sustainability are interrelated and one poorly functioning component drags down scores on the rest, endangering overall sustainability.[16]
- The opposite also seems true. The best performing systems are the ones where all four components of sustainability get high scores.
- While scores on *system quality* (blue section of bars) and *effective functioning* (red section) are comparable across all communities, great variations are visible in terms of *effective financing* (green) *and effective management* (yellow). This suggests that the project has in place the means to ensure certain quality standards for technical aspects of water supply systems (which affect effective functioning), but probably has no standard approaches to ensure the quality of community management and adequate financing of operation and maintenance by users.

Implications for changes in project approaches to enhance sustainability or the need for deeper investigations of specific issues can be deduced from findings such as above.

Regrouping communities by the best and worst performers (e.g., communities with the top and bottom 10 percent of scores) on specific aspects and looking for explanatory differences between them is another possible analysis. This often identifies questions for further explanatory investigation.

Another type of possible analysis is looking for

16 This means that in practice the aggregate sustainability score of community-managed systems cannot and does not exceed the minimum benchmark whenever any one component performs extremely poorly. Recognizing this interrelated web of influences among the components, the MPA treats all four components of sustainability with equal weights. This relationship however may not hold true for systems not managed and financed by user communities.

trends or comparisons over time, by repeating assessments in the same set of communities at different points in the project cycle.

5.6 Analyzing agency factors influencing results on the ground: stakeholders' meeting

The second level of analysis takes place in the stakeholders' meeting. This meeting captures the views of different categories of stakeholders on the institutional mechanisms that influence community level results such as sustainability, effective use, participation, demand-responsiveness, gender and social inclusion. The stakeholders participating in this analysis are agency personnel of different types, community representatives, and social intermediaries.

The stakeholders' meeting takes the form of a day-long workshop where a series of participatory analysis exercises are used to elicit assessments and views from different stakeholder groups, on agency objectives, strategies, practices, mechanisms, organizational climate, incentives, and management approaches. The assessment is designed to explore how far each category of stakeholders considers these agency factors to be supportive of gender- and poverty-sensitive demand-responsive approaches. A typical stakeholders' meeting program is described in Chapter 6. At the end of each exercise as described in Chapter 6, the facilitators gather all participants to examine the visual outcome of the excercise. Scores given by each category are averaged or modal scores chosen as typical of each group. Co-facilitators quickly plot the resulting scoring patterns in simple visual and graphic forms.

The most revealing analysis and the most useful findings usually emerge from the differences in male and female responses, and between technical and non-technical staff responses, and between agency personnel and community members' responses. Hence, it is essential to invite responses and display results from each category separately, without generating confrontations and threatening situations. This means deciding on and consistently using color-coded but anonymous voting tokens and response cards of different shapes and types throughout the workshop, for all the stakeholders.

After visually displaying the results of assessment, the facilitators help the meeting participants to first identify similarities and differences in outcomes. Facilitators ask questions to make

Stakeholders' meeting in FLOWS project district, Flores island, Indonesia

participants think about the outcomes and discuss their implications for the project/program. What do the emerging consensus/divergence of views/ patterns mean? What do they say about the strengths and weaknesses in the agencies? Is anything surprising? To whom? Why? What are the implications for further exploration? For further action for improvement? Who should do what?

Facilitators use such questions to generate a group discussion. When inter-category sensitivities are anticipated, the discussion is held in several small, homogenous groups where people feel more comfortable in expressing their opinions. Co-facilitators then bring the results from all the groups to the plenary. Summarizing group responses on cards helps focus this presentation and makes it easier to record results later.

At the plenary, if a consensus seems to emerge from the above discussion about the overall score to be assigned, it is recorded on a large scoreboard. This is done in a graphic way showing each achieved score against the maximum possible score, to enable visual monitoring of the assessment activity as it progresses from one exercise to the next. If consensus is not achieved, the differing scores are recorded as such, marking them with the names of categories whose assessments they represent. The group then moves to the next exercise.

At the end of all the assessments, the final scoreboard is presented to the whole group. They use it to identify and jointly rank areas of **institutional strengths and weaknesses**, in terms of support for sustainability and equity in the outcomes of water supply and sanitation interventions made by the institution.

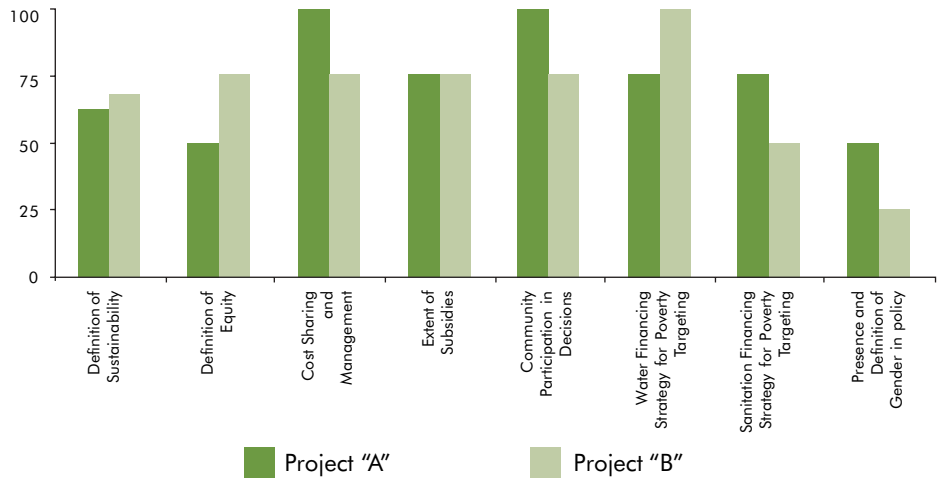
Facilitators generate a plenary discussion on what can be done to build on the strengths and improve on the areas of weaknesses. The participants discuss, agree on and record implications for action needed at each of the three levels: the community, sector agency/institution, and policymaking. Scores and actions agreed upon are recorded for future monitoring of progress by the participating stakeholders and for presentation at the next assessment level, the *policy analysis dialogue*.

5.7 Policy analysis

The analysis of sector or agency policies can be done through a half-day workshop with high level policy formulators and national directors of projects, using a process similar to stakeholders' meetings. An alternative is to interview key officials at times convenient to them and then gather them for a presentation and discussion of a summary of interview results. If the interview option is chosen (see Chapter 6), the results are also discussed with the interviewees as the interview progresses. This serves as a joint analysis of findings on the links between policies and results on the ground, although it is limited to the participants in each separate interview. If the more participatory workshop option is chosen, the final score board arrived at will depict the seven aspects assessed (see example in Figure 9). The scores depicted in the bars represent the participants' assessment of the extent to which different aspects of current sector policies are supportive of gender- and poverty-sensitive demand-responsive approaches.

Scores from more than one project may be used together as all projects operating within the same time frame in a country are implemented under the same sector policies. Comparing several projects make the participatory policy analysis a more potent instrument of change. In the example in Figure 9, both projects came across as weak on their vision with respect to gender. This was related to the lack of clarity in policies at the time about why or how gender was important. In the next step, the group of participating policymakers

Figure 9 Results of policy assessment: example from country "X"



identifies the needed policy-level actions based on the results. The policy workshop design that was used in this case is included in Appendix B as an example.

It would be useful to extend the policy analysis at least as far as getting the group to prioritize and logically sequence the changes needed. The specific country situation will determine how much specificity and detail are relevant to determine at this workshop for future action.

5.8 Statistical analysis

Statistical analysis using the MPA data is possible and appropriate at different levels. For the bulk of project planning and monitoring requirements statistical analysis in its simplest form, i.e., analysis of frequencies and graphical presentations of the same are both useful and sufficient. They make it possible to identify areas of good and bad project performance on the ground and to understand trends. Such analysis can show how often certain characteristics are present in the database of the program with telling results. For example:

- the percentage of communities where 80 percent or more of the households have access to improved water supply and sanitation indicates the extent to which conditions for better public health impact are being met in project-assisted communities.

- the percentage of communities which covered at least the day-to-day operation and maintenance costs over the last three years indicates the extent of financial sustainability being achieved.

- the proportion of women and members of households locally classified as poor in the local water management organizations reveals the extent of gender equity and social inclusion in water service management.

Central values, such as averages from ratio scale ratings, the most prevalent scores, and spread of scores above and below the median benchmarks on scales can present further insights. With a computerized MPA database, it is possible to present results on any of the aspects, such as technical and financial functioning, participation,

equity and use, in figures and graphical forms, as and when needed. It is also possible to show progress over time as the number of individual community projects increases. Updating only requires new information on current conditions, not historical analysis.

Using aggregated scores from sub-indicators on sustained or effectively used services (e.g. as stacked bar charts, as shown in Figure 8), managers can rank individual communities into top and bottom performers. Ranking gives managers and staff insight into the characteristics of both groups. It helps them to bring communities together for horizontal learning and to decide where to focus limited resources.

Comparing community performance on individual and aggregated scores also helps identify interesting findings for case studies, especially when combined with qualitative information.

In situations where MPA is used for more research-focused purposes, such as investigating relationships between factors or for comparing clusters of communities on specific aspects, statistical tests appropriate for ordinal measurements can be applied, provided conditions for statistual testing are satisfied. This means ensuring that appropriate sample selection procedures have been followed, the correct statistical test is selected, and sufficiently small margins of error are chosen to conclude that the differences or associations found are significant (that is, not due to chance).[17] For hypotheses testing, a 95 percent level of confidence is considered sufficient for most social research and monitoring purposes, although MPA data have often produced results significant at a higher (99 percent) level of confidence, i.e., with only 1 percent probability that the tested relationship found is not true.

Statistical testing for associations helps managers to see whether certain clusters of factors, as well as individual factors, tend to occur together. MPA data have been used in this manner to answer questions such as:

- Are better-sustained services also better used by all? If not, are non-users a mix of different types of households or are certain groups, such as poor households, systematically excluded?

- Are higher user payments for operation and maintenance associated with greater choice available to users (for service levels or for modes of financing, or choice by more groups in the community), more equitable tariff systems, provision of training on financial management, and/or better accountability to users?

To test for significant correlations, non-parametric tests are used because most scales used in the MPA are ordinal in nature. The strength of the association is measured through the correlation coefficient. As the name indicates, a correlation merely says that the two related aspects "co-relate," or "occur together." It does not say whether increase in scores for one aspect leads to a simultaneous increase in scores for the related aspect. Clear causal relationships are hard to establish using ordinal data, since such relationships may only be tested using parametric tests such as multiple regression analysis or factor analysis - which are applicable at higher levels of measurement and require much larger sample sizes than is usual with MPA applications.

17 For a fuller explanation readers can refer to standard textbooks for behavioral and social research such as *Research Methods and Anthropology: Qualitative and Quantitative Approaches* by H. Russel Bernard. 1995. Altamira Press.

Supplementing non-parametric tests of association with qualitative explorations of community perceptions of causality can provide project managers with sufficient insights for action. To cite an example from the global study, better gender balance in the village water and sanitation committees was found to be significantly associated with higher overall sustainability scores. Qualitative data from focus groups explained that when community service management organizations are gender-balanced, more management training can go to women, enabling them to exert greater influence on service management, thus making the water service more responsive to their demands and therefore more satisfying to the principal users (who are usually women in the community). Satisfied users value the service and therefore tend to pay user fees regularly, thus improving the adequacy of financing, which makes the service more sustainable .

It can also be investigated if such relationships continue to hold when controlling for other possible influencing factors, e.g., the level of development in the communities concerned or the complexity and age of the installed systems. Through building a model, it is possible to see which factors are most crucial in obtaining the desired results. However, such analyses can only be done when the sample and data meet certain requirements (see any methodological or guidebook on statistical analysis in the social sciences).

Insight through statistical analysis is attractive for program managers, policymakers and researchers. It requires the presence of a sociologist, economist or statistician experienced in the use of non-parametric statistics at the program level. Her or his main functions are to supervise data entry, analyze frequencies and cross-tabulations, decide on the statistical test(s), test the strengths of the associations among individual influencing factors, and between those factors and the achieved results in terms of how services are sustained and used.

6 Participatory Tools Used in the MPA

The MPA uses a sequence of nine pre-defined participatory activities.[18] It allows opportunities, however, to choose different tools for the same purpose or developing and using variations of the tools. The sequence itself is also not rigid, as it is adjusted to the convenience of the participating groups.

6.1 Ensuring quality and validity

Pretty (1994) lists a set of criteria for deciding whether information from participatory assessments can be trusted. Use of the MPA will meet most of them, provided applications are carried out with quality control (see section 4.10), as explained here.

- Working five days with each participating community helps to meet the criterion of an *intensive engagement*.

- The process allows for the *expression and analysis of variation* by making certain that a wide range of different actors is involved and their perspectives and realities are accurately represented.

- *All relevant stakeholder groups* - in all cases, women and men, better- and poor, local managers, and user and non-user groups - must have participated.

- *Cross-checks and parallel observations* are built in to test credibility, e.g., getting information on the way the water supply or sanitation program is managed from local managers and users, women and men.

- The data have been subjected to *triangulation*, that is, results are arrived at through up to three different methods and are then compared for internal consistency. In the MPA, this is done in three ways:
  - using the same type of source repeatedly, e.g., interviewing several key informants.
  - using more sources for the same information, e.g., sessions with women *and* men.

18 Specific tools which have been taken from existing participatory methodologies and adapted for use in the MPA are described accordingly in this section. The remaining tools were conceptualized and designed by the global core team from WSP and IRC that developed the MPA.

- using several facilitators with diverse disciplinary, professional and personal backgrounds in a team.

- *Parallel investigations* by sub-teams and team communications are carried out to see if findings tally and so demonstrate reliability of the research. Inconsistencies discovered must be followed up through further cross-checking with relevant groups the following day.

- *Reflective journals*, or diaries, are kept on a day-to-day basis to provide a private reference document, in which to record, and account for, methodological decisions and interpretations. This includes records of observation by team members throughout fieldwork and daily discussions within the teams of any differences between their observations.

- Analysis of findings includes *negative case analysis*, whereby hypotheses are worked over until one hypothesis accounts for all known cases without exception.

- Facilitators check whether the participating groups recognize the results as a *valid representation* of their own reality, in discussions after tools, during the community review assembly and, at agency level, the stakeholders' meeting.

- Where relevant, the report contains the hypotheses, the descriptions of the context, and the visual tools used in data collection. Information is clearly laid down so that others can *trace the findings* and, if so desired, *replicate the study*.

- To account for quality of research, *peers or colleagues not directly involved in the research* review methods and results.

- In an inquiry audit, a person or group of persons with no direct interest in the work examines the process and/or product to confirm that the findings are *realistic* and not a figment of the inquiry team's imagination.

- A demonstration of *impact* on the capacity of the stakeholders to know and act shows that a sequence has not been carried out for the benefit of the outsiders, but has resulted in enhanced capacity of the stakeholders and an increased understanding of possible actions.

The last five criteria were, for example, included when the MPA was used in a global study (van Wijk-Sijbesma, 2001).

Community review assemblies in villages in Laos and Indonesia. These meeting are held in each community at the end of MPA assessments, to present and confirm findings with the whole community, to discuss how to enhance sustainability and equity problems found and to plan collective action.

6.2 Welfare classification[19]

Defining rich, poor, in-between categories in Cambodia

Purpose

The tool helps to classify the population in three socio-economic strata (high/middle/low), based on locally specific criteria and using culturally appropriate terms. The facilitators use the information to identify groups with which to hold focus group discussions.

The community groups use the criteria for mapping the access of the poor and the wealthier to improved facilities, paid jobs and management power and for identifying the differential rates of payments and degrees of participation in community decision making, service management, etc.

Process

A discussion is started with a group about how they differentiate between households in their community. When socio-economic criteria are mentioned (which happens very soon), the facilitators provide some blank sheets of paper and ask the group to draw pictures of a typical well-off person in the community. When someone takes the pen and starts drawing, the facilitator asks others to draw a typical poor person and a typical middle income person. The terminology to be used for rich, poor etc. is taken from the group's own language, to be culturally acceptable. This activity challenges the group's creativity. The drawings usually produce some laughs and serve as good icebreakers.

Using the drawings as a starting point, the group begins to describe the characteristics of each category, one by one. As the answers emerge, someone from the group lists them under the picture in question. It is helpful to start with the wealthier, then move to the poor, and end with the middle category.

The activity continues until six to seven characteristics have been identified for each category. Probing by the facilitators helps bring out different types of characteristics, not only assets

19 Modified from *Wealth Ranking*, a participatory rural appraisal (PRA) method.

and access to services, but also household composition (such as single parents, bachelors and old couples), health (such as chronic illness) and psychological characteristics (such as isolation, lack of respect for self and from others).

Participants then distribute a number of seeds or small stones equal to the total number of households in the community over the three pictures to visualize how the three groups are present in their community. Alternatively, facilitators provide a set of 100 pebbles/seeds and ask the group to make a proportional distribution of the seeds among the three categories, assuming that the total amount of seeds provided represents the total polulation. This allows a rough percentage distribution to emerge, which can be used to identify whether the middle group should be included with the poor or the wealthier, for focus groups. The group then records the resulting characteristics and figures on a large sheet. These are kept with the drawings for ready reference during later assessments requiring rich/poor differentiation.

Results

The activity results in agreed and locally valid criteria for classifying households into upper, intermediate and lower classes and the approximate distribution of households in these categories.

Uses

The tool is used in combination with the community map (see Section 6.3). Its information serves to:

- identify the route of the transect walk and the focus groups of wealthier and poor women and men with whom discussions and assessment activities will later be held, as described in Chapter 4 (Section 4.8, under "Getting representative focus groups").

- help the groups that make the community map to decide which households to mark as wealthier, poor and intermediate. They would then count how many households fall outside the areas of access to the improved water supply, which they mark on the map using twine or colored wool, and identify those households by welfare category. The data are then analyzed to see how equitably access is shared and what may be done about inequities found.

- put the numbers of households with and without latrines in a matrix across the three welfare categories, to analyze access to sanitation, identify possible reasons for access differentials, and better target physical and financial support in case of new projects.

- list the number of women and men in each category who hold paid and unpaid jobs related to the water and sanitation services, who received various kinds of training and/or have positions of influence on service management committees. This make it possible to assess gender and social equity in access, type of work done and control of services.

- visually depict whether tariffs, and contributions in cash and kind reflect the socio-economic differences in the community and how benefits such as proximity to water sources and service levels are shared. This facilities planning for socio-economically fairer divisions of burdens and benefits.

6.3 Community map[20]

Counting households with good or poor access to services from the social map in Cambodia

Social maps represent a popular planning, evaluation and monitoring tool as they reveal a lot that is never possible to know from written records. Since they also take considerable time to make, it is worthwhile to consider how many different types of data to include, keeping keeping in mind that the more complex the map, the more time the analysis will take and that other tools, discussed later, can give the same information more "at one glance" than a social map.

Purpose

Community social maps help to visually represent and analyze the community situation regarding all water and sanitation facilities - traditional as well as those provided by specific projects - and access of the poor, rich and middle-income households to them.

They also help to visualize in which households (rich/intermediate/poor) paid or unpaid males or females work in water, sanitation and hygiene promotion, who paid or currently pays how much in relation to service access obtained, and who received training.

Preparations

A day before this activity, the facilitators will discuss it with village representatives (both women and men) and agree on the area to be mapped.

For large villages, it is often too cumbersome to map the whole village down to the household level. In such cases, a general layout of the community is drawn with the traditional and new water supply systems created through the project, as well as the rich, poor and intermediate neighborhoods, according to the criteria agreed.

For project planning purposes, the entire population to be covered by a project intervention would have to be included. For monitoring and evaluation purposes, however, areas for detailed mapping can be delineated and average/typical household clusters or neighborhoods selected according to the purpose of the activity. For instance, large villages can be sectioned off

20 Adapted from participatory rural appraisal (PRA) techniques

according to administrative (sub-village) or geographic boundaries when point sources of water such as dug wells or hand pumps were provided. When network systems such as piped water supply was provided, the command area of each system from source to points of use would constitute the types of areas/units for mapping.

A random selection is then made from the relevant areas/clusters for household mapping, in consultation with the community, so that the mapped area provides sufficient information to represent the majority's water-sanitation situation.

The venue chosen for mapping is a central place where a large group can gather for an extended period of time, protected from the weather, well lit and accessible to all classes and both genders.

Process

The facilitator explains the purpose of the exercise, and helps start a discussion to develop a list of features that need to be indicated on the map.

Women and men make the map, either together or in separate groups, as gender relations allow. Depending on literacy, local preferences and availability of space and materials, they may choose to draw it on a large sheet of paper (e.g., 2-4 wrapping paper sheets taped together), using drawing materials they are familiar with, or on the floor, or on open ground.

With the help of local materials, such as pebbles, seeds, flour, twigs in case of a map on the ground, or symbols in case of a map on paper, all selected features are marked. When maps are made on the floor or open ground, the literate villagers and team members transfer them to paper after completion.

The team uses the map to generate group discussions and gather information, for further reference, particularly for planning the transect walk and for sampling. It is usual for a map to be progressively developed, detailed and refined over the entire period an assessment team is in a village.

Results

Maps bring out key local information.

- Number, type and location of all water sources, whether or not created through the project being assessed.
- Degree to which the sources meet all water needs during the year, only partly meet water needs in some months, or at times fall completely dry.
- Degree to which distribution points meet all water needs, of women and men separately, the year round, or do not have water for certain periods, for uses of women, men or both.
- Predictability of water delivery, consquences in case of irregular service, especially for women.
- Cut-off zones for water source use, clarifying access of households to sources, particularly point sources.
- Location of rich, poor and middle-income households according to criteria agreed on earlier, and the relationship of the welfare classification with accessibility and regularity of service delivery.
- Households that do not have easy access to any type of improved source.
- Number, type and location of sanitation facilities, both public and household, according to their installation before, during or after the external intervention.
- Homes of community members with roles in providing and maintaining water and

sanitation services, according to gender, period (past and present), socio-economic level and function or type of work, including whether it is paid or unpaid.

- Homes of community members who have received training for construction or maintenance of services, according to gender, class, period (past and present) and subject area.

Uses

Community maps are used in the MPA to analyze at least the following aspects of services.

Access to services: The group examines the locations of the facilities vis-à-vis the clusters of homes:

- Which clusters of households are well served, through closeness to facilities or household connections?
- Which clusters are not?
- Reasons?

Facilitation brings out the rationale for and stories behind the siting of facilities – both for water supply and sanitation.

During project evaluations, it is very useful to compare the community map to the project agency's infrastructure map for the same village and probe reasons in case discrepancies are found between the two.

Coverage over time: The facilitator helps reflect on what has happened over time:

- Since the project constructed facilities, has the community expanded or replicated them? Has it installed more taps? Built more latrines? With or without external assistance? Why or why not?

Proportion of people using the service. The group selects the score that represents the community situation best. The same procedure is followed for sanitation.

Quality of service: The group also discusses the quality and reliability of service:

- Are there variations in water quantity, quality and reliability?
- Which sources/points are functioning well and which ones not?
- What are the reasons?
- Who is affected?

The answers are used for scoring quantity, quality and reliability of water delivered by the different water points. The discussion often explains aspects of management and financing.[21]

Equity in sharing cost vs. benefits: From the classification of user households and analysis of access and quality of services, the progression to discussing contributions is quickly made.

- What did and do poor and rich households near and far from water points contribute for the service?
- Do some households also use the water from the system for productive uses? What types of households, and what types of uses?
- Do these uses involve a lot of water? Does it affect water availability for all, or could it do so in future? Are these uses reflected in the tariffs?

The results help the group score equity of tariffs and links information on water distribution and

21 The same information is also obtained from service management committees and triangulated with information from users from the map and transect walks.

adequacy for gender- and class-specific water use to system designs, source capacity and water management.

Equity in community management and capacity building: The group examines the map to identify the homes of:

- women and men on the water and sanitation committee;
- women and men who received training in financial, technical, management, and hygiene education aspects;
- those who use this training in current positions; and
- women and men who hold paid jobs in water supply, sanitation and hygiene.

The information helps the group analyze and score the equity in the community capacity created and used, by gender and class.

6.4 Transect walk[22] with rating scales

Purpose

The transect walk is used to review the construction quality and functionality of the water and sanitation services in both the wealthier and poorer sections of the community, both from the users' and external technical specialists' perspectives. The walk also serves to cross-check some of the information in the community map.

During the transect walk, a group of women and men from the water and sanitation committee and the different user groups, together with the facilitators (one of whom is an engineer) visit a cross-section of the water supply system(s) and the sanitation facilities. It is conducted with male and female community members so that it becomes an opportunity to pool outside knowledge with local knowledge of the technical aspects.

Process

When the community map has been prepared and discussed, it is used to identify a route for a water and sanitation-related transect walk. The route has to include the source(s) of the community water system(s), the main works and a sample of delivery points in different parts of the community, for systematic observations. It has to also include a proportional sample of latrine-owning households in the different welfare categories and any public sanitation facilities existing in the village.

The team of facilitators and local women and men moves along this route, observing and assessing the quality of installations using the *systems observation form* and *semi-structured interview guide (available in the MPA fieldbook provided during training)*. They employ *rating scales* using

22 Adapted from participatory rural appraisal.

standard lengths of locally available ropes to record the assessments of women and men user groups at public water points about the performance of the facility in terms of quantity, quality and reliability of water services.

For sanitation, the group visits randomly selected latrines installed before, during, and after the intervention project. Using a *latrine rating schedule*, latrine owners and the team may agree on a maximum of 10 points for each latrine. Users' assessment of latrine designs, construction and functionality is assessed with the rope rating scale in a randomly selected number of households owning latrines, and the scores averaged.

At the end, the members agree on the overall scores for the water supply and sanitation facilities, with the facilitators ensuring that the views of all members count.

Results

The activity gives insight into the physical condition and quality of construction of the water systems and sanitation facilities observed.

Views of different socio-economic groups that emerge concern use of and access to services, adequacy and regularity of functioning of the system, adequacy of operation and maintenance, fairness of fees, and contributions paid for the service.

Use

The transect walk gives information about quality of works, which is a precondition for proper functioning. This is then related with the participation, and influence, of women and men in design and construction. Through the mixed team, insights from different groups are pooled and a more complete picture obtained.

The interactions with women and men users at water points during the transect walk yield information about operation, financing and management of the services from their viewpoints. The same areas are later investigated in the committee interviews and review of records. Contradictions found should be further explored with tact and sensitivity, as they could be indicators of forces hampering equity and transparency.

Visual rating scales

Rating scales are administered in separate groups for women and men. Using a 2-meter piece of rope, a scale is drawn on the ground. The ends are marked with two symbols indicating "fully satisfied" ☺ and "not satisfied at all" ☹. The mid-point and quarter points are also marked to indicate that it is a continuum. The group begins to discuss the concept being assessed and one volunteer takes up a posititon on the scale to reflect group opinion. The volunteer usually moves back and forth on the line, until the group is satisfied that his or her position accurately reflects their collective assessment. The Transect Walk team measures the distance of this position from the zero point ('not satisfied') of the scale and records it for each concept and group in accurate proportion in miniature (say 20 centimeters) on sheets of paper. These measurements are then converted to scores, on a 100-point scale, the 20-centimeter length being taken to represent 100 points.

Other teams have used a series of drawings of faces in which the expressions range from the deepest sadness to the highest pleasure for the same type of scoring.

6.5 Pocket voting[23]

Pocket voting exercises in Africa and East Asia

Purpose

This technique detects patterns and changes in behavior and decision making by different categories of users and at different points of time, e.g., before/after interventions, during dry/rainy seasons etc. It is a particularly handy technique for sensitive subjects on which women, men or both are inhibited about stating their views publicly. The voting is done in the four community focus groups, men/women, rich/poor. It is used during the community assessment as well as the stakeholders' meeting.

Process

Example 1 - Use of water sources

On the back of a cloth stretched between two poles, trees or on a wall, the team member assisting the focus group fixes small drawings in a matrix form. The drawings characterize the range of local water sources in the community and their possible uses. Drawings of water sources are placed in a horizontal row, and water uses in a vertical column. Each cell in the matrix gets an open envelope.

Each participant in the focus group gets a set of voting slips, women a different kind from men. The number of slips is equal to the maximum number of sources a participant could use. However, participants need not finish the slips: the actual behavior may be less varied than is theoretically possible. The team member explains what the drawings represent and how the activity will be done. S/he then cross-checks that the activity is clear to all. Participants may vote for more than one source if they use multiple sources for the same purposes.

For the initial voting, each participant goes behind the voting screen and selects the sources which (s)he currently uses for a particular purpose after the new service came about. For non-sensitive issues, voting can be done by all simultaneously, by keeping only one row of envelopes open for

23 From SARAR and PHAST methodologies.

voting at a time. When all have voted, a volunteer takes out the slips from each envelope and the facilitator registers the votes under the relevant pictures on the matrix or on a paper version of the matrix, using one symbol for the votes of men and one for the votes of women, so that those with no or low literacy can also analyze the results.

If there are great differences in service levels between the wet and the dry seasons, the whole activity has to be done twice. For before/after analysis, a second round is done in the same way, for the water use pattern before project intervention. To do this, voting slips are given a different shape or color than the first round and the picture depicting a new project-provided source is removed from the matrix for the second round of voting (i.e., for the pre-project situation).

In the analysis the group compares the degree of improvements in water use practices (change to safer sources), and assesses whether some are using a combination of safe and unsafe sources for drinking.[24] They discuss underlying reasons and agree on the overall score in the scoring system. In case the group raises issues, extra time is required discuss them. The team later combines the results of the various rounds of voting into a total community result and score for presentation and discussion of the overall community findings.

Example 2 - Sanitation and hygiene behavior

Voting procedures are as above. To find out where people defecate, pictures of sites used for defecation are placed in the horizontal row, and pictures of different household members - women, men, girls, boys, toddlers, babies - along the vertical column. "Before" and "after" defecation practices are assessed for a sanitation project by doing the voting twice, first for the current situation and then for the situation before the project intervention.

The incidence and/or effectiveness of hand washing practices in the community is assessed by placing different types of hand washing options along the horizontal row and key hand washing opportunities along the vertical row (before eating, after defecation, after cleaning up infant's feces, before handling food).

Example 3 - History of participation

A similar matrix is used to analyze the extent of local voice and choice (history of participation) in decision making. Locally appropriate pictures of persons/groups that are or were involved in making decisions and choices are placed in the horizontal row, such as:

- External agency worker
- Local male leader
- Local female leader
- Local men's group - rich
- Local men's group - rich and poor
- Local women's group - rich
- Local women's group - rich and poor
- Local mixed group (male, female) - rich
- Local mixed group - rich and poor, women and men.

Types of important opportunities for choices and decisions are placed in the vertical column, for example:

- Initiation of project
- Types of technology and service levels
- Design, location of facility(ies)
- Agency or contractor for construction
- Payment amount and system

24 Reducing water-borne diseases requires a switch to year round use of only safe water sources for drinking and food preparation, coupled with hygienic transport, storage and drawing. For the reduction of water-washed diseases, any source of water is fine as long as plenty of water is used with soap or a soap substitute such as ash, or firm rubbing. Elimination of the guinea worm and schistosomiasis require the avoidance of bodily contact with infested sources. Thus, a fairly detailed assessment is needed on the basis of local risks and practices.

- Local management
- Local maintenance system
- Persons to receive training

The participants in this activity vote twice, first on who got access to information on which aspects, and second on who made decisions on which aspects. Women and men use voting slips in different colors to make it possible to see if their experiences and practices differ.

Results

The following kinds of information emerge from this tool.

Water use:

- Which water source is generally used by the community, for what purpose, before and after introduction of the new project facility, and in wet and dry seasons, if significant seasonal variation exists.
- Whether women and men, rich and poor use different sources of water and water for different purposes.
- Internal consistency of the scores (e.g., do women and men from the same neighborhood report different sources for drinking water?).
- Whether the new facility has caused any changes in the community's water use pattern.
- Underlying reasons for change or lack of change in water use practices.

***Sanitation and hygiene behavior*:**

- Pattern of hygiene behavior being studied before/after project interventions.
- Differences between women and men, rich and poor.
- Underlying reasons for change or lack of change in behavior before/after project interventions.

Participation history:

- Who had access to what information in the planning phase.
- Who participated in making the important decisions leading to the creation of the water supply and sanitation facilities. Who decided on what local planning aspects.
- Who did not participate and why.
- What extent of information and choice was available to those involved in making the decisions.

Uses

After each voting, the group lays out votes and the contents of the respective pockets on the ground/cloth for the analysis of the findings. The facilitator draws the group's attention to voting patterns to analyze similarities, differences and changes. A team member notes the rationale and stories behind the results, probing further wherever something in the results seems unexpected or not logical. The group then chooses the category on the scale that best fits the results of their analysis regarding *improvement in water use practices; effectiveness of handwashing, effective use of sanitation facilities , access to information,* and *voice and choice*.

Community group discussing results of pocket voting for water use in Cambodia

6.6 Ladders (1)

Women's group assessing benefits of household latrines versus costs in Cambodia

Purpose

The ladder activity is first used to assess the extent to which a water supply/sanitation program meets the users' demand and whether they consider the benefits worth their costs. The activity is done separately with women and men in wealthier and poor sections of the community.

Process

A discussion is started about how the service has affected people's lives. Are there any benefits (or negative effects) that they are experiencing from the service itself or from their participation in the process of its establishment or operation? As they emerge, the benefits are listed on a flip chart sheet or separate cards using words along with symbols, pictures drawn by the community members, or real objects to illustrate the benefits. Using symbols or drawings is important to ensure that the illiterates are not excluded from the discussion. Once people feel that they have listed all the benefits, they are invited to select those cards that represent a demand currently being met by the service, and lay aside the rest.

The women or men then rate the degree to which they, as a group, are getting this particular benefit. They do this by giving each pictured benefit a score of between ten (highest) and one (lowest) using beans or seeds as markers.

Once the activity is completed, the cards are put into a rank order from high scores to low. The facilitator helps to add up the total obtained score as compared to the total theoretical maximum (the number of identified benefits times ten). The ultimate score is a ratio arrived at by taking the average times ten. Thus, if the users identify that the service meets seven types of user demands, the maximum possible score would be 70. Since not all benefits will be rated a maximum of 10, the actual score may, for example, be 55. The percentage of satisfied demand is then 55/70 X 100, or 79 percent.[25]

25 Use of a percentage score ensures that the final score is independent of the number of benefits identified, and only measures the users' perception of the extent of benefit expectation (or demand) being met.

To assess the value for costs, the participants look at their scores again, but now discuss which of these benefits are worth their past and current contributions, in terms of payments, time, conflicts and whatever else the service costs them. If there are items for which they feel their costs are greater than the benefits they are getting, they can reduce the number of beans given as scores. If there are certain benefits for which they would even contribute more than they do now, they can add beans. The value-for-cost score is then calculated using the same method as above.

Result

The scores indicate the groups' perceptions of different types of benefits from the new service. They also reveal group perceptions of the extent to which each type of benefit is experienced. Ranking of benefits shows what they considered worth paying for (in terms of money, time, effort, assets or any other way), according to gender and welfare class. Cross-checking helps identify to what extent these experiences relate to their willingness to sustain the water service or sanitation improvements and whether other factors also play a role. Women and men may also see different benefits for themselves and for the other gender.

Use

The activity results in overviews of the types, division and scope of benefits accruing to women, men or both and as perceived by the different socio-economic groups. The results help examine whose demands are being met and whose are not. Additionally, whose demands are being met to a greater extent than for others and why? If major inequities are discovered in the *benefits experienced from the services* and in the *value for cost* perceived by different groups, facilitators use discussions to draw out reasons underlying them. The whole community needs to become aware of the inequities and identify the reasons for them, to spark collective decisions and actions.

For example, if a certain group is deriving proportionately greater benefits from the services than others but is paying the same user fees, this could lead to a change in the rates of user fees that better reflects the differentials in consumption - thus improving financial sustainability.

The activity also lends itself to a broader discussion on benefits and gender: which benefits are for women and girls, which for men an boys, and which are the same for all. Trying to distinguish between practical gender benefits (that is, facilitating life without changing existing roles of women and men) and strategic ones (that is, leading to an improved position of women as compared to men) turned out to be difficult in field situations and was abandoned as part of the assessments.

6.7 Card sorting

Assessing who contributed what for construction, by gender and class, in Nepal

Purpose

Card sorting is used in MPA to assess who contributed what to the establishment of the service, in relation to capacity to contribute.

Process

For this activity, the starting points are the drawings that emerged from *welfare classification* as representing the rich/wealthier and the poor. With each drawing, a picture of a man and a woman is added (if not already present) to represent the male and female head of the family. Alternatively, the two persons are depicted with a symbol, e.g., typical male and female implements or pieces of clothing. In addition, pictures or real life symbols are needed to represent total and partial payments in cash (e.g., large and small bag of money or pile of coins); typical payments in kind (e.g., chicken, grain, coconuts, etc. as is locally appropriate), typical unskilled labor (e.g., digging, carrying construction materials, catering) and typical local materials that the users may have provided in the installation process (e.g., sand, bricks, stones and the like).

The facilitator explains that this activity aims to learn who in the households has contributed what to establishing the service. The groups then discuss what the cards represent or identify and bring symbols for each kind of contribution by women and men. They lay these out in three rows under the pictures or symbols of a woman, a man, and a woman and a man together, placed as column headings.

Each person in the group then gets as many seeds, pebbles or similar objects as there are types of contributions. They place them next to types of contribution(s) in any of the three rows: given by the man or men in the household, the woman or women in the household, or the genders/couple together. The total number of beans is then copied on a pictorial copy of the scoring sheet. To structure the activity, it can be done row by row.

Where relevant, the activity is done twice, once for water supply and once for sanitation.

Results

The outcome provides insight into the division of contributions within the community and on the gender division of labor contribution in households, and also for cash contributions in those cultures where women and men have their own sources and control of income. It shows the nature of user contributions to meet demand, other than time for meetings. Time also has monetary value, but is hard to recall several years after implementation.

Uses

This is another activity that helps to analyze (in)equity and draw conclusions about whether households contributed at the same rate or different rates.

Questions may be asked to bring out what was the basis of determining the type and amount of contributions. Were the poor required to contribute less or the same as others? How did they decide who was to pay more or less? Did the majority of users have a voice in deciding the extent of the contribution? Did the poor and the women have a say in deciding? Did women and men within each household and in both economic groups contribute different amounts and in different ways? How do the different categories feel about their contributions? Do they feel it was fair? What are the reasons for their answers?

Results are used to score the equity in division of contributions during construction.

6.8 Ladders (2)

Men's group in Indonesia assessing gender division of workload for operation and maintenance of water services

Purpose

This activity is used to assess the impact of the water service or the sanitation program on women's time and workload in relation to that of men.

Process

A second ladder exercise similar to the first one is done with the members of the water committee and other voluntary workers, who contribute time and work to keep the service going. It is also done with focus groups of users for whom the project intervention may also have affected time and labor patterns.

The activity uses a series of small drawings depicting typical female work related to use and maintenance of water and sanitation services. Another series depicts men's work. Each group begins by discussing the typical female and male tasks the members now carry out, using the cards. These cards are then ordered in the day's sequence. A week's or month's sequence may be used in addition if there are tasks that are not carried out daily. Using matchsticks or other easy-to-count materials, members of each group then estimate how much time they spent on each activity.

They discuss the changes that have occurred through the project. Has work increased, decreased, or stayed the same? Have cooperation patterns in the household (work by women, men, boys and girls) changed?

Results

Information emerges on who (women and men, rich and poor, girls and boys) does what work related to use and upkeep of water supply and sanitation, and changes in workload and work division within the

households. This helps start discussions on redistribution and other ways of facilitation of equitable sharing of workloads.

Uses

Division of workload. When the visual output is complete, the facilitator initiates a discussion on sharing burdens. How are the workloads/ responsibilities for water supply and sanitation shared between women and men? How is this for boys and girls? Is the workload shared fairly? If yes, how did it happen? If not, who has a greater burden? Why? How does this affect their lives?[26] Should this change? What can be done to share the burden more equitably? What action can be taken, by whom? The groups use the outcomes to choose the option (or in-between score) that best represents their situation.

Effect on time and work division

After a ladder exercise, members of the water committee in a community in Ghana decided that, for a fairer division of work and better results , all members would help the treasurer with fee collection from user homes.

26 Some significant effects can be changes in school attendance of girls and boys; changes in infant care and feeding practices in the family; changes in women's access to opportunities for developmental interventions or income generating activities.

6.9 Matrix voting

Access to training by gender and social class, in Nepal

Purpose

Matrices are used to assess the division of skilled and unskilled, paid and unpaid work related to the water service and/or sanitation, between women and men, rich and poor.

The same activity can also be used to assess access to and income from training or productive uses of water, for women and men, rich and poor.

Process

Within the group (which may be the members of the water and sanitation committee or male/female focus groups in the poor and wealthier sections), the construction, maintenance and management work done for the water supply and/or sanitation is identified. Participants prepare a card label for each job. In case of low literacy levels among participants, drawings of the jobs or implements used for doing the jobs may be used as symbols.

The group then discusses which jobs are skilled/only for the trained and have a high status and which jobs involve only unskilled physical labor and are low status. They sort the cards into the two categories.

The facilitator then draws a matrix on the ground or on a large piece of paper with three rows and three columns. The second and third columns get labels or pictures of "women" and "men." In the first cells of the second and third row, the facilitator places or writes the identified skilled and unskilled jobs.

Using colored slips, beans or other local material, the participants then put the numbers of women and men who carry out the identified tasks in the respective cells of the matrix. Different colors or shapes may be used to denote women and men

from wealthier households and women and men from poor families. The same exercise is done for paid and unpaid jobs/tasks.

The types of training given or planned to be given by projects are assessed in the same manner, e.g., training in leadership skills, technical construction or maintenance skills, bookkeeping and accounting skills, skills for monitoring system functioning and use, and hygiene promotion. Who and how many have had access to training is identified by gender and class.

Results

Emerging data include new jobs and skills for women and men, including non-stereotyped skills; status and gender division of physical labor; division of paid and unpaid jobs between women and men, rich and poor; access to training for women and men in wealthier and poor households; impacts of the project on women and men.

Uses

To assess activities and impacts: The activity provides insight into how unskilled and skilled jobs, low and high status jobs are or will be divided between women and men, and how this impacts their positions. Typical questions that may be answered are:

Sharing workloads and responsibility

- Do women/girls also do technical jobs? Why or why not? Would there be benefits if more women/girls are (also) trained for technical tasks? What types of women/girls could/should be trained?
- Do only women/poor people do the physical work involving cleaning, collecting tariffs, etc.? Is the work paid? What does the situation mean for their workload?
- Do men have responsibilities for household and environmental cleanliness?

Access to new resources - knowledge, skills

- Has the project brought new skills? To women, men or both? To girls and boys?
- Has the project brought any training? In what subjects? Who and how many benefited, in the committee and in the community?
- Are only the wealthier getting trained for skilled and paid jobs? Why?
- Was training given along conventional gender lines, or did both women and men learn new aspects, e.g., men on health and hygiene, women on financing, maintenance of facility?

Access to new resources - jobs, production, and income

- Has the project brought new jobs? Paid or unpaid? Who does the paid jobs, and who the unpaid? If men did unpaid jobs that are now done by women, would they be paid?
- Who has benefited from paid jobs? The elite, or also common people?
- Any new/additional economic uses of water or waste? What are the benefits? Payments? To whom? Does the use affect current access to the resource for others? May it do so in future?

The results are used for the scales on labor division, training and gender impacts. Scores and qualitative information are recorded in the fieldbook. The original matrix, like all pervious materials, is kept by the group for presentation in the community review assembly, where discussion is facilitated on any social and gender inequities found and ways of correcting the situation.[27]

27 And for further use in community monitoring of progress.

Work	Women	Men
Skilled/High Status		
Unskilled/Low Status		
Paid		
Unpaid		

6.10 Hundred seeds

Women in Sulawesi assessing distribution of financial responsibility for water supply and sanitation within households, Indonesia

Purpose

"A hundred seeds" is a tool to obtain an approximate percentage distribution of any concept; in this case, sharing of earning and financial responsibility within households.

Process

The hundred seeds activity gives insight into who carries the burden of paying for (or otherwise contributing to) improvements in water, sanitation and hygiene, men or women or both, and from what resources. For this purpose, each focus group (male, female, rich, and poor) is given 100 seeds. The seeds are assumed to constitute the total income of women and men in the typical household in the area.

Participants group the seeds or "money" into the percentages each member of the household (father, mother, older son, older daughter etc.) earns in cash or the value of in-kind earnings.

The number of seeds in each pile constitutes the percentage of the total household income contributed.

The group then lists the type of financing responsibilities each earner has in the household and divides each pile into the proportion that each person uses for these purposes and for personal objectives. Payments for water, sanitation, and hygiene are identified among those made for the family.

Having divided the seeds per earner into piles and transferred the numbers onto the slips representing the extent of their financial responsibility, the group then judges whether women in the family contribute relatively more or less to water, sanitation and hygiene than men, or whether the payments and responsibilities are in proportion to the levels of earning of the family members concerned. Having come to a conclusion, the group scores the results in terms of the extent of

equity. Further discussions probe possibilities of addressing any gross inequities revealed.

In an adjusted version, the tool helps measure time allocation, including for water collection and sanitation.

Results

The tool provides information on:

- Intra-household patterns of earning and contributions by different members, as perceived by groups of rich men, poor men, rich women, poor women.
- Intra-household pattern of paying or spending time for household necessities, including water supply and sanitation services and household hygiene (who contributes what).
- Extent of division of work and financial responsibility between women and men in the household for household water supply, sanitation and hygiene.

Uses

The outcomes facilitate a discussion on equity implications, e.g., for family welfare and health, and reasons for the emerged patterns of financial and labor responsibility. Do the payments made look proportional to differentials in earning by different household members? Are the financial responsibilities or work fairly shared? If not, why? What may be the effects? What might make it fair? The results are used for scoring and planning and monitoring change as with previous activities, and divisions presented as pie charts at the community review meeting.

6.11 Stakeholders' meeting

WSLIC 1 project stakeholders' meeting, Gorontalo district, Indonesia

Purpose

This one-day meeting uses various activities to assess the indicators that stand for *institutional support for gender- and poverty-sensitive, demand-responsive participation*[28] (the variables under F in Figure 3 and Box 10 in Chapter 3). They are carried out with the institutions that were involved in the establishment of the water supply and sanitation service in the sampled communities. It is also an ideal opportunity to cross-validate the results, especially of indicator E (*Equity in community management* and *Participation with empowerment*), as several of the variables assessed are related to the community as well as the institutional level.

Historically, participatory tools were developed to empower and work primarily with communities with low or no literacy. Recognizing the powerful principles underlying the SARAR[29] tools, the WSP - IRC team designed the *stakeholders' meeting* to apply the same principles to assessment with institutions. The approach was found effective not only for the learning assessment but also in triggering collective action to address some of the emerging issues.

To the extent it is possible, the representatives from the institutions should include those persons who were involved in planning, design and establishment of the service in the selected communities, as the range of indicators to be tested relate to the rules and practices at the time of establishment. Care should be taken to include both male and female representatives. Participants include representatives from:

- The service delivery agency (engineers, social development staff if any).
- Social intermediaries/NGOs/CBOs, if any.
- Other institutions, such as heads of schools where there is a school sanitation program.

28 *Enabling organizational system* (explicit objectives, strategies, performance criteria on sustainability and equity; gender and class – desegregated planning and monitoring; mix of staff expertise; extent of team approach), and *enabling organizational climate* (capacity building; managerial support; staff performance incentives).

29 SARAR stands for Self – Esteem, Associative Strengths, Resourcefulness, Action Planning, and Responsibility.

- Community organizations that were involved in the service establishment, e.g., members of the then water and sanitation committees or village development committees.
- Special categories/groups who made significant contributions to service establishment, such as female masons, health workers involved in hygiene education, etc.

The *stakeholders' meeting* is organized at the district or project level. In situations where geographic distances are vast, two or three such meetings may have to be organized and the results collated for reporting. The *stakeholders' meeting* should not be held at the office of the service agency. A neutral place with adequate meeting space is needed.

Process

The process and group dynamics are significant and revealing. It is therefore critical that the facilitator is assisted by recorder/s who take notes very carefully and use them for reporting on the qualitative aspects. The full meeting is conducted in the local language.

Introduction

This is the formal opening at which all the participants give a brief background of themselves and their interests. Some introductory icebreaker exercise compatible with the local culture is necessary at this point, to neutralize hierarchical barriers to interaction and create an informal, relaxed climate conducive to sharing and learning together.

Open discussions focusing attention on sustained and effectively used services

The first step in the group process is an open discussion on the influence of institutional factors around the question "What agency factors were/ are important in establishing a sustainable and effectively used service?"

Identified factors can be those that have either positive or negative influence. Rather than letting a dominant person speak up and answer for the rest, it is advisable to have the different types of participants record their views on color-coded response cards, e.g., blue cards for technical agency staff, pink for social development agency's staff, yellow for village level intermediaries, white for community representatives and so forth. If women and men write cards of different shapes, e.g., men write rectangular cards while women write oval ones, the results are visually very "telling." Writing is done with thick markers, and only one idea may be written on one card. The cards are displayed on the wall or floor.

The participants subsequently cluster the cards based on the similarity of ideas expressed on them. Each cluster is given a self-explanatory label. This activity reveals the answers to the above question as expressed by the whole group. The facilitator then helps the group to draw conclusions on the nature of factors and observed patterns, relating expressed views to the participants' backgrounds. For example, do technical staff have views that are different from those of the social development staff or the village leaders? Do women think differently from men?

The presence of hierarchical relationships among the participants may inhibit honest responses about agency factors. If that were the case, the first exercise is done in three separate but parallel groups with the help of three facilitators and the results collated. This helps bring out major disparities in views among different categories of staff without threatening anyone.

Assessing agency objectives and strategies

This may be done using the card sorting technique

described earlier. Each participant sorts the cards with scale options on agency policy on sustained services, from the lowest to the highest order. Empty cards of a different color are provided to add another option if needed. Sorting is done in small groups of different categories of participants, or even individually if the number of participants is less than 15.

Each person selects the card, which, in his/her opinion, best matches the project approach their agency used at the time of establishing the services in the selected communities. Each person uses a color-coded voting token or sticker to mark the selected card. The colors represent participant categories, i.e., whether the person is technical, social or village level staff or community member and whether male or female. The groups display their cards and markings on the floor or a wall. The facilitator helps the group to draw conclusions about the similarity or divergence of views and scores by different participant categories. Major variations stimulate discussions on underlying reasons, meanings of concepts, problems and required actions.

The activity is repeated for the other indicators - i.e., policies regarding demand-responsive services, community ownership and management and gender-sensitivity and gender balance.

The groups examine the degree of consensus and agree on overall scores in the scoring tables with the whole group. When consensus cannot be reached, it is important to explore reasons for the divergence of scores, which may be too sensitive to do in the plenary discussion. Facilitators should note if there are agreements within certain sub-groups. Smaller, more homogenous groups can be formed to discuss people's rationales for given scores and the results gathered from all. Persistent lack of consensus should be recorded by facilitators as such, identifying which groups agreed with which scores and why.

Assessing enabling organizational systems

This variable (see footnote 28) requires assessors to have experienced the relevant organizational systems themselves, and thus can only be assessed by agency personnel. Community representatives may however be invited to comment on the results of the assessment, as described below. The aspects covered include planning and monitoring systems, skill mixes of agencies, expertise in field teams, and use of team approaches.

Several creative techniques have been used to measure the degree to which the organization is perceived to have gender- and poverty-sensitive systems. One such technique was using ribbons in different colors for each category. Participants folded the ribbons conforming to their opinion of level of support (fully open if the support is 100 percent to folded four times if the support is only 25 percent) and stuck the ribbons on to a board. It is interesting as well as revealing to see how colleagues in the same organization or in other stakeholder groups view the organizational culture.

Another alternative is to use pocket voting for each scale. Empty envelopes are taped to individual cards carrying descriptions for scores of 0, 1, 2, 3 or 4 for each scale. Each set of cards is placed on a board turned towards the wall. Participants go behind the board and vote using color-coded tokens, one at a time. Since the topics covered in this section may be sensitive, more honest assessments are made possible through voting in privacy. Results are then tallied in front of the whole group, so everyone can see the voting pattern,

discuss the rationale for it, and agree on the overall scores.

Community representatives are asked to report their impressions on staff capacity, management support and incentives. A plenary discussion is held on the reporting and any emerging trends and issues.

Assessing enabling organizational climate

For this activity, each participant is given a sheet with descriptions of scores for the aspect being assessed (*capacity building provisions*, *management support*, *staff incentives for performance*). If translations of scoring tables are used with participants, it is advisable to have bilingual versions that make both English and translated sections available on the same page.

Each participant selects the situation that best fits the project being assessed and writes his/her reasons for selecting that score, on the sheet. Participants also record their gender and participant category on the sheet. The process is repeated for the scales about management support and staff incentives.

After each round, the results are summarized publicly for each participant category, by tallying information from the sheets collected by the facilitator, who also lists out the reasons given for selection of each score. This reveals the perceptions of different levels and types of staff regarding organizational support for working in a gender-sensitive and poverty-targeted manner. An overall score is agreed on if a consensus can be reached. If there are major score variations among participant categories, the variations are reported by categories instead of an overall score.

Role of the facilitator

The *stakeholders' meeting* is, by virtue of the range of participants, a significant challenge for the facilitator. All efforts must be made to ensure that the hierarchy of institutions is not reflected in the proceedings, i.e., the poorer or female participants are not relegated to the background while the community elite and project staff take center stage. Special care must be taken to ensure equal participation by all. It is advisable to use the services of professional facilitators adept in the local language. A team of one facilitator and one or two co-facilitators/recorders is preferable.

The facilitator and recorders are asked to be very alert to capture special features of the group dynamics between the different categories of participants and make notes when views differ consistently. The facilitator is further asked to record his/her gut feelings on the credibility of the data: did all participants take the activities seriously and seem to answer truthfully? Were there any inhibitions with certain individuals or groups?

Scales are scored on the spot, and refreshments are made available during the activities.

6.12 Policy level assessment

Assessing the definition of gender in water sector policies in the Philippines

Purpose

This activity helps identify the national or aid agency policies that were operational during the planning and implementation of water and sanitation projects, and reveal how they relate to institutional practices and thus finally influence results at community level. The activity consists of assessing the G variable in the MPA analytical framework (Figure 3 and Box 10, Chapter 3).

Option I: Structured interviews with selected policy officials

At the policy level, a structured interview guide is used for discussion with officers involved at the time of establishment of the service. During the discussion, the facilitator provides a brief feedback on the outcomes of assessment at the community and institutional levels.

Option II: Policy dialogue workshop

A more participatory option is the organization of a half-day workshop with the key officials at the policy level, national directors of assessed projects and representatives of external support agencies and NGOs working in the sector. It is ideal if the meeting is organized in collaboration with the agency responsible for sector coordination. It is important to ensure that all participants are familiar with the assessed projects, the policies governing their design and implementation, and national sector policies/regulations at the time they were implemented.

Process and Results

A workshop usually lasts about three to four hours and has three main content blocks.

Introduction

This is the formal opening at which participants introduce themselves and a facilitator explains the purpose of the gathering. The participants are usually familiar with each other as most are from the central government and national level NGOs and external aid agencies. A carefully designed, culturally appropriate icebreaker exercise is

necessary to create an informal, relaxed climate conducive to sharing and learning together.

It is very important for the facilitating agency to emphasize that the purpose of the meeting is not to compare or evaluate the projects from which MPA results are being discussed, but to identify what policy elements and institutional factors influenced by the policy elements could have led to the community level outcomes observed.

Presentation of results of the assessment at community and institutional levels

Summarized scores, qualitative findings and graphic presentations from both community and institutional assessments are presented by facilitators, or invited project implementers. Facilitators use the presentations, usually displayed at the meeting venue, to raise questions and invite discussions, using a creatively crafted process. They help relate findings from communities and institutions to existing policies and facilitate a debate on what policies need to change and how, to better support gender- and poverty-sensitive demand-responsive approaches, for the ultimate goals of sustainability and equity.

Scoring of relevant policies

Open discussion and participatory exercises such as pocket voting, card sorting and visualized scaling are then used, to get the participants to assess the indicators under *Policy support*.[30] It is important to facilitate discussions on each visual output before a score can be agreed upon.

It can be very productive and eye-opening for all if the policy dialogue can include stakeholders from implementing agencies and user communities and if the country's cultural and political climate allows candid interactions across all levels of stakeholders. In practice it has been possible to include institutional and policy levels but not the community representatives in policy dialogues to date. Community level assessments have however been presented in policy dialogues as the basis for policy discussions, with powerful impact.

Uses

The policy dialogue process is proving to be a powerful tool for influencing mind-sets since it is able to show how policies translate to action on the ground. It is a process that is already being used at various sub-national levels where decentralization has devolved power and responsibilities to province and regional levels. Getting all levels of stakeholders to interact, learn from each other and improve the end result is not a new idea. The MPA only adds some concrete and interesting ways to make the idea actionable. To maximize the potential advantages of the policy dialogue, it is necessary to use it as a part of the process linking communities, institutions and policies, and institutionalize it as a periodic learning exercise for the national sector.

This policy assessment rounds off the activities of data collection, sharing and analysis and begins processes for planning and implementing improvements.

The entry of the data into the database and the analysis and reporting of the overall quantitative and qualitative findings which comprise the second level of action are described earlier in Chapter 4.

30 *Presence and nature of national sector policy for water supply and sanitation; Presence of sector strategies to set in motion community participation, demand-responsive approaches, gender and social equity.*

Box 24 Policy analysis builds consensus for needed change

In a policy dialogue workshop held in 1999 in Indonesia, based on results from one World Bank- and one AusAID–supported project, the principal reason for lack of community participation in planning certain types of water supply systems was traced back to a law which prohibits the planning and construction of such technologies by anyone other that the government's Public Works Department.

The finding prompted a discussion and identification of other legal and regulatory mechanisms in use in 1999, all designed when centrally decided supply-driven modes of providing water supply were the only service delivery mechanisms. The need for change was suddenly very concretely visible to all.

PLA Initiative Country report, Indonesia.
Water and Sanitation Program - East Asia and the Pacific

Section 2

MPA Application Case Studies

Section 2

MPA APPLICATION CASE STUDIES

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Do Project Rules Promote Sustainability and Equity?

An ex post facto assessment in 40 communities served by five past projects in Indonesia

Bruce Gross

Background

Indonesia has not yet adopted a national rural water supply and sanitation policy, and funding agencies have pretty much followed their own development philosophies. The result has been that projects vary substantially in their objectives, financial rules, and approaches to demand and community participation. Forty Indonesian communities in seven different provinces, which had received support to improve water supply services in the past, were assisted to use the MPA to find answers to the following questions:

- What kind of outcomes have the different projects produced?
- How well do they do in giving women and the poor voice and choice?
- Is there a link between project approaches and access to services?
- How successful are multi-sector projects in helping communities build the structures and capacity to sustain their water systems?
- What can be learned for policy development and for future projects?

Projects, process, and water systems

Three projects - the Village Infrastructure Project I and II (VIP) and the first Kecamatan Development Project (KDP 1) funded by the World Bank, and the Village Infrastructure Project funded by the Overseas Economic Cooperation Fund of Japan (OECF) - were multi-sectoral poverty reduction projects with water supplies as one of several public infrastructure choices. The other two projects - the Water Supply and Sanitation for Low Income Communities (WSLIC) Project funded by the World Bank, and the Asian Development Bank-assisted Rural Water Supply and Sanitation (RWSS) Project- offered only water supply and sanitation.

Six teams of four MPA facilitators each assisted the communities between March and June 2001. All team leaders had prior experience with the MPA. Only the community level MPA indicators were used. Project documents and reports were reviewed to compare objectives, rules, and approaches, and some project personnel were interviewed to clarify how the projects worked in practice.

The community sample was not completely representative. It included user communities that were willing to devote time for assessments of their water systems, and since that is rarely the case for non-functioning systems, the sample left out completely broken down ones. It likely included the better of the WSLIC, VIP and, in Jambi, the RWSS water systems. The KDP and OECF-assisted villages and the RWSS villages from south Sumatra are the "available" villages in the geographical area, because there were few water projects from which to select. Hence, the lessons learned most likely show the best picture. No tests of statistical significance were performed for this analysis and the results do not represent a comparative evaluation of the projects. The focus of the exploration was on the variations in project rules and the outcomes associated with them.

Thirty water systems relied on gravity-flow piped distribution, six had pumping systems, and four used simpler technologies such as dug wells, handpumps, and rainwater collection. The average number of households per community was 290 with a range from 83 to 639. WSLIC systems had been in existence the longest, an average of five years; KDP systems for the shortest time, just over two years on average.

Three main positive findings

1. Despite the projects' lack of emphasis on sustainability, sustainability was average or better.

Only WSLIC had an explicit sustainability objective. Sustainability was one of five project principles for KDP. Sustainability in RWSS and VIP was expected to result from community ownership. Despite this lack of emphasis, sustainability of the water supply systems was gratifying. 80 percent, or 32 of the 40 communities achieved a score of at least 200 out of 400, the point below which sustainability is in doubt, although three of those 32 scored just on the borderline of sustainability (Figure 10).

2. Active and trained community water management organizations do better on sustainability, local management and financing, and expansion of access and convenience.

The strong performance probably reflects growing capacity and awareness within communities, of what it takes to achieve sustainability, after many successive development efforts. Although only the water sector projects routinely set up management arrangements, all of the communities in the upper 80 percent had some provision - mostly water management organizations (WMOs) - to ensure maintenance and repair over time. If the project did not help the community establish a WMO,

Figure 10 How effectively are water supply services sustained by the communities?

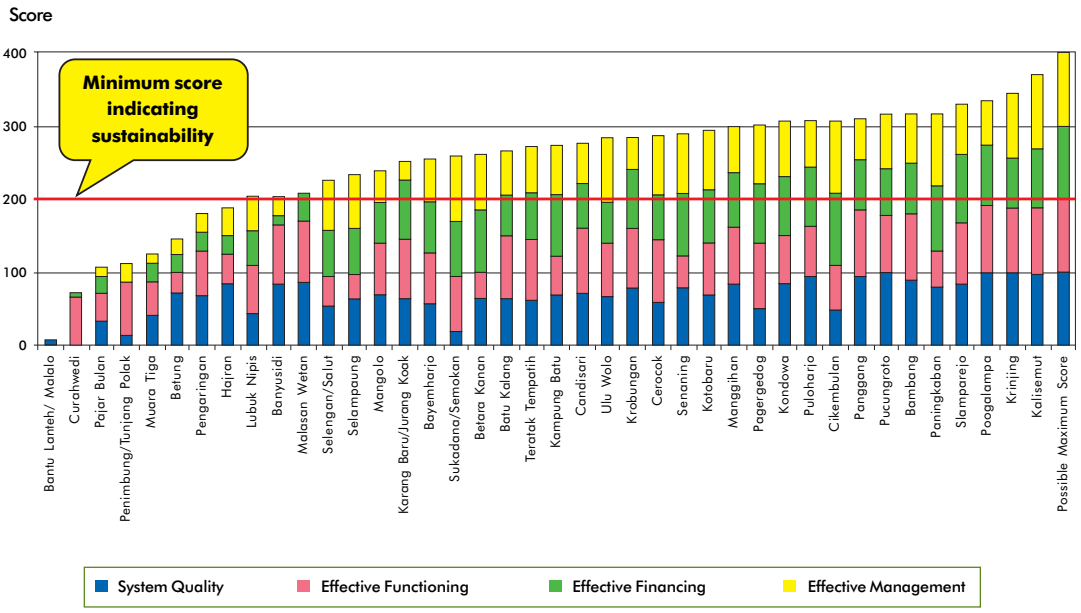
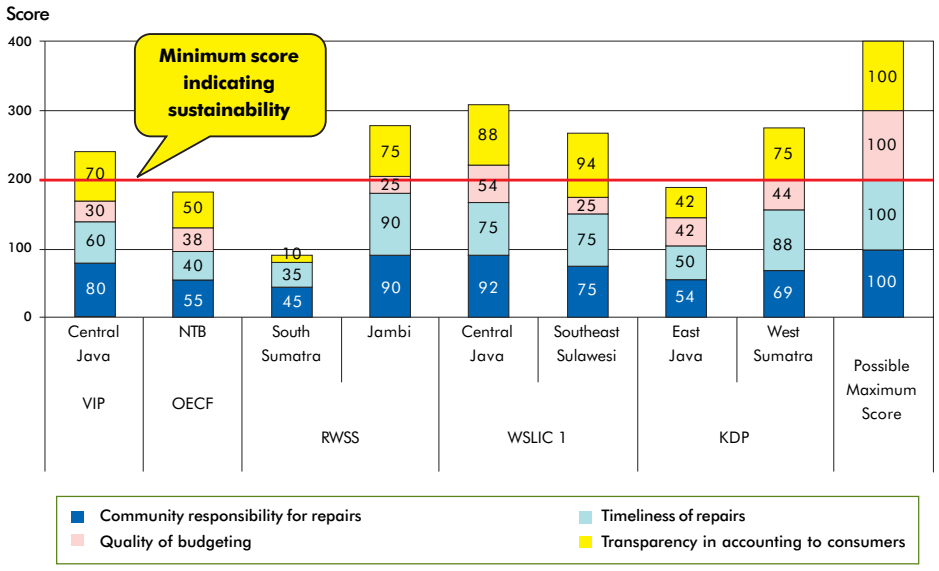


Figure 11 How effectively are water services managed?

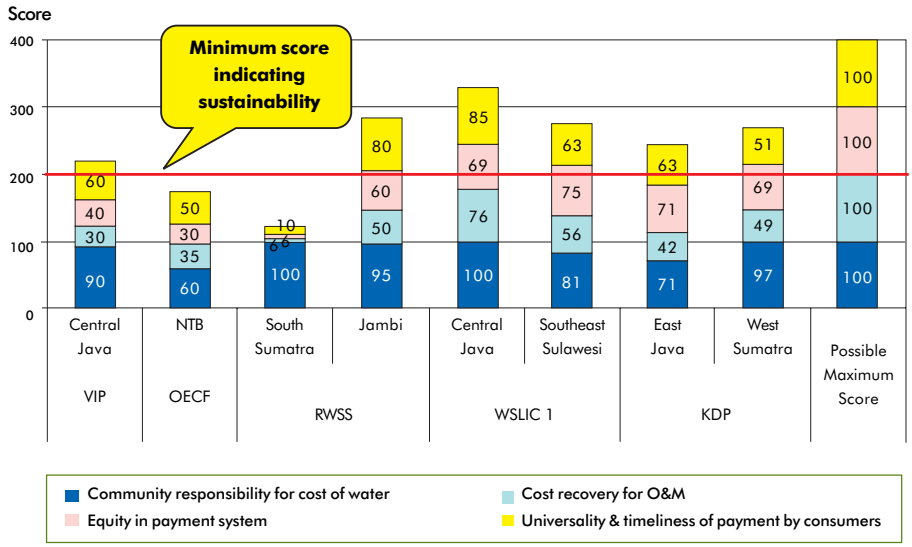


enlightened community leaders often did so on their own.

Communities with WMOs performed better, especially in management and financing. None of the 12 communities with the lowest sustainability scores had a functioning WMO. WSLIC, in particular, offered maintenance and management training to the WMO members. The multi-sectoral projects did not emphasize management arrangements and did little training, although KDP required village proposals to contain a plan for maintenance and to set up a management committee after the system was built.

Communities with WMOs were also more likely to increase access or convenience (household connections) than communities that did not have WMOs. Many of the WMOs took the initiative to correct system problems, expand system capacity, or add house connections, usually with locally generated financing. This finding was particularly evident in WSLIC communities, where systems had been in operation longer (an average of five years). All had active WMOs with women members. Nine out of ten of them also held regular public meetings to review performance and plan ahead, and five made efforts to have meetings at suitable times for all. Users of services responded by paying user fees universally and regularly (Figure 12).

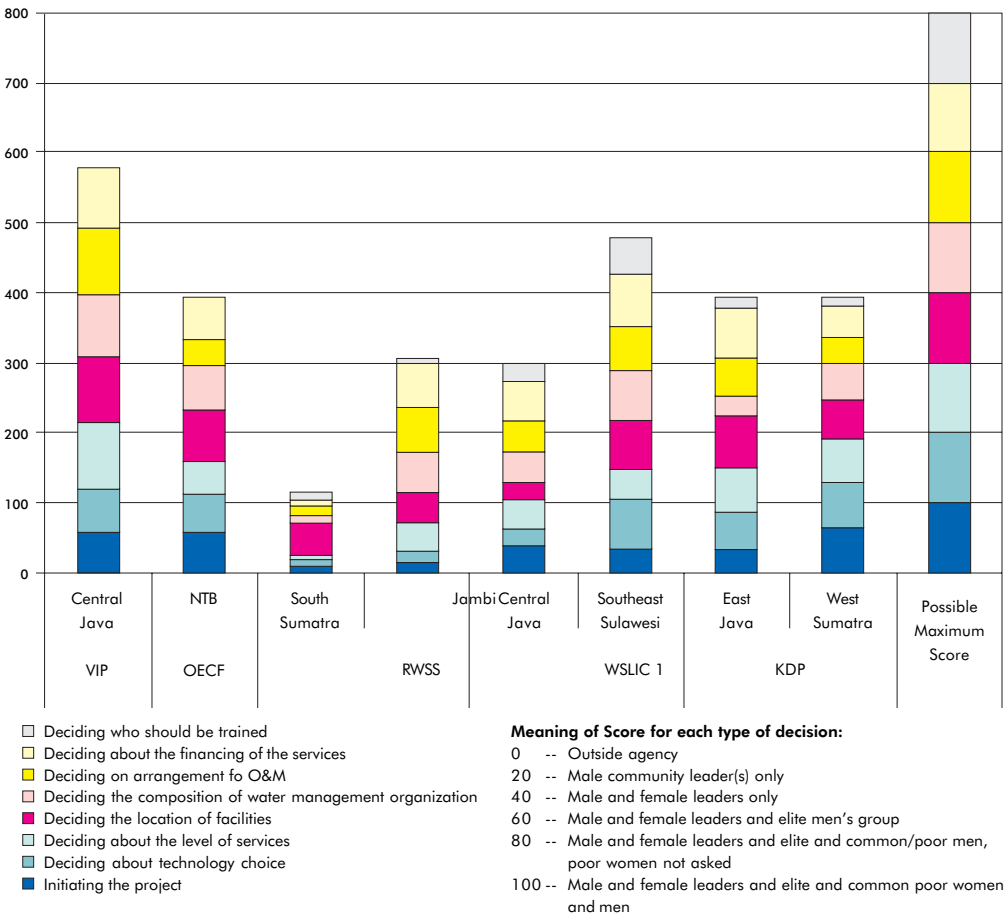
Figure 12 How effectively are water services financed?



3. Construction quality was higher when community members and an engineer cooperated, and community women and men had greater control over decisions at project start.

System quality was highest in the VIP systems, where a consultant engineer worked with LKMDs[31] to determine community wants and to design the system, and then oversaw the construction by paid community labor. System quality was also high in WSLIC communities in Southeast Sulawesi, where communities played a greater role because contractors tended to be weaker. Both projects also scored highest on both women, and men's participation in making key planning decisions for establishing the water supply services (Figure 13).

Figure 13 Who was involved in making decisions about the project?



31 Lembaga Ketahanan Masyarakat Desa *(Village community resilience committee)*.

Three major weaknesses

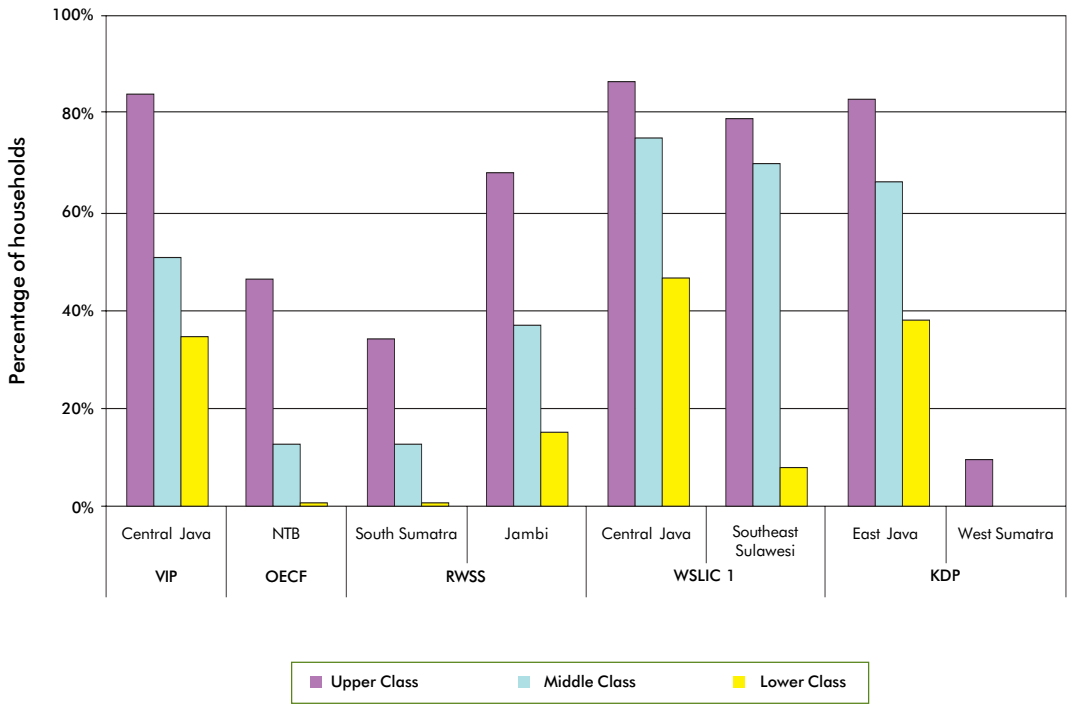
1. In almost all cases with access below 100 percent, wealthier households had greater access than poor ones.

The study checked access only in the parts of the village covered by the project. In less than half of the 40 villages did the project cover all the *dusuns* (sub-village habitations). Only in Central Java did all five VIP communities achieve 100 percent access, though three of six WSLIC communities in Central Java also had reached 100 percent. There was no baseline against which to measure the change in equity of access, so it is not known to what extent the project approaches contributed to these results.

2. Sanitation access was low except in Java and Southwest Sulawesi, and highly inequitable everywhere. Improvements follow water, but outside support can give sanitation a boost.

In 15 communities fewer than 10 percent of the households used a toilet. Even where there was access, access for poor households lagged dramatically. Convenient water access is almost a prerequisite for a latrine, and wealthier households still got water (or more convenient water) first. The multi-sectoral projects did not even offer household latrines as a choice. WSLIC and RWSS did, but only to a very limited extent. Most toilets apparently came from homeowners' own efforts, at their own cost, and the wealthier

Figure 14 Who has access to improved sanitation?



households got adequate sanitation first, or were the only ones to have it (Figure 14).

Rural Indonesians prefer household pour-flush latrines and use water for cleansing. Of the 12 communities that had sanitation access over 60 percent, the average water access was 84 percent, and seven of the twelve had achieved 100 percent water access. The assessment teams reported that sanitation "took off" in a number of communities after house connections came. They also found that Ministry of Health (MOH) programs led to vigorous sanitation programs in several villages. In one, people were trained and groups were set up with revolving funds to build latrines. In another, sanitation received special attention when the village was selected as a MOH model water supply and sanitation community.

3. Women and poor households had little voice and choice in decisions and service control.

None of the projects had sufficiently effective mechanisms to reach out to women and poor households. Getting information is an essential first step if people are to make informed choices and decisions, but none of the projects did very well in spreading information beyond the village elite. VIP's information dissemination efforts worked best, followed by WSLIC's in South Sulawesi. These two groups of communities, not surprisingly, also reported a greater equity in control over decisions about their water systems. As with information provision, however, none of the villages reported that ordinary people were involved in decision making to any extent (Figure 13).

Five lessons about the projects for the future

1. Project inputs follow project objectives.

Only WSLIC had a clear sustainability objective. Achieving sustainability in rural water supply and sanitation requires attention to five aspects: technical, environmental, financial, institutional (managerial), and social. Community-managed systems need a management organization to ensure longer-term sustainability, particularly one in which all categories of users, both women and men, have a voice. Yet, only WSLIC and, to a lesser extent, the RWSS project sought to establish water management organizations and build their capacity to sustain their water systems.

None of the projects had an equity objective. Few project inputs - mainly in WSLIC and KDP - were directed towards actions to increase the chance that women, poor households, groups in the project villages, and other marginalized groups would have a voice and choice in their services.

WSLIC was the only project to involve women meaningfully in any project-supported activity. It set out to include women in the WMOs it established and in the training it offered. Women and some poor people were brought into management organizations and have stayed involved over the years. Women were trained and continue to use the skills they gained, and both poor people and women have benefited from the paid and unpaid jobs created in WSLIC community-managed systems on Java.

2. Targeting poor villages does not target poor households in these villages.

Villages which the national poverty indices classify as "poor" consist of a mix of wealthier and less well-off households. Projects without explicit mechanisms to identify poor households and give them voice and choice may not bring any direct benefits to the poor and marginalized members of the community.

3. National policy could establish a common understanding of demand-responsive services and encourage project strategies that give a voice and informed choice to women and the poor too.

The two water sector projects (WSLIC 1 and RWSS) were planned before much was known about how to elicit or respond to consumer demand. The sector now strives to bring decision making down to the household level, giving women and men equal access to information and decisions about services. Neither WSLIC nor RWSS was very demand-responsive in these terms. The water sector includes in its definition of demand a willingness to pay for services, and only WSLIC required fixed percentage contributions in cash and kind.

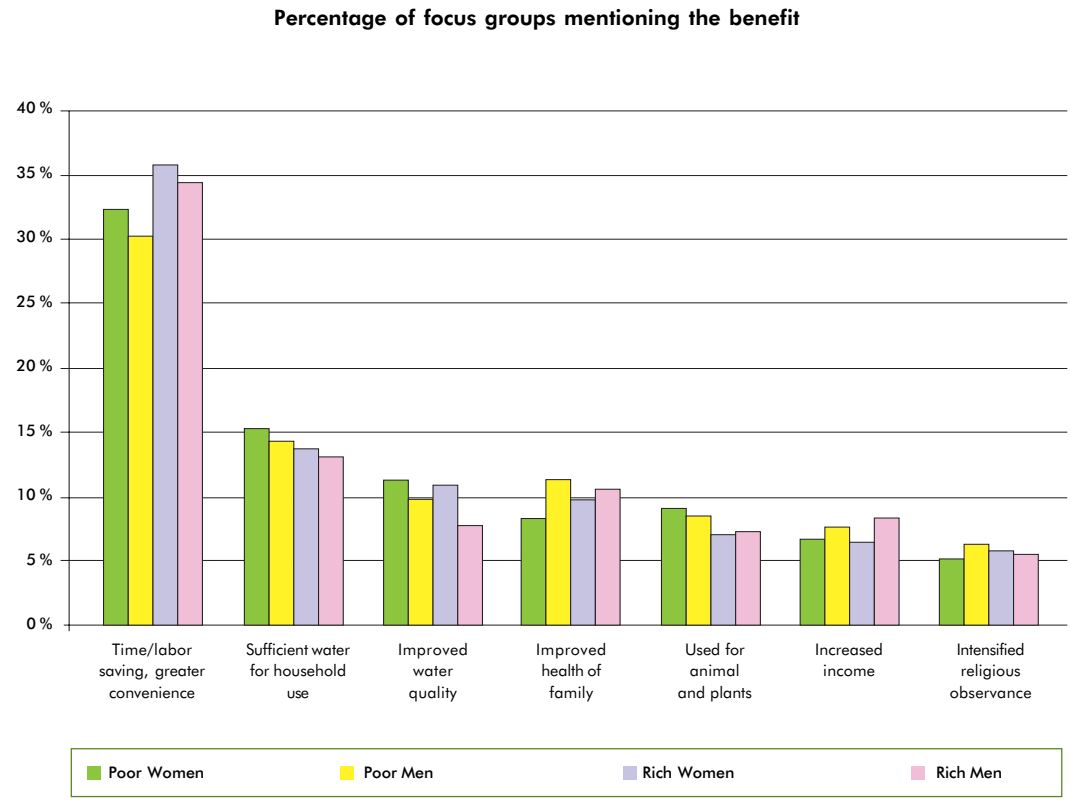
The three multi-sector projects had broad poverty alleviation concerns. If they considered demand at all, they considered it to be satisfied when a community made a choice from a menu of options. KDP 1 is a more recent design than VIP and OECF projects, but demand and equity in demand featured neither in its objectives nor as its operating principles (which were sustainability, community participation and empowerment, transparency, simplicity, and competition among villages for funds). Willingness to pay was also not a consideration; none of the three multi-sector projects required contributions.

4. As more Indonesian villages near or reach 100 percent access to water, convenience of access and access to sanitation become increasingly important equity issues.

Convenient water access means house connections. When public funds become available for villages where wealthier people already have access, will they be used to upgrade systems in ways that help the better off gain more convenient access (increased volume and better distribution, for example), or to close the access gap for the poor? Unless there are safeguards, not all villages will make a fair decision, as *Kalisemut* did, where, with very low water volume, house connections were prohibited but every household gained access through a system of public tanks and taps.

Most of the household toilets found in the 40 communities came from households' own efforts, using their own funds. Almost none came from the two water sector projects, and the multi-sectoral projects did not fund household sanitation. Not surprisingly, the wealthier households had the toilets. Ways need to be found to help poor households build latrines while encouraging the households that can afford them to do it on their own.

Figure 15 Importance of benefits to poor and rich women and men



5. Communities attach a high value to their water services, suggesting that they might be prepared to pay more and that projects could experiment with reduced subsidies.

Groups of rich and poor women and men almost all said that their water services were worth more than their cost. In addition to the high value for cost, there was a surprising amount of agreement among rich and poor women and men as to the importance of specific benefits (Figure 15). The high value attached also suggests that the communities will strive to keep the water systems functioning. It also suggests that communities are prepared to pay more for water than they presently do, possibly allowing development projects to reduce subsidies across the board, and reach more people with services per rupiah (Indonesian currency) of development assistance.

From Theory to Practice

A study of rural water supply and sanitaion strategy implementation: PADEAR[32] in Benin

Suzanne Reiff[33]

Background

In 1994, the Direction of Hydraulics in Benin, with the support of the Water and Sanitation Program (WSP), developed a rural water supply and sanitation strategy which consisted of implementing a demand-responsive approach based on the principles of community participation and decision making. The strategy enabled communities to participate in the project once the required community contribution (approximately 5 percent of investment costs) was collected and deposited in a bank account. The communities (including both men and women) were enabled to choose their technological option (improved well, hand pump, and piped water systems) with full knowledge of the recurrent costs and maintenance for which they were responsible. Community management committees were set up by the communities themselves and were responsible for the management of the system as well as small repairs, which were to be financed from the sale of water. This strategy was tested in two regions (Zou and Atlantique) during a pilot project co-financed by IDA (International Development Association) and DANIDA (Danish International Development Agency). Soon after the implementation of this project, GTZ (German Agency for Technical Cooperation) and KFW decided to follow suit and supported PADEAR projects in two other regions of Benin. In 1999,

32 Projet d'Assistance au Développement du secteur d'alimentation en Eau potable et de l'Assainissement en milieu Rural.

33 Suzanne Reiff, *Gender and Environmental Health Specialist,* WSP - Africa.

DANIDA began supporting another PADEAR project in two more regions in the north. DANIDA has also continued to support an intermediary phase in the regions of the Zou and Atlantique as the PADEAR IDA/DANIDA came to a close in December 2000. Moreover, the Belgian Technical Cooperation is about to start supporting another PADEAR project in the last region which was not covered yet by the PADEAR strategy.

During the mid-term review of the PADEAR IDA/DANIDA project, it became clear that gender and poverty issues were not being adequately addressed. Hence, towards the end of this project an evaluation was carried out using the MPA with an aim to look at gender, equity and the long-term sustainability aspects of this project. The methodology and the findings of the evaluation were presented to the different actors in the RWSS sector in Benin and were well received by the Government of Benin (GOB) as well as by the donors. This led to requests from PADEAR IDA/DANIDA to use the MPA in an adapted form for a poverty study and from the GTZ/KFW PADEAR project to evaluate the initial phase of the project. The findings of these evaluations and studies and the lessons learned from the implementation of the MPA are presented in this case study, as well as the future plans for the use of this methodology in Benin.

1. Application of the MPA in Benin: lessons from three projects

PADEAR IDA/DANIDA

The first application of the MPA was carried out during the evaluation of the PADEAR IDA/DANIDA project. A training was organized for some twenty people including government personnel, project staff and eight independent extension workers who had not previously been involved in the project but were well acquainted with the regions. These extension workers were then requested to carry out the community level assessments. The sample consisted of twenty villages from the two regions where the systems had been operational on average for two years .[34] One male and one female extension worker made up one team, and they spent at least four days with each village. Generally the methodology was well appreciated by the extension workers and community members, although in several villages people commented that the exercises were very time consuming and got in the way of their daily duties. This is likely to happen when facilitators do not plan sessions in consultation with villagers, at times convenient to them.

A policy level discussion using the MPA process was also carried out with staff from the nodal Ministry, the regional representatives of the Ministry, the NGOs, and members of the Community Water Committees. Finally, a high level policy discussion was held with the Director of Water, the Director of Sanitation, and their assistants. This discussion once again looked at the overall implementation of the strategy. Also, a discussion was held around the themes of equity, cost-sharing and cost-recovery, community participation, and whether this was a pro-poor strategy and a gender-sensitive one.

PADEAR-DANIDA

This project is the continuation of the first PADEAR IDA/DANIDA project and is now solely financed by DANIDA. The MPA was used in this project to

34 For more information on this evaluation please refer to: 'Les hommes et les femmes du Bénin évaluent leurs projet d'approvisionnement en eau potable et d'assainissement – Leçons d'une évaluation participative 20 du PADEAR IDA/DANIDA.

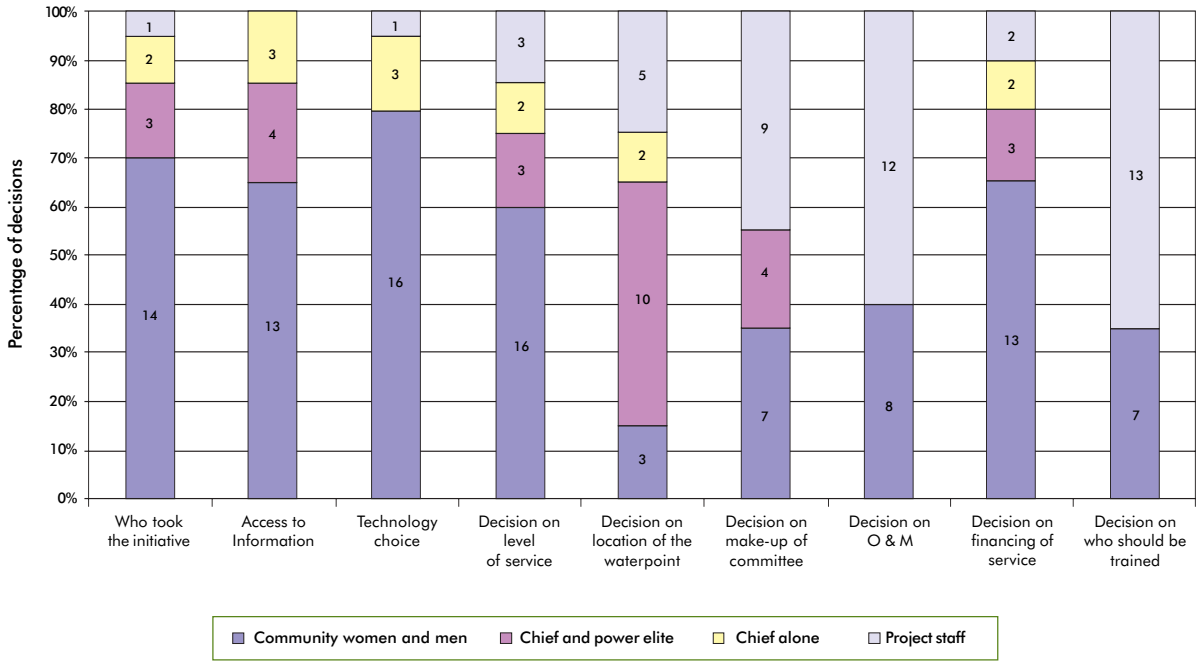
carry out a study on poverty zones in Benin. The assumption underlying this study was that applying the PADEAR strategy (which required a financial contribution from the community within a fixed time) may end up excluding some of the poorer communities. It was indeed noticed in the first PADEAR project that certain communities could not get the total amount of their contributions together on time. The question was: what other mechanisms and principles could the PADEAR test to assure that poor villages would not be excluded from participating in RWSS projects?

The study (using selected MPA tools and MPA trained extension workers for poverty profiling) was carried out in 14 villages and a "poverty profile" was developed for each village. The next step was for several new approaches to be tested in the three poorest villages to see what principles in the PADEAR strategy needed to be made more flexible, to insure that the poorest villages are not excluded from the PADEAR. The approaches looked at different mechanisms to mobilize community contributions and also applied different approaches to social intermediation.

PADEAR-GTZ/KFW

This is the second project that is testing the PADEAR strategy. An evaluation of this project was carried out by the same team of extension workers using selected MPA tools at community level. The sample for this evaluation was quite small (six villages), and the systems had been working for one year on average. Some interesting results and differences were seen when compared with the first PADEAR project.

Figure 16 Who had voice and choice in WSS project implementation, as perceived by women and men in the community



2. Key findings from the three studies

Communities had voice and choice in only some areas of project decisions

- Community voice was strong in the first steps of the development of the projects such as project initiation, levels of service, and how the system was to be financed. The projects had also tended to give information about these choices to both women and men. In these respects the projects had been quite demand-responsive (Figure 16).

- However, the community's voice waned when decisions were to be made concerning roles and responsibilities in the water management committee and training for operation and maintenance. Project staff made most of the decisions regarding who would get trained for what. This was apparent especially in the pilot project and to a certain extent, is still the case in the GTZ/KFW project communities, although generally they fared better in terms of roles of men and women in water management committees. The domination of the power elite was clearly visible in deciding the location for water facilities.

Capacity building for community management is bearing fruit

- Progress on this was seen from one PADEAR project (IDA/DANIDA) to the next (GTZ/KFW). Water management committees were present in all the villages participating in the project and were trained in technical aspects, construction, small repairs, general management and leadership and hygiene. The second project put an additional emphasis on training in financial management for money made from the water sales.

- Progress in book keeping and budgeting was clear from the assessments. Financial management was particularly good in the GTZ/KFW project, where financial tools were used in the management of the systems.

Community management remains elite-dominated, and gender roles in management remain stereotypical

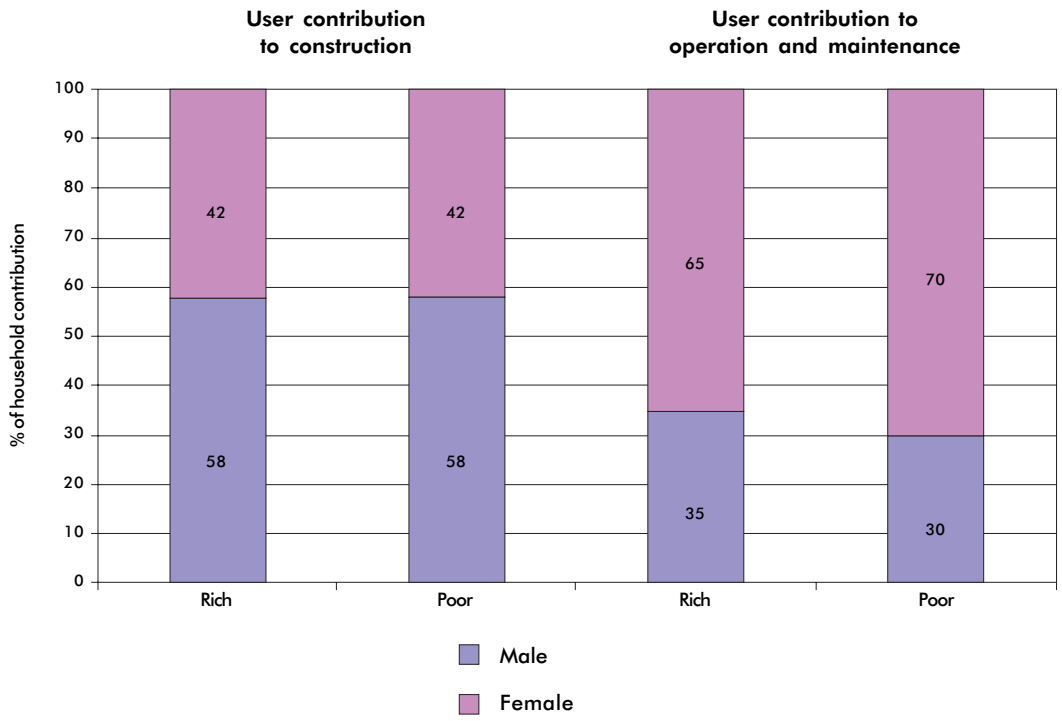
- Gender and poverty issues presented some interesting results for the IDA/DANIDA project. In all the 20 villages the position of the president was held by well-off men and the persons responsible for hygiene were always women (both poor and wealthier).

- Access to training showed the same gender inequity. Men got almost all the training. Women received very little training and never on aspects of decision making or control of finances. With regards to gender aspects, the GTZ/KFW project attempted to be more gender-sensitive by putting in place rules for more women gaining access to different types of training. Nevertheless the key positions in the committees assessed were still held by men. It was clear however that women in these communities had more knowledge about the management issues of the water system in general and we may hope that when women gain a more equal position with men on management structures, this will lead to greater sustainability in the long run.

Communities recognize and deal with "equity" problems in their midst, but within the household women pay most of the cost of water

- In all projects, the proportions of wealthier versus poorer was approximately the same in all the villages with on average 15-20 percent

Figure 17 Gender equity in cost-sharing for water services



of the households being "wealthier" and 80-85 percent households being "poorer". In the poverty study carried out, the average of poorer households was slightly higher.

- It is interesting that in all projects the difference in access for the poor and rich was minimal, and that in each village generally there was a way of dealing with the poorest households by letting them have water for free or for a smaller fee. With regard to contributions for construction, clearly everybody contributed, but often each according to his or her means. This indicated that in Benin, villagers are well aware which families are poorest and reducing contributions is an accepted compensatory community practice for such families.

- In terms of contribution in cash for service establishment, there was a certain measure of equity, with women contributing marginally less than men and the poor contributing less than the wealthier households. Particularly, in the men's group, poor men contributed on average three times less than men who were better off. However, continued payment after the establishment of the service, in particular for the payment of water, became a larger financial burden of women. This is illustrated in Figure 17.

Reality of enmeshed gender and poverty issues

- From the studies in Benin, it became clear that most villages already deal effectively with socio-economic variations between households by adjusting contributions to differential payment capacities. In contrast, the gender gap remains large and is currently the most important problem. One urgent point for policy action that came out of the poverty profile is that the poorest villages are also those that have the highest proportion of female-headed households. In some villages, more that 75 percent of households are female-headed.

Changing hygiene behavior takes more than hygiene promotion

- The sanitation and hygiene component did poorly in these projects. Construction rate of latrines was very low and little behavior change was observed. The strategy for the sanitation component was to train local masons in the building and promotion of low-cost sanitation technology, and to put the emphasis on hygiene and sanitation promotion in order to foster demand rather than offering subsidies for household latrines, which has proved to be unsustainable. Even though the PADEAR GTZ/KFW did put more of an accent on hygiene by having a specific group of people in each village being responsible for carrying out door-to-door hygiene promotion, little change was seen. The hygiene promotion method was not well developed and not targeted which led to communities getting bored with the same messages being repeated by the field project staff.

- The sanitation component did poorly and the latrine construction was clearly low in the 20 villages.[35] This was mainly due to the low priority the sanitation component was given for the first year of the project. Also, more efforts will have to be put into training masons, in carrying out the marketing for latrines, and allowing for households to pay for their latrines in installments. It may be possible to experiment with training women latrine masons, which has been successful in raising demand in other countries.

The PADEAR strategy succeeded to some extent in promoting community voice and choice, community management capacity, and social equity in project benefit-sharing

- In general, the strategy was successful in providing the communities with a voice, and to a lesser extent a choice, in the outcome of their WSS projects. It is also clear from the results that certain areas of the strategy were less sensitive to the demand-responsive approach than was expected. In many cases, project staff made the choice as to who would get trained in the water committee, and when and how feedback to the community would be given. Within communities, the village chief and the male elite still dominate decisions on the location of facilities.

35 Only 2 percent of this population gained access to a latrine. Of these 2 percent (48 households), 92 percent (44 households) were from the better off class.

- Regarding poverty issues, it appeared that equity was quite good in all the projects in terms of access and in financial matters. But this may be more due to Benin's cultural traditions of helping neighbors than the strategy's principles.

- The PADEAR strategy enabled communities to get water supply services that they wanted and were willing to pay for and maintain. To a certain extent, mechanisms were put in place and tools developed for the water committees to be able to manage their systems adequately.

The PADEAR strategy needs to improve its gender-sensitivity and sanitation promotion approach

- It was clear that the gender-sensitivity of the strategy was weak. It became stronger as the project staff received training in gender issues toward the end of the pilot project as well as in the GTZ/KFW supported project.

- It is clear that the PADEAR strategy still needs to improve its approach to sanitation and hygiene. There is a strong belief that the subsidy-free policy for sanitation is the way forward for rural sanitation in Benin. Indeed the problem is not so much the price of the latrines, since they range from traditional type latrines to VIP (Ventilated Improved Pit) latrines, and thus there is a range of prices available. In a study on the willingness to pay for latrines,[36] traditional latrines were considered affordable to large segments of the communities interviewed. The challenge that PADEAR faces is generating demand for latrines. Much progress can be made by learning what motives women and men in the different groups have for wanting to install and use latrines, and tailor messages accordingly. The problem is much the same with hygiene promotion, where the methods used were not adapted to the rural situation and the different roles and responsibilities of women and men.

3. Plans for the future

The ongoing implementation of the PADEAR projects as well as the results of the MPA evaluations and others have yielded many lessons for the continuation and adaptation of the strategy. The Government of Benin and other stakeholders have agreed that the PADEAR strategy is ready for further refinement. The lessons learnt from the MPA evaluations, especially concerning gender issues, demand-responsiveness, sanitation and hygiene, will be taken into account when reviewing and updating the strategy.

Particular focus will be put on giving all project staff (not only central level staff) training to look at gender and poverty issues in a cross-cutting way as well as providing improved hygiene promotion methods and tools.

The strategy will also review how it can increasingly put the community's women and men at the forefront on decisions regarding the establishment and the management of their WSS services.

Regarding the continued use of the MPA in Benin discussions are underway for the extension workers in the PADEAR projects to be trained in using the MPA tools for monitoring purposes. This monitoring would be incorporated into their regular social intermediation program in the villages and would not require additional resources.

36 *Strassler, Dossou et Kinsiklounon, 'La volonté de payer dans le domaine de l'eau et de l'assainissement- Une expérience au Bénin',* Helvetas - Bénin, Avril 2000.

Adding Accountability for Gender Equity and Social Inclusion

Learning from the process of institutionalizing gender- and poverty-sensitivity in large scale Community-Driven Development (CDD) projects in Indonesia

Nilanjana Mukherjee and Nina Shatifan

Preamble

Half the population in Indonesia remains highly vulnerable to poverty in this post-economic crisis period. It is evident that the poor have not received a fair share of the benefits of growth over the past three decades, when community development services remained low quality, excessively top-down and often not matched to local demands. Local governance has often not been transparent or equitable, with the poorest people in general and women in particular, having had little voice or choice in developmental interventions.[37]

The water and sanitation sector in Indonesia has until recently had a history of being construction–focused. Sector institutions still lack skills and personnel for social development activities, are predominantly male and technical in composition. Although gender-awareness exists at policymaking levels, a large portion of the operational staff is not yet convinced that gender is an issue in project performance.

This issue has become more complex with the advent of decentralization. Now that development

37 *Indonesia; Constructing a New Strategy for Poverty Reduction,* The World Bank, 2001; Mukherjee, Nilanjana, " Indonesia - coping with vulnurability and crisis" in *From Many Lands:* Voices of the Poor vol. 3, World Bank, 2002.

projects have become the responsibility of multiple stakeholders at national, provincial and district levels, issues of capacity now extend from policymaking to administration at sub-national levels and communities.

Participatory evaluations have shown that past water supply and sanitation interventions supported by aid agencies in Indonesia have often done poorly in terms of ensuring equity of access for the poor or women in the community, to empowering interventions. Moreover, community water supply systems that have been evaluated tended to have fairly adequate technical quality, but community management and financing of their operation and maintenance were often inadequate, putting longer-term sustainability at risk.[38] At the same time, empirical evidence from a worldwide study has shown the sustainability of water-sanitation services to have positive relationships with gender and social equity in community empowerment.[39]

1.1. Gender and poverty mainstreaming in two new projects

Two projects starting in Indonesia in 2001 offered ideal opportunities to build on the knowledge gained to date, by addressing social and gender equity and sustainability concerns in infrastructure investments in concretely verifiable ways, and building those mechanisms into local governance structures and systems. To this end, a GENFUND grant was used by WSP-EAP during 2001-02 to support gender- and poverty-mainstreaming in two World Bank supported infrastructure development projects. This paper explains what interventions were made and what was learned in the process of institutionalizing them. Whether or not the MPA-based interventions make a difference to project outcomes will be monitored periodically during 2003-05 and evaluated near the end of projects in 2006-07.

The second Kecamatan Development Program (KDP 2, a multi-sector intervention) and the second Water and Sanitation for Low Income Communities Project (WSLIC 2, a health sector project) both aim to improve basic infrastructure in poor villages simultaneously with community empowerment and improvement of local governance, using a community demand-driven approach. WSLIC 2 plans to reach at least two million people in 2000 villages of seven provinces between 2001 -2008 while KDP 2 will use a similar approach to reach an estimated 20-30 million people in twenty provinces in four and a half years starting in 2002. Together they constitute nearly $530 million in credit and grant funds, although water and sanitation will likely comprise only a part of the KDP 2 project, the actual outlay being determined by community demand.

The objectives of this gender and poverty mainstreaming initiative were:

1. Developing and testing the use of verifiable indicators and tools for gender equity and social inclusion (poverty-targeting) within communities in the community level planning process for the multi sectoral Second Kecamatan Development Program (KDP 2); and
2. Developing and operationalizing a gender-

38 *Reports available from www.wsp.org of WSP-EAP's evaluation of community-based components of UNICEF Indonesia's WES programme (Local Voices Heard), West Nusa Tenggara ESWS Project and Flores WSS projects supported by AusAID, RWSS project supported by ADB, (1997-99).*

39 *Linking Sustainability with Demand, Gender and Poverty: A Study in Community-Managed Water Supply Projects in 15 Countries*; Gross, B., van Wijk, C. and Mukherjee, N. Water and Sanitation Program and IRC International Water and Sanitation Centre, (2001).

and poverty-sensitive community action plan preparation process for water supply and/or sanitation interventions, in the Second Water and Sanitation for Low Income Communities (WSLIC 2) Project, and also for these interventions through social fund type projects.[40]

The Methodology for Participatory Assessments (MPA) was the principal instrument for analysis and intervention used in both projects. Selected qualitative tools from two other participatory methodologies, PRA and PHAST[41] were used to complement MPA in both cases.

2. Entry points and interventions made in KDP 2

Government of Indonesia's Kecamatan Development Program supported by the World Bank aims at reducing rural poverty and improving local governance. KDP provides block grants directly to sub-districts (*Kecamatans*), out of which funds are made available to villages on the basis of proposals presented and defended by village teams at a sub-district level community decision making forum. Program rules specify ceilings for funds available to each village, the kinds of activities that may be funded, and require that if a village submits more than one proposal, one must come from women's groups. KDP objectives emphasize community participation - especially that of women and poor villagers- transparent decision making, competition among villages for funds, and sustainability of project investments. In view of the multi-dimensional gender mainstreaming actions already under way in KDP 2, the WSP-EAP chose to focus strategically on one piece of the whole picture, i.e., improving the gender-poverty-sensitivity of village level decision making processes for: a) village proposal preparation, and subsequently, b) the final selection of proposals to be funded by KDP 2, at the sub-district level.

It was agreed with the project management team that this would require a holistic approach, in which:

a) capacity building for community facilitators would be integrated with a gender- and poverty-inclusive and empowering community level planning process, and
b) the extent of empowerment and poverty/ gender-sensitivity of that process would be verifiable and be monitored by the program (KDP 2).

a. Providing a process and tools for inclusion and empowerment

A structure of activities was designed for the community level process that will formulate activity proposals for funding.

Table 1 summarizes the tools introduced and their purposes (for details on MPA tools see Chapter 6 of this book), and Figure 18 illustrates how they fit in the KDP 2 activity cycle.

b. Incorporating the process/ tools for inclusion and empowerment into facilitator training

A training program to equip sub-district and village-level facilitators to use these tools with communities was piloted in one province. At the

40 In both cases, the objectives are pursued by working with KDP 2 and WSLIC 2 project implementing agencies and drawing on project budgets for stakeholder involvement, training, and piloting of activities.

41 PRA - Participatory Rural Appraisal, and PHAST - Participatory Hygiene and Sanitation Transformation.

end of training the facilitators evaluated the proposed new tools in the light of their community work experience in KDP 1. They said that the proposed tools:

- enabled more democratic decision making at sub-village and village levels;
- provided proof of local poverty conditions, from both men's and women's perspectives, to use as the basis for proposal selection and formulation;
- reduced the potential for conflict between different habitations (*dusuns*) and within the community, by making the process transparent;
- simplified monitoring of implementation, for both the community and outsiders;
- made the village facilitators' work easier and more effective;
- helped sub-district facilitators to supervise and assess success of the program;
- required at least two days of field practice to develop basic skills for application, and therefore KDP 2 facilitator training programs should provide for the same.

Training of KDP 2 village facilitators in gender–and poverty–sensitive process facilitation

c. Adding transparency and verifiability for gender- and poverty-sensitivity in community processes

The following ways were worked out by the national technical assistance providing consultants for KDP 2, in consultation with the trainees:

- Visual outputs from the tools (welfare classification criteria, social and poverty map, causal diagram of poverty, prioritization, and voting results for proposal selection) will become the means of monitoring whether the KDP 2 village level process has been sufficiently gender-responsive and poverty-sensitive.
- These outputs will be required attachments to village proposals submitted for funding at the sub-district forum. They will serve as the means to evaluate proposals in terms of their responsiveness to root causes of local poverty and responsiveness to the voices of both women and men in decision making.
- Selected visual outputs from approved proposals will be permanently displayed in the village to serve as public monitoring tools for all villagers can track progress of project interventions.

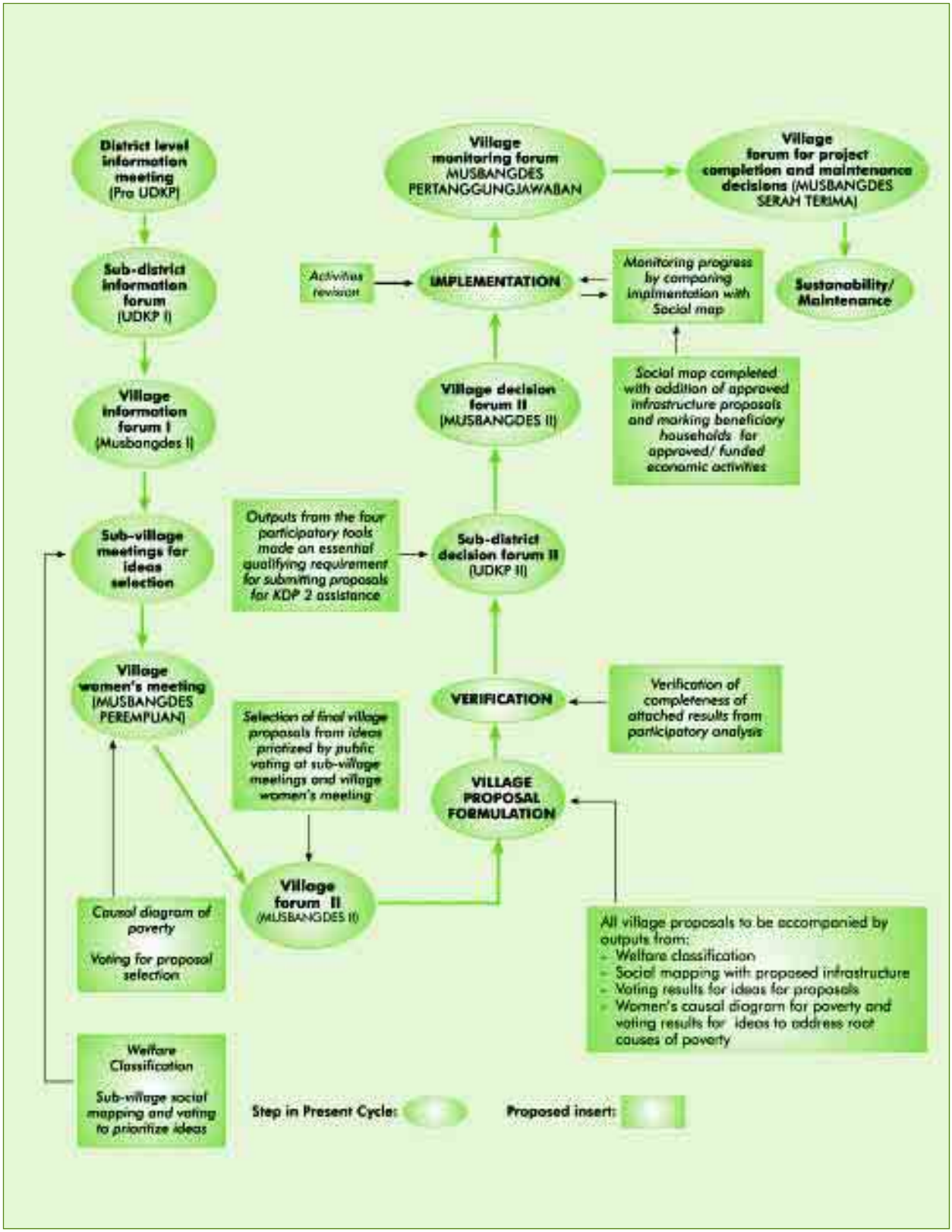
The process, tools, and indicators are now incorporated in: a) KDP 2 training programs for

Table 1 Social inclusion and empowerment tools introduced in KDP 2

Tool and target group	Purpose	How does it help gender-poverty mainstreaming?
1. Welfare Classification With poor and wealthier men and women, during sub-village meetings	To identify the local poor. To establish a baseline poverty profile of the village. To ensure that the lowest socio-economic sub-groups are targeted for participation.	Allows community members to discuss the basis for socio-economic segmentation in their community and agree on criteria for differentiation. Gives voice to a broader range of people. Allows for the economically weakest to be identified by local consensus.
2. Social Mapping With poor and wealthier men and women, during *dusun* meetings	To map out socio-economic distribution of the community and current service provision. To assess equity in current access to and usage of available services. To check for improved access of the poor while planning future infrastructure improvements.	Community has control of the process. Increases community confidence in their capacity to analyze their own situation and plan for improvements. Adds transparency to plans. Enables community members to monitor the impact of the program on the poor and non-poor sections of their population.
3. Selecting activity ideas for proposal formulation With poor and wealthier men and women, during *dusun* and village meetings	To elicit ideas for desired improvements and identify potential benefits for different socio-economic groups, drawing on information provided through social mapping. To publicly evaluate ideas generated against a range of poverty targeting and gender inclusive criteria and rank them using a transparent voting system.	Individual members match their preferences against community needs in an open and transparent manner that promotes equity in decision making. Enables collective evaluation of the effectiveness of suggested activities for poverty reduction, and their potential sustainability. Prevents elite-domination of decision making by giving equal voice to poor and better off, women and men, through individual voting and public vote counting, to select the activities that would be developed into village proposals.
4. Causal diagram of local poverty and proposal formulation With women from poorest cluster of households in the village, together with women invited from other dusuns, during women's meeting *(Musbangdes perempuan)*	To identify root causes of local poverty and links between causes, in order to identify the most appropriate strategies which will benefit the poor and can be supported by community resources. To evaluate strategies/action ideas against a range of poverty- and gender inclusive criteria. To rank ideas using a democratic voting system.	Provides space for women's voices. Visually represent women's realities of poverty and links between causes. Provides evaluation of proposed activities from the viewpoints of poor women and ranking of the most effective poverty-reducing activity by consensus achieved through individual voting. Prevents male-domination and elite-hijacking of decision-making in selecting ideas for women's proposals. Provides visual record of the process and rationale underlying women's proposals – to be used as presentation aids by women representatives while defending their proposals at sub-district decision making forum for funding.

(Note: 1 and 2 above are MPA tools, outputs from which are, then used to target poorest households and women's groups for further analysis and planning using 3 and 4, which are PRA tools).

Figure 18 KDP 2 activity cycle with proposed inserts for gender-poverty mainstreaming



village and sub-district facilitators and their district level supervisors, and b) KDP 2 project manuals on proposal formulation, verification and final selection criteria. In late 2002 project training became operational.

2.1 Lessons learned in KDP 2

2.1.1 Capacity building for the MPA and PRA Tools

There is capacity and readiness among the village facilitators of KDP[42] to use the selected participatory tools. The trainees demonstrated high levels of enthusiasm for using them at the community level, but stressed the importance of field practice for building skill and self-confidence. Accordingly, at least two days of field practice are now included in the seven-day training program designed for KDP 2 village facilitators.

Village facilitators need additional sensitivity and skills building in analysing gender issues in local cultures and dealing with them in culturally acceptable ways. All participants demonstrated a lack of gender analysis skills and ability to address gender issues. Some gender training was provided during KDP 1, which could be strengthened by linking it in a practical manner with the community level facilitation tasks and the facilitators' own community experiences. Gender targeting would also benefit from an increase in the number of female facilitators at village and sub-district levels. Efforts are currently ongoing to achieve this objective in KDP 2.

The field test experience suggested some revisions in the criteria for the selection of village facilitators. Empowering methodologies call for facilitators with listening skills and openness to learning. Criteria used during KDP 1 emphasized "speaking skills" and "ability to impart information", which can lead to the selection of those who command respect. Such people are used to providing direction and advice in Indonesian communities, and are ill-at-ease in listening and learning-facilitation roles. During the training pilot, a few facilitators who happened to be figures of authority in communities demonstrated low capacity and interest to work in a participatory learning mode.

The participatory nature of the training, modeled after the approach to be used in communities was appreciated, with many participants commenting during evaluation that they enjoyed the "relaxed" nature of the learning. Facilitator training programs need to exemplify the desired kind of facilitation for better skill development.

2.1.2 Community use of the tools during field test

The high level of enthusiasm shown by the community, both men and women demonstrated their interest in working with the selected tools. Their ability to grasp the concepts and purpose of the tools was encouragingly high even though understanding depends on the presentation style and information provided by the facilitators. It required approximately two hours per tool to make sure that information emerging from a community group is relevant and of good quality. This was not seen as a constraint if group sessions were scheduled at the convenience of community members.

42 KDP's village facilitators are residents of the village where they work and are to be chosen by the villagers. They are expected to have at least middle-school level education and "good communication skills." KDP 1 did not formally provide them with facilitation training but KDP 2 does.

Women in particular appreciated the opportunity to vocalize their views, but were often interrupted. One of the tools was used solely with women, as is intended in the *Musbangdes Perempuan* or village women's meeting. Women responded actively, as long as there were no men around. However, it was often difficult to sustain gender-segregated women's group meetings for long because some community men felt a need to participate in the process, or at least be present even in women's meetings and answer on their behalf. Unless specially sensitized to the need to ensure the expression of women's voices, village facilitators tend to accept this situation rather than deal with it, as it is culturally acceptable for men to "take over" in this manner.

Information derived from the tools was gender- and poverty-sensitive, in the sense that the different priorities and viewpoints of men and women, the poor and the non-poor, were made clear and discussed by all. The trainees reported that the tools allowed more community members to have a voice, as compared to the methods they had previously used.

One potential impact of the use of participatory analysis methods is a reduced need for forms to be completed, as the outputs from the tools provide the supporting evidence and data for community proposals (as indicated in Figure 18, the KDP 2 Activity cycle). A review of the current recording/monitoring mechanisms is now being conducted to see which ones can be simplified, eliminated and replaced with actual outputs from participatory analysis and planning tools. The ongoing review is also aimed at institutionalizing the monitoring of gender- and poverty-sensitivity of KDP 2 processes and outcomes.

3 Interventions made in WSLIC 2

WSLIC 2 is a second-generation community-based project for improving water and sanitation infrastructure for poor communities in Indonesia. It is a community-demand-driven project that offers choices to communities about service improvements and requires that they pay a minimum 20 percent of the construction cost for the chosen type and level of services, part in cash (4 percent) and part in kind (16 percent). Operation and maintenance are to be fully user-financed, with some project inputs for capacity building.

Gender and poverty mainstreaming were built into the design of WSLIC 2 with a requirement for use of MPA as the main approach for community mobilization and planning process for improving services and health, combined with PHAST.[43] The major challenges for this project thus far have been the development of MPA as a methodology for planning by combining it with PHAST, scaling up a process that has hitherto been used for relatively small scale monitoring and evaluation exercise, and gaining "buy-in" at the provincial, district, and community levels. Since the project was launched in late 2001, the following interventions have been made.

a) Project management

- Provision of a national level specialist adviser for MPA and PHAST on the central project management team.
- Project design requiring participatory monitoring and evaluation at village level to

43 *Participatory Hygiene and Sanitation Transformation: A participatory approach for the control of diarrhoeal disease,* developed through a collaboration between WHO and the UNDP/World Bank Water and Sanitation Program in the mid 1990s.

be linked to the project's Monitoring Information System (MIS).
- Defining project monitoring and evaluation indicators for sustainability; incorporating process indicators for sustainability in terms of gender-and-poverty-sensitive demand-responsive approaches (in process, at the end of 2002).

b) Capacity building

- Orientations on gender- and poverty-sensitive empowering methodologies for project consultants at all levels (central, provincial, and district) and stakeholders (local government agencies and contractors).
- Setting criteria for participatory skills and experience as part of the selection process for community facilitators.
- Intensive training in gender- and poverty-inclusive empowering methodologies (the MPA-PHAST-based process) for community facilitators and district implementation teams, incorporating substantial in-field practice.

c) Community engagement process

- Road shows (public information activities at project launch) at district, sub-district and village levels which emphasize the community-demand-driven approach, choices available to communities and the rules of engagement with the project.
- Requirement for a formal expression of community demand (a Letter of Intent) as the starting point for project engagement with interested communities.
- Developing a community planning process that uses a demand-responsive, gender-balanced and socially-inclusive approach, combining MPA and PHAST methodologies into one community planning process[44] (See Table 2 for process outline and tools used).
- Establishing the requirements for participatory, gender and poverty-sensitive approaches to be used in preparing community action plans (setting criteria related to gender equity and poverty-targeting for evaluating and approving community action plans for project funding).
- Providing trained facilitator teams to assist communities to develop and implement their action plans through the MPA-PHAST based process.
- Providing training for village implementation teams in participatory, gender- and poverty-inclusive approaches.

3.1 Lessons learned in WSLIC 2

2002 is the first year of WSLIC 2 implementation. Whether or not the processes, tools, and indicators will have made a difference in outcomes will not be known until at least another year. Some lessons that have been learned to date, about institutionalizing and scaling up gender- and social-inclusion are presented here.

Institutionalization

- **Incorporating gender- and socially-inclusive methodologies into the project design has proved essential in gaining acceptance at national level**. The requirement for the use of the MPA has caused gender, poverty and sustainability issues to be more easily discussed and addressed in the normal course

44 Until this point, MPA had been used as an assessment tool for monitoring and evaluating project implementation. WSLIC 2 provides the first opportunity for it to be tested as a planning methodology on a large scale. It has necessitated some modification to the recording and use of information gathered through the participatory tools. Further modifications are expected following the first round of field application in WSLIC 2 provinces in 2002.

of project implementation. Because they are not seen as optional, the risks of these issues being marginalised is lower, unlike what has often been seen in past projects.

- **A definite marketing strategy and extensive promotion are necessary to "sell" the approach for gender and socially inclusive participatory development to stakeholders at the national, provincial, and district levels**. The strategy adopted by WSLIC 2 was not to sell these ideas separately, but integrate them into a package that can attract all stakeholders' interest. Since stakeholders at all levels are concerned about sustainability, "*sustainability of services/project investments/health impact*" was strategically selected as the package for marketing all the interlinked concepts, i.e., demand-responsive approaches, gender- and poverty-inclusion, community empowerment and participation. This is helping to develop a degree of ownership of the project goals (sustainability and equity) by various categories of WSLIC 2 stakeholders, whereas, in other cases, participation/gender/poverty issues tend to be delegated only to social development personnel in projects.

Mapping households by welfare categories with villagers - community facilitators training in WSLIC 2 project, Indonesia.

- **The issue of institutional capacity building at the local government level is emerging as a major challenge**. The consultants that are implementing the project using the new methodologies are supervised and managed by district level government agencies. These agencies are habituated to traditional, top-down ways of executing programs. WSLIC 2 faces an enormous challenge of bringing about a common understanding of project concepts, facilitating more participatory, downwardly accountable management styles and new kinds of quality control criteria with local government agencies, which are currently also experiencing decentralization of central power for the first time. Provincial and district level structures are keen to test the limits of their autonomy and are now less amenable to central guidance than in the past.

- **There needs to be an integrated strategy that synchronizes the establishment of participatory, community demand-driven processes with institutional change management at local government levels. Project teams also need institution development skills.** The use of empowering methodologies, which mainstream gender- and poverty-inclusion, necessitates major changes in traditional institutional mechanisms at local level. The nature and scale of the institutional change management challenge (to get local government agencies

Table 2 WSLIC 2: POVERTY AND GENDER MAINSTREAMING IN THE COMMUNITY PLANNING PROCESS THROUGH MPA* AND PHAST**

(Basis for community facilitators' training program)

Planning Stage	Information obtained	Relevant tools	Use of the information
Problem identification	Social and economic characteristics of the community.	Community Data Inventory (MPA) Welfare Classification (MPA)	To establish a baseline for the community socio-economic profile which will enable sub-groups (rich/ poor/women/men) to be targeted for participation in community planning process.
	Current provision of services and gaps in service provision. User satisfaction with existing services. Involvement in establishing existing services, including training. Who does not have access to services and why.	Social Map (MPA) Pocket Voting (MPA) Voice and Choice (MPA) Assessment of Training (MPA) Transect Walks: Source Management (MPA) Quality of Works (MPA) User Satisfaction Rating (MPA) Unserved Populations (MPA)	For community to map out its current service provision and assess social and gender equity in decision making, access, usage and training and management of water and sanitation services. This shows how existing services were developed and the differentials in access and use of services by women and men, the rich and the poor. This allows different user groups (and non-users) to assess what can be built on, to plan for improved or new WSS services that are more equitable.
		Gender Roles – Who Does What (PHAST)	Men and women examine gender division of labour to identify how this might impact on availability to participate in decision making and project implementation and the likely consequences for benefits and sustainability of services.
	Management of existing water supply provision.	Gender Division of Time and Tasks (MPA) Management and Decision making (MPA) Financial Management (MPA) History of Participation (MPA)	To check the extent of equity in managing current services and the effectiveness of management and financing, with whoever is managing and operating them.
	Current health problems perceived by women and men in the community.	Contamination Route (PHAST) Good and Bad Hygiene Behaviors (PHAST)	Men and women identify predominant health problems in the community, perceived links betwee health problems and current water-sanitation situation, perceived "good" and "bad" hygiene behaviours. This encourages men's responsibility for health-related behaviours, and identifies existing health-hygiene awarness among men and women.
	Preliminary discussion of impact of findings for project development in water facilities and management, sanitation facilities and hygiene behaviour change as they affect men and women, rich and poor.	Community Review Assembly (MPA)	To present the findings to the larger community as a starting point for participatory planning of new services. Issues to be discussed include equity in planning and management and improving sustainability of services.

Table 2 *(continued)* **WSLIC 2: POVERTY AND GENDER MAINSTREAMING IN THE COMMUNITY PLANNING PROCESS THROUGH MPA AND PHAST**

(Basis for community facilitators' training program)

Planning Stage	Information Required	Relevant Tools	Use of the Information
Problem analysis and selection of technical and health options	Assessing demand for different user groups	Water supply ladder Choosing sanitation improvements (PHAST)	To elicit people's (users and non-users) preferences, by social class and gender, for different types of improvements for WSS services, and the potential community resources available. Community groups match the diversity of their needs against technical options available and capacity and willingness to pay, in order to determine the level of demand. This provides the basis for discussion on financing options for different social groups and promotes equity in community planning and management of contributions.
	Selecting possible hygiene and health improvements for community and schools	Blocking the spread of disease (PHAST) Selecting the barriers (PHAST) Choosing improved hygiene behaviours (PHAST)	To assist different groups within the community to deepen their understanding of ways to improve their health status and identify key hygiene behavior targets for community and school action.
Planning for water and sanitation services and hygiene behaviour change	Community action planning Allocating responsibilities	Planning for change: water services ladder Planning for change: sanitation (PHAST) Planning for change: hygiene behaviours (PHAST) Planning who does what and by when (PHAST)	Sufficient information (quantitative and qualitative) is available to the community for informed choices about possible project interventions. The interests of different groups are represented in the Community Action Plan through their participation in decision making (about new development and management of new or improved services, training needs and hygiene behaviour change).
	Risk analysis and management	Identifying what might go wrong (PHAST)	Community conducts its own risk analysis and develops risk management strategies.
	Monitoring plan	Identifying indicators for participatory monitoring and evaluation.	Community identifies its own indicators and process for monitoring service development and maintenance and hygiene improvements.

* **MPA** - Methodology for Participatory Assessment
** **PHAST** - Participatory Hygiene and Sanitation Transformation
*** **PRA** - Participatory Rural Appraisal

to function in a demand-responsive mode when they have had a history of being entirely supply-oriented) were underestimated in the project design. Moreover, bureaucratic exigencies have caused batches of personnel joining WSLIC 2 project in a manner that is neither systematic nor properly sequenced. Their readiness to function in the project has had to be built in a reactive "fire-fighting" mode instead of systematically and therefore cost-effectively.

- **MPA offers a process model for gender and poverty-inclusive participatory planning that fits with the new planning paradigm for Indonesia, in theory.** At this initial phase of the project the process is seen to be helping technical specialists, health and community development specialists function in a more integrated manner than previously experienced. However, ultimate success will depend on MPA applications being maintained consistently into the implementation phase to ensure gender and social equity in future outcomes, e.g., in community capacity building for infrastructure operation and maintenance, participation in water management organizations, and more equitable distribution of workloads, power and benefits resulting from the project.

- **Monitoring and evaluation specialists are an important target to ensure that key gender and poverty indicators are included in Management Information Systems (MIS).** While process indicators are an important part of assessing empowering approaches, project level M&E is usually more concerned with physical inputs and outputs. Successful integration of MPA into the project MIS is a key milestone, which has not yet been reached. Table 3 provides a sample of gender- and poverty-sensitive process indicators built into WSLIC project design, which now need to be made operational through participatory monitoring mechanisms and the MIS.

Capacity building for community processes

- **Capacity building is an iterative and continuous requirement.** WSLIC 2 recognizes that the community level interface is the most critical one for the success of empowering methodologies and for project sustainability, and that quality training is required for those who work at this level. WSLIC 2 provided five weeks of initial training for community facilitators in three tranches, interspersed with three phases of fieldwork. Despite this, further technical guidance in the field during initial stages has been identified as necessary and ongoing refresher training is planned.

- **Capacity building improves in quality through learning from the field.** The first year's community planning process has yielded valuable feedback on how to streamline and sharpen the MPA-PHAST process, and refine community facilitators' skills. A stakeholders' review of the process has been planned with the objective of reaching consensus before making changes for the next round.

- **Who makes the best participatory facilitator?** There are trade offs. WSLIC 2 experience showed that fresh college graduates recruited as community facilitators were more responsive to the new empowering approaches. During training they were more open to learning as compared to those who have spent significant time in bureaucracies, such as extension workers within government systems (a somewhat comparable finding is reported in the section on KDP). However, while MPA tools are relatively easily learned, the rationale for their use is not easily understood without some fieldwork and community experience.

There is a need to develop a more user-friendly rationale in local languages for MPA/PHAST.

- **The workability of MPA/PHAST as a planning tool was demonstrated through the first round of community planning in five provinces**. It was shown to be adaptable for planning, particularly where there are existing services and usable in diverse settings, with appropriate adjustments of the visual tools for specific cultural and geographic variations. The transparency afforded by the use of the participatory planning tools was frequently remarked upon as valuable by rural men's and women's groups in project provinces. They enjoyed using the tools, although community facilitators are not yet sufficiently skilled in using the data gathered for probing and encouraging greater community understanding of their local situation.

Whether or not the MPA-PHAST-based interventions make a difference to project outcomes is being monitored by implementing agencies and researchers independent of the project, and will be evaluated near the end of project.

Table 3 PERFORMANCE MONITORING AND EVALUATION INDICATORS FOR PROJECT DEVELOPMENT OBJECTIVES

(Excerpts from Table 7a: Project Implementation Plan, WSLIC 2)

PLANNING PHASE (Note: M/W, R/P = Men and Women, Rich and Poor)				
Project Development Objectives	**Input Indicators**	**Outcome Indicators**	**MPA Variables**	**Indicators and Sub-indicators to Assess**
1. Providing safe, adequate, cost effective and easily accessible water supply and sanitation facilities	• CFs[A] provide feasible system options to community (including water sources of adequate quality and quantity). • Full community participation (gender and class-sensitive) in choosing system and service level. • **DED[B] for WS system is developed and included in CAP[C].** • DED for sanitation facilities is developed and included in CAP. • Plan for collecting and managing water user fees included in CAP.	System option chosen is technically appropriate. System option/s chosen are what all sections of community want. Technical quality of CAP and DED meets standards. Desired service level reflected in system design. System management and financing needs accurately estimated.	Project responsiveness to demand (Users' voice and choice in planning and design)	**Degree of informed choice made by M/W, R/P on**: ➢ Kind of technology. ➢ Service level (e.g., public tap, house connection, private latrine). ➢ Location of facilities (public taps, tanks, etc.). ➢ Type of local service management organization. ➢ Size of cash and in kind contributions for construction, modes of payment and utilization. ➢ Tariff rate (water user fee) for chosen level of service and mode of payment. ➢ Organization responsible for construction. ➢ Training needed for construction, operation and management.

[A] CF : Community Facilitator [B] DED : Detailed Engineering Design [C] CAP : Community Action Plan

Table 3 *(continued)* PERFORMANCE MONITORING AND EVALUATION INDICATORS FOR PROJECT DEVELOPMENT OBJECTIVES

(Excerpts from Table 7a: Project Implementation Plan, WSLIC 2)

PLANNING PHASE (Note: M/W, R/P = Men and Women, Rich and Poor)				
Project Development Objectives	**Input Indicators**	**Outcome Indicators**	**MPA Variables**	**Indicators and Sub-indicators to Assess**
2. Developing sustainability and effectiveness through community participation	• Number of community members participating in project activities is balanced in terms of gender and class. • PHAST process is conducted. • CFT[D] is in place and functioning. • Monitoring plan is developed. • System option is chosen by community. • Community agreement to provide share is in CAP. • Community agreement to pay O&M is in CAP. • Community members (M/W, R/P) participating in PHAST.	• For the system chosen, the community (M/W, R/P) understands and agrees on level/quality of service expected, maintenance implications, design life and coverage as per design. • Community formally agrees to provide contributions according to CAP schedule.	Equity in sharing burdens and benefits	**Extent of understanding and agreement of community M/W, R/P regarding**: ➢ CAP contents (system type, level of service, community cash/in kind contributions, water tariffs, hygiene behavior improvements plan, O&M arrangements and Training plan). ➢ Criteria for trainee selection, considering equity of opportunity and sustainability of services. Composition and functioning of VITs reflect gender and social equity principles (CFT task). Extent of community control of financing and implementation, by M/W, R/P.
3. Improving health behavior and health services of communities	• Health CF is in place. • Teachers are trained in PHAST and school health program. • VIT[E] health is trained in PHAST. • Sanitarians are trained in PHAST. • Planning for behavior change as part of CAP preparation.	• PHAST sessions are properly sequenced in community meetings and in schools. • Community classifies its own good and bad health behaviors. • Community identifies key behavioral changes needed to improve health and QOL[F]. • Teachers understand how to conduct HSP. • Sanitarian and VIT understand how to use PHAST for HSP[G]. • CAP includes behavior change activities plan, and behavior change monitoring indicators locally decided.	Participation in service establishment	**Extent of community voice and choice in planning and design of hygiene and sanitation program**: Decision making by M/W, R/P on: ➢ Key behavior changes needed in the community. ➢ How behavior changes will be promoted and monitored. ➢ Type of special health program to be taught in school linked to key behavioral changes identified.

[D] CFT : Community Facilitator Team [E] VIT : Village Implementation Team [F] QOL : Quality of Life [G] HSP : Hygiene & Sanitation Promotion

Table 3 *(continued)* PERFORMANCE MONITORING AND EVALUATION INDICATORS FOR PROJECT DEVELOPMENT OBJECTIVES

(Excerpts from Table 7a: Project Implementation Plan, WSLIC 2)

PLANNING PHASE (Note: M/W, R/P = Men and Women, Rich and Poor)				
Project Development Objectives	**Input Indicators**	**Outcome Indicators**	**MPA Variables**	**Indicators and Sub-indicators to Assess**
4. Efficient and effective project management	• VIT is established. • CFTs are trained in project principles and their required role and are at the place of their assignment. • On the job training to VIT by CFs on CAP development.	• CFTs are in place. • VIT is established. • CAP is submitted on time. • Quality and completeness of CAP contents adequate. • Quality of facilitation provided by VIT during PHAST and CAP development process is adequate.	Institutional support for gender- and poverty-sensitive, demand-responsive participation	**Supportive Organizational System** ➢ Project implementation strategies and performance indicators verifiably reflect overall guiding principles: DRA, sustainability of services and impact on QOL, community ownership and management, gender equity and poverty targeting (CIT[H] task). ➢ Guidelines for gender and class-disaggregated (poor/non-poor) planning and monitoring systems are available to DIT[I]s, PMC[J]s and CFTs for inclusion in the project (CIT-CMT[K] task). **Supportive Organizational Climate** ➢ Guidelines formulated for types of expertise needed in management and implementation teams at different levels (DPMU[L], DIT, CFTs) for demand-responsive approaches (CIT-CPMU[M] task). ➢ Policy guidelines are basis for resource allocations in project management budgets for staff capacity building, management support and performance incentives for functioning in a demand-responsive, gender-sensitive and poverty-targeted manner (CTT-CMT task).

[H] CIT : Central Implementation Team (Central TA Consultants)
[I] DIT : District Implementation Team (consultants)
[J] PMC : Project Monitoring Consultant
[K] CMT : Central Management Team (Central Government Staff)
[L] DPMU : District Project Management Unit (DIT + DMT)
[M] CPMU : Central Project Management Unit (CIT + CMT)

Looking Back to See Forward

Learning from communities about use and sustainability of RWSS services in Lao PDR

Soutsakhone Chanthaphone and Santanu Lahiri

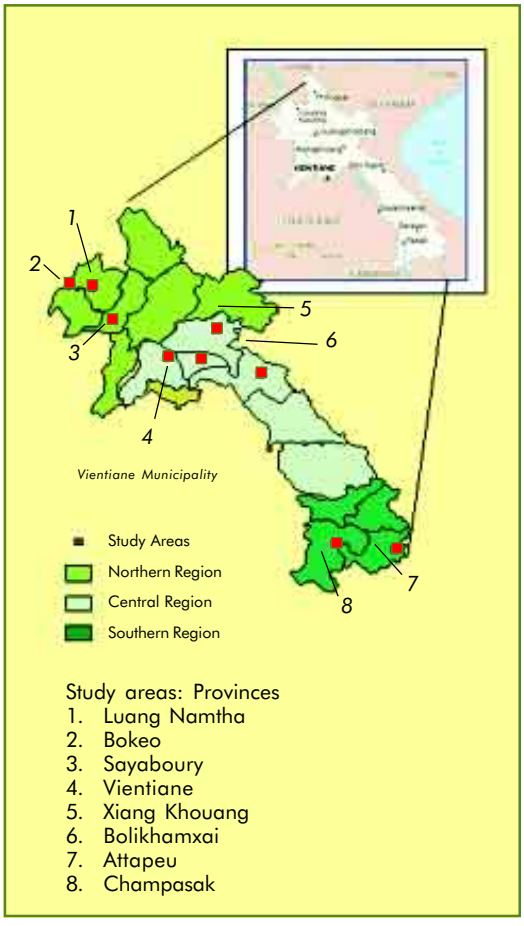
Background

Lao People's Democratic Republic (PDR), commonly known as Lao PDR, is a land-locked area between China, Vietnam, Thailand, Myanmar, and Cambodia. It has a population of 5.2 million. Around 85 percent of the population lives in rural areas that are often remote and very difficult to access. There is a broad range of linguistic and ethnic diversity throughout the country. These factors combine to make provision of rural water supply and sanitation (RWSS) a challenging task.

Water and Sanitation Sector Strategy

The National Center for Environmental Health and Water Supply, commonly known as Nam Saat, within the Ministry of Health is responsible for co-ordination, guidance and facilitation of the RWSS sector. Prior to 1997, the approach to RWSS in Lao PDR was top-down, focusing on coverage rather than use and sustainability, and centered on areas that were easily accessible. Following a

Figure 19 Location map of Lao PDR



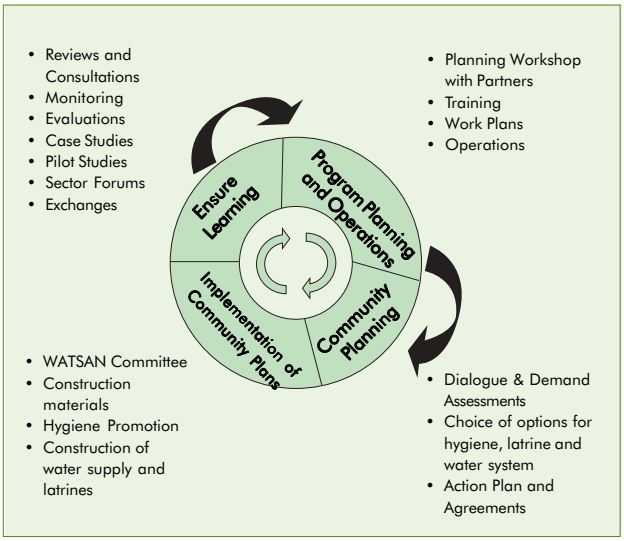
review of the RWSS situation, Nam Saat prepared and launched in 1997 a RWSS Sector Strategy, that was developed with sector partners, with support from the Water and Sanitation Program - East Asia and the Pacific (WSP-EAP). The strategy outlined a new approach to improve the way water supply and sanitation services are delivered to rural communities.

Guiding principles of the strategy now being operationalized

Nam Saat has completed Phase II[45] (1998-2002) of sector reform. The RWSS Sector Strategy outlines several changes to make the delivery of WSS services to rural communities more sustainable. These changes focus on a demand-based approach through increased community contributions and local decision making.

As compared to the past (when the tendency was to focus on easily accessible lowland villages and technicians deciding specific technology interventions for communities), user communities are now the decision makers. They are supported by technicians from Nam Saat and social workers (from Lao Women's Union, Youth Union, and Rural Development Committee), who work together to facilitate local decision making based on informed choices.[46] Both sanitation and water supply options are now presented in a ladder format or menu[47] so that people are able to compare many different options and choose the most affordable and appropriate technology and service levels for themselves.

Figure 20 Annual RWSS cycle



The guiding principles of the National RWSS Sector Strategy include:

- National policies and standards
- Equity of service
- Linking with partners
- Bottom-up decentralized planning
- Participatory approach
- Community management and ownership
- Gender and cultural sensitivity
- Accountability and transparency
- Informed choice
- Learning process

These principles are summarized in the annual RWSS cycle as illustrated in Figure 20.

45 Phase II (1998-2002) of Nam Saat program funded by Swedish International Development Cooperation Agency.

46 For further information please visit Lao PDR Country page of the http://www.wsp.org website.

47 These are options for sanitation and water supply services, starting with minimal cost hardware interventions.

Field assessment study through MPA, Bolikhamxai province, 2001

Members from the following organizations were trained in the MPA

Nam Saat	6 people
Department of Hygiene and Disease Prevention	3 people
Water Supply Authority	2 people
Dept. of Housing and Urban Planning	1 person
Lao Youth Union	1 person
Care International	1 person
Save the Children, Australia	1 person
Quaker Service Lao	1 person
European Union	1 person

Assessing existing services in light of the guiding principles

During April-December 2001 a study was carried out by Nam Saat to capture learning about how RWSS infrastructure built in the past is being managed and sustained. The aim of this assessment was to gain experience from projects throughout the country supported by the government and various external agencies. This experience is now being integrated into ongoing and future projects to strengthen the Lao guiding principles. The assessment was organized by Nam Saat and partners with support from WSP-EAP using the following process:

- *A consultation workshop* took place where sector partners[48] discussed possible alternatives and decided on the *Methodology for Participatory Assessment (MPA)* as the most appropriate methodology to assess the water supply and sanitation systems.
- *MPA training program* was conducted in Laos to establish a national core team of trained professionals to conduct this assessment. Included in the training were practical field assessments in two villages to provide hands-on experience. The MPA fieldbook was tailored for the Lao situation and translated into the Lao language. As part of the preparation for the field assessment study, Nam Saat requested

Sample village selection criteria for conducting the MPA study

- Major types of technologies used in Laos.
- Age of the systems (*at least 3 years*).
- Different types of supporting agencies: *(Government, NGOs, external aid agencies, communities, others*).
- Remoteness from district town (*representing zones 0, 1, 2 and 3 depending on time taken to access from the district headquarters*).

48 The Consultation Workshop took place on 24-26 January, 2001 and partners included Nam Saat, WSP-EAP, UNICEF, Water Supply Authority, Department of Hygiene and Disease Prevention, Lao Women's Union, Lao Youth Union, selected NGOs and provincial representatives.

interested sector partners to nominate persons to be a part of a "national core team." In response, sector partners nominated eleven people to attend the training program for MPA carried out by Nam Saat and WSP-EAP regional and Lao PDR country offices.

- *Assessments were carried out in 38 villages in eight provinces.* The core team was divided into three sub-teams, assisted by provincial and district Nam Saat partners, who worked in parallel in different provinces. The first phase of the assessment was done in 14 villages in Luang Namtha, Bokeo, Bolikhamxai and Vientiane provinces. After the first phase, the methodology was further refined. The second phase of the assessment was carried out in 24 villages of Xiang Khouang, Sayaboury, Champasak and Attapeu provinces.
- *Analysis of results was carried out after* completion of both phases of the assessment. Nam Saat analyzed the data and prepared an assessment report.
- *A National Workshop* was organized by Nam Saat to share the learning from the study with sector partners in March 2002. Policy questions arising from the study were been identified for discussion and consensus building for future action in the Lao PDR RWSS sector.

Technologies assessed in thirty-eight villages

➢ Gravity fed system	18
➢ Dugwell	9
➢ Borehole with hand pump	9
➢ Piped system from electric pump in borehole	2
➢ Latrines: 37 villages with pour-flush latrines. One village with no latrines.	

Findings from the assessment of past RWSS investments

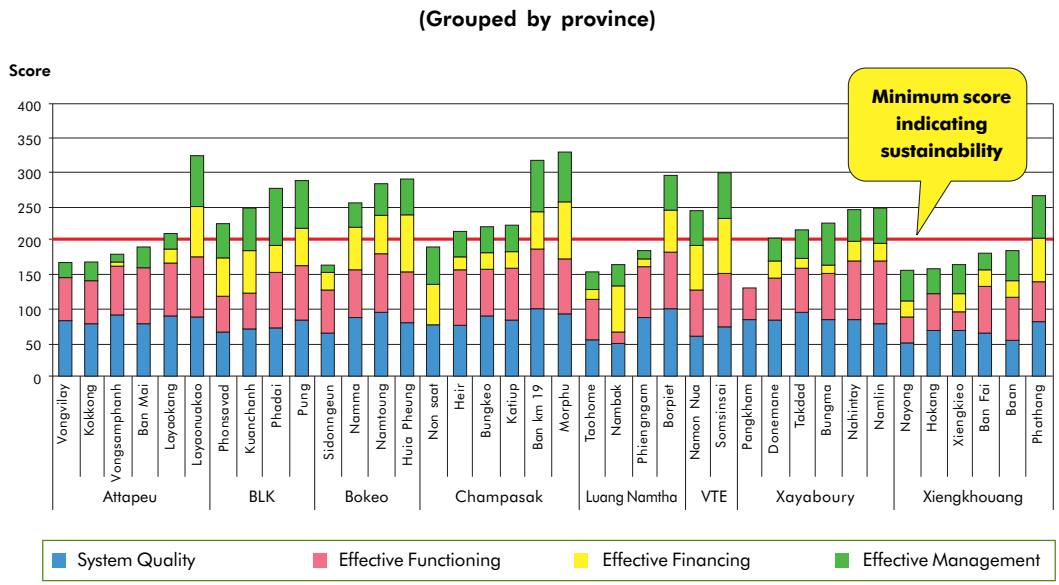
This study is of strategic importance for reasons of national capacity and consensus development in support of the Sector Strategy principles. This is the first time in Lao PDR that major stakeholder agencies in RWSS (Government, NGOs and ESAs) have come together in a collaborative effort to assist communities to assess the equity, sustainability and impact of their RWSS systems. Also, the study was conducted entirely by a national core team, which now has the capacity to scale up the assessment process for continuing improvements in the overall Nam Saat program.

Participants in the assessment included men and women in village water management committees, and men and women present in open village meetings. In each village, separate focus group discussions (average nine focus group discussions per village) were also organized with men and women from poor and wealthier households.

Major learning outcomes

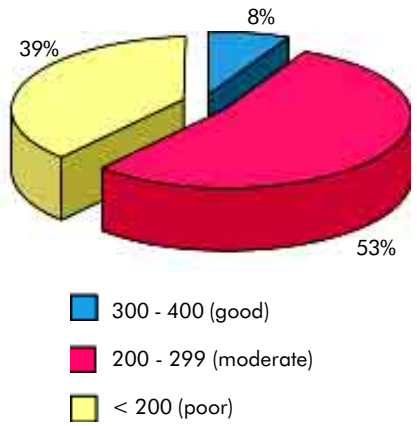
- ***Many interrelated factors influence the use and sustainability of services:*** The study marked a new era when the national agency for RWSS looked back to evaluate the performance of past efforts in terms of use and sustainability, using a broad-based methodology that combined qualitative and quantitative participatory techniques. The study clearly demonstrated that sustainability is affected by a combination of technical, financial and socio-organizational factors. Effective financing and management mechanisms are required to support the quality and effective functioning of the systems. Villages that scored

Figure 21 How effectively are water services sustained?



highest on sustainability tended to do well on all the factors, whereas villages where one or more factor lagged, overall sustainability scores tended to be dragged down (see Figure 21).

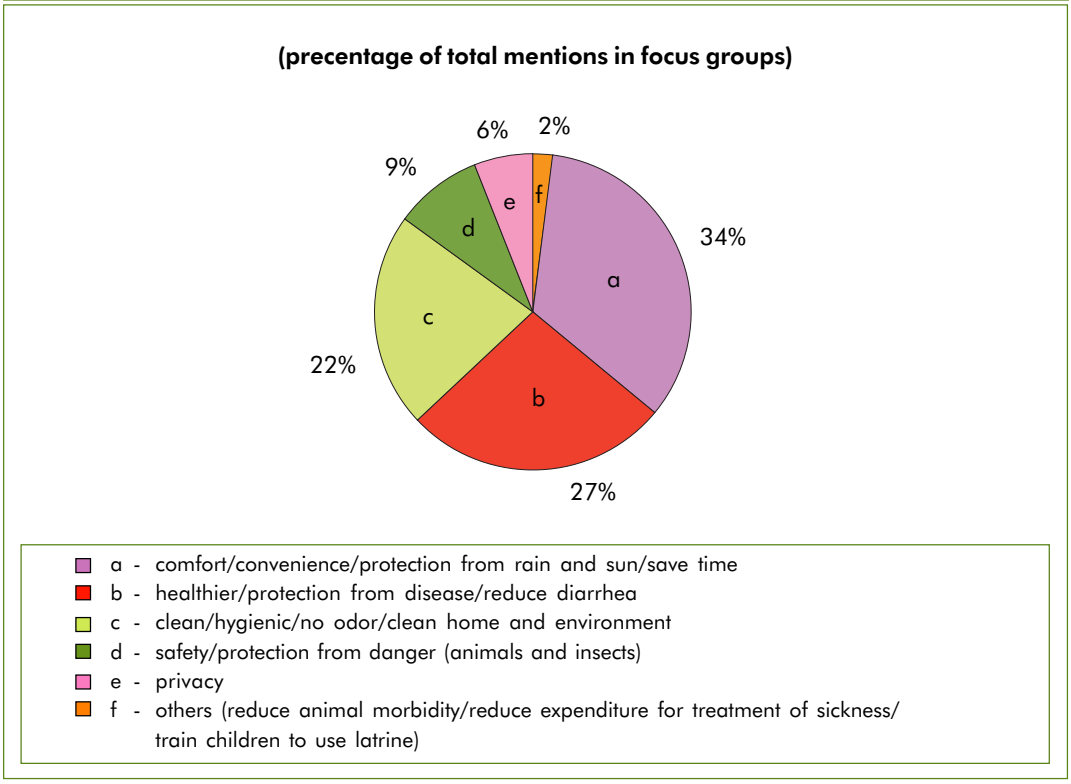
Figure 22 Overall sustainability of water supply in 38 villages



- ***Ownership of Services helps sustainability:*** Overall, only 8 percent of the sampled villages (three communities) showed high sustainability scores of 300 or more on a 400-point scale). In these cases, all the factors had been optimized to encourage local ownership, resulting in better sustainability. As Figure 22 illustrates, around 53 percent of the sample villages (20 communities) judged their four components for sustainability to be acceptable. The remaining 39 percent (15 communities) had low ratings, suggesting poor sustainability.

- ***Perceptions of benefits from improved facilities vary between communities and outsiders:*** For household latrines, men and women identified "comfort and convenience" as being the main benefit. External agencies have so far mainly stressed "health" as the most important benefit while promoting sanitation and hygiene awareness, without taking into account the perceptions of the users. The study demonstrated that communities' views often differ from those of outside agencies. This will help Nam Saat to develop new hygiene

Figure 23 Benefits of household latrines as perceived by user groups in 37 communities



promotion materials based on local perceptions (see Figure 23).

- ***Understanding problems and needs of communities requires quality time and resources:*** Like other participatory techniques, MPA applications require time and well-trained facilitators. The quality of assessment results is influenced by the skills of the facilitators who lead this process in the villages. For this study, it took almost six months to develop a trained team of 17 members to apply this process in 38 villages. The methodology also needs to be tailored and adapted to the local situation to make the application easier and more effective.

- ***Cost-effectiveness of participatory assessments:*** Participatory assessments can be very cost-effective when trained teams extend their work to other parts of the country or other projects. Also, when the participatory evaluation is used as the basis for community learning and new investments planning, initial preparatory costs yield high returns for projects.

Specific findings on sustainability

Sustainability was assessed using four factors:

- **System quality:** quality of design, construction, materials, workmanship.
- **Effective functioning:** quality, quantity, reliability, and predictability of water service available.
- **Effective financing:** cost-coverage achieved for operation and maintenance, regularity and universality of user payments.

Figure 24 System quality

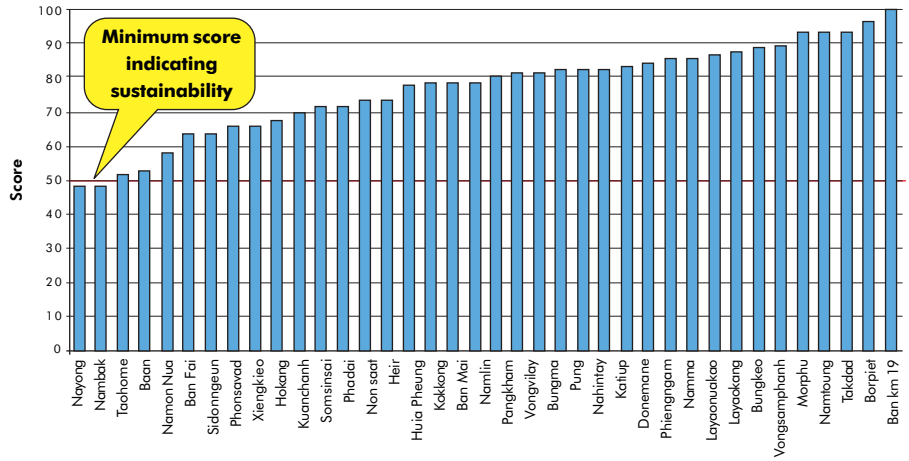


Figure 25 Effective financing

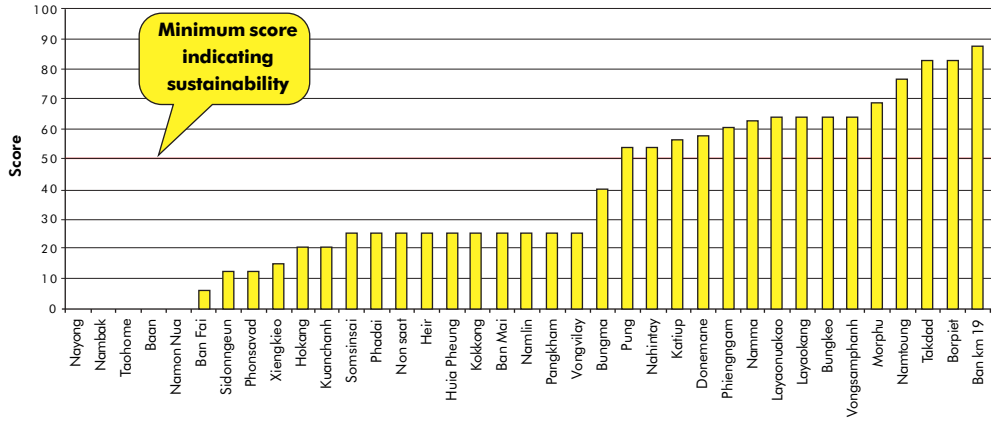
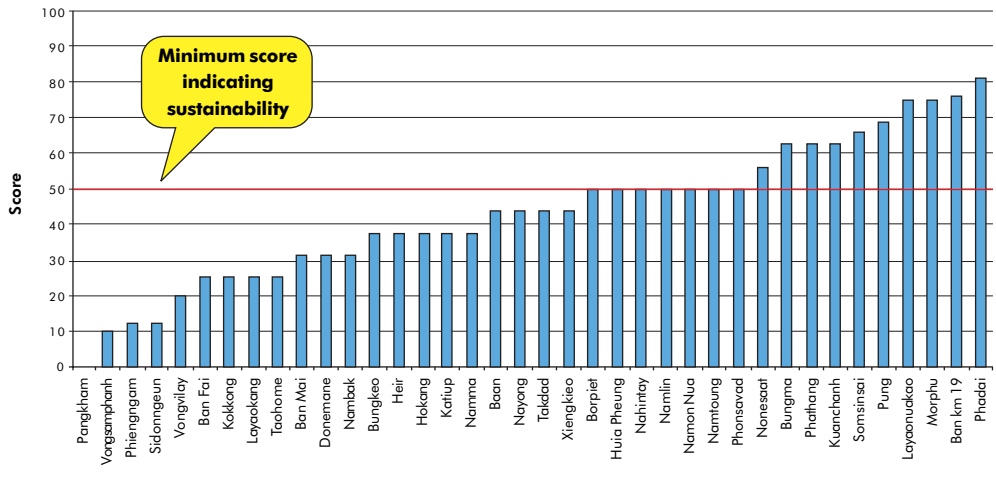


Figure 26 Effective management



- **Effective management:** level and timeliness of repairs, quality of budgeting and account keeping.

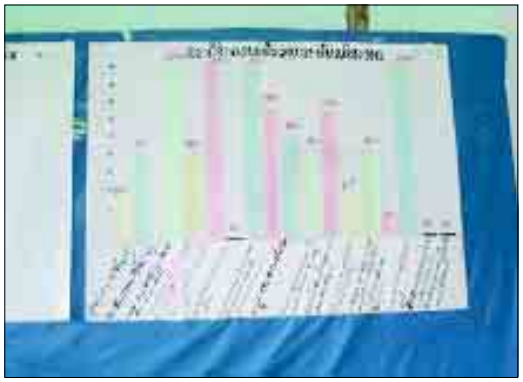
Men and women in each community had the opportunity to express their qualitative and quantitative perceptions regarding the aspects being assessed, and to see where their systems stood on the sustainability scales. They were thus able to see areas where they needed to improve scores, for their systems to be more sustainable. The summary of the specific findings from 38 villages are presented in Figures 24, 25, 26.

- Most communities judged the quality of their system (design, construction and materials) to be generally sound (Figure 24). Only 5 percent of the communities classified the technical design as poor. Improved technical training and services of district and provincial Nam Saat officers seem to be producing positive impacts on design, construction, and installation of equipment. Also, the growing free market is likely injecting exposure to new technology and competition.
- While the majority of systems scored above the mid-point of 100-point scales, i.e., above 50 point[49] for system quality and effective functioning, the scores for financing and management were generally poor, with more than half of the sample communities scoring below the sustainability benchmark level of 50 points (see Figures 25 and 26).
- No proper financial system is in place in a majority of the sampled communities. Less than one third of the communities have established user fees. Even where if established, user fees are insufficient to cover costs of operation and maintenance, repairs, and future expansion of the system. Communities do very little or no financial planning for the future.
- Only ten communities out of 38 have established a water and sanitation committee. Systems are mostly managed by user groups that have very limited knowledge of operation, management and maintenance. Women's participation in decision making and management of the facilities is very low.

Emerging implications

The study pinpoints several key issues to consider during future planning, implementation and use of rural water supply services in Lao PDR.

- All the four factors - such as system quality, effective functioning, effective financing, and effective management - are essential and need to be studied to assess sustainability. As this study shows, even though all households in a village may have access, households do not



49 Possible maximum score for each component of sustainability is 100. Thus, for each of the four "factors" a maximum score of 100 is possible. These four "factor" scores are added together to give an overall sustainability score out of 400, in Figure 21.

always use their protected water source. In the assessment, more than three out of ten households did not use available protected water sources all the time. Simply counting the numbers of households having access to protected water supplies may camouflage use problems that need to be addressed.

- Approaches to community financing and community management need to be improved to ensure sustainability of rural water supply services. Overall, the technical quality and functioning of water supply systems were rated moderately high, showing improvements in technical sustainability over time.
- The score for *effective management* was low when the community did not establish a formal management committee. This was discussed in the national consultation workshop with partners. The discussion concluded that management options need to be offered together with the various technology options.
- Improvements in health, added convenience and cost efficiency in the delivery of improved water supplies were the key benefits identified by households about their improved water supplies. Both women and men mentioned benefits related to health and hygiene as important in their satisfaction with improved water supplies.

The study pinpointed many related issues on sanitation and hygiene:

- Examining the effective use and quality of latrines revealed valuable information about specific local hygiene behavior changes.
- Simply counting the number of latrines in each community leaves out the qualitative aspects of latrine improvements. Existence of a households latrine does not necessarily mean that the household members will use it effectively and keep it clean.
- The quality of construction, maintenance and use of latrines was not always correlated to the level of household income.
- Comfort and convenience are by far the main benefits reported by latrine users.
- No significant behavior change has occurred in terms of the disposal of infant feces. Regardless of the ownership of latrine facilities, families seem to think that a baby's feces are harmless and therefore continue with unhygienic disposal practices.

Conclusions

This assessment is a landmark for the rural water supply and sanitation sector in Lao PDR and for the country as a whole. Through in-depth participatory discussions with communities, local people have given valuable guidance for the future of RWSS services in Lao PDR regarding:

- the strengths and weaknesses of past rural water supply and sanitation initiatives in terms of achieving goals such as increased access, effective use and management of services, and community ability to sustain the services;
- how local partners (Nam Saat and its line agencies) can make their planning process dynamic, based upon continual learning about problems and successes;
- innovative ways of addressing problems from the viewpoints of user communities and primary beneficiaries; and
- how to operationalize highly participatory community-based models for conducting assessments of all types.

Box 25 What is associated with low or high sustainability?

Externally decided interventions – recipe for low sustainability? None sa-at, Champasak district

None sa-at is a village located about 60 kilometers from Champasak district of Champasak province. It has a population of 882 people with 173 households. The original source of water in the village was a large natural swamp. Until the early 1990s the village had four boreholes using Tara hand pumps that were provided by UNICEF. The four boreholes had been working quite well and were providing enough water for drinking and cooking purposes to the whole village.

In 1998, None sa-at was selected by an NGO as a focus village for an integrated rural development project. Assistance from the NGO provided, amongst other things, a rural piped water distribution system from a new borehole fitted with an electric pump. The scheme was constructed and supervised by the NGO project staff. Community members had very little involvement in the construction of the system, even though they had contributed labor and local materials.

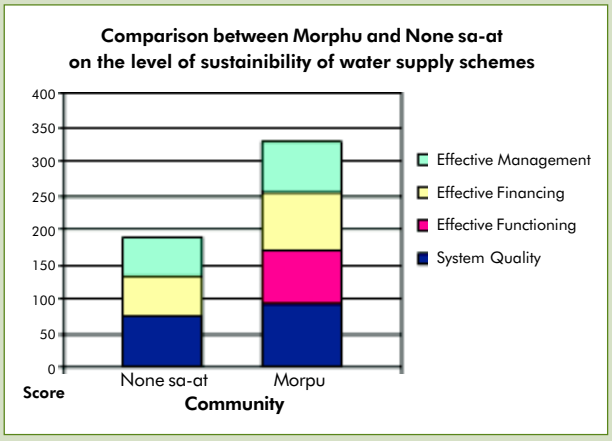
The system was run by two male villagers, who had been designated by the project to look after the operation, maintenance, and financing, which included billing and collection. The money collected was to cover minor repairs and part of it was used for remunerating the two workers. Collections went smoothly for the first year after construction. From the second year onward, however, there have been many defaulters, and as a result, fees collected did not cover the costs for repairs and remuneration. The community emphasized that the service provided did not fulfill their expectations, e.g., very often water was not available due to technical design problems of pump operation, or faults in the distribution system.

In April, 2001, the distribution pipes were broken up by a road construction company. Eight months later (December, 2001), the pipes had still not been repaired. No one knows who is responsible for getting the system repaired. Due to the lack of clarity about ownership of the facilities, and division of roles and responsibilities between village volunteers, the community, and Nam Saat, the villagers have returned to using water from the old Tara hand pumps and the traditional swamp.

During field visits by the study team, villagers said that that they are expecting the NGO project to come back and fix the water system.

Community voice and choice makes a difference - Morphu, Pathumphone district

Morphu is a village located in Pathumphone district, Champasak province. It has a total population of 1000 people in 174 households. In the early 1990s, Morphu received seventeen boreholes with Tara hand pumps from an external support agency. By the late 1990s, the wealth of the villagers had increased, and they proposed to construct a new piped water scheme with household connections.



In 2000, the villagers in collaboration with a private company constructed a new piped water system with an electrical pump. The private company had set the initial contribution for each household at KIP 700,000 (approx. US$80) plus household connection fees. A private company constructed the system, while the community supervised the works. The company covered 30 percent of the capital costs and will reclaim this investment through user fees.

After construction, the scheme was leased to the same private company to manage the system for five years. The company has set the user fees and hires villagers who were trained to become responsible for billing and repairs. The company is fully responsible for operation and maintenance of the scheme.

There have been no complaints about the services provided by the company, and there are no defaulters on the payment of bills.

As per the contract signed by villagers and the company, the villagers have the option to manage the system by themselves after five years of lease. However, there is a possibility that the private company could extend its management contract depending upon the community's satisfaction with its performance during the five years' lease.

MPA core team members in Lao PDR

Sonephet Chanthaphone, WASA

Kheuvanh Souphindara, Nam Saat

Ving Sengsirichanh, Nam Saat

Khonekeo Phongvichit, Nam Saat

Phousavanh Sisavath, Nam Saat

Keo Oudom Namsena, Nam Saat

Bolilak Duangsavanh, Youth Union

Dengsong Seunou, Care International

Vanthong Sengvilay, Save the Children - Australia

Sengpaseuth Simmanivong, Quaker Service Laos

Sisavanh Phanouvong, focal Point for MPA, WSP-EAP

Effects of the MPA on Gender Relations in the Community

Case study from Java, Indonesia

Christine van Wijk

In September 2000, a group of MPA practitioners carried out an MPA asssessment with the community members of Sewukan community in Magelang district, Java, Indonesia. The purpose was to assess the community's experiences with their existing water supplies before embarking on the design and construction of a new, additional system. Before their participation in the assessment, the women in Sewukan had met only to discuss social or religious events. Their participation in the evaluation of the existing water supplies in the community affected gender relations in several ways.

Value of women's knowledge recognized

Initially, the *kepala dusun* (sub-village head) considered the consultation of women on technical design and construction of the water systems a waste of time. He said that women knew nothing about such matters. However, his views and those of the other men changed when the group of women pointed out significant design errors such as too low a ratio of cement to sand in concrete mixing[50] and entry points for the water pipes being set too low in the reservoirs. The men's group had given only very general remarks such as lack of training. The experience led the *kepala dusun* to make, in that culture, an unusual remark in public that the women had brought out more useful technical observations than the men. When the men presented the outcomes in the plenary meeting (women and men alternated in presentations and the men started), they presented only the women's findings. This brought general hilarity, when a man in the audience asked: "But what about our findings?"

Gender-specific needs and demands brought out

The women's evaluation of the existing water systems also brought out two major women's needs for the new project: a better distribution of domestic water and the addition of a sanitation component to the project.

50 *Reportedly observed by women during the construction of the facility by the contractor hired by the Public Works Department.*

Because the community already had 11 small domestic water supply systems, the male leaders had assumed that there was no need for a twelfth. They had decided that the new water system would be designed for irrigation. The women's evaluation showed that, while all households had access to domestic water, the *distribution* of the water in the community was skewed. This finding emerged during the social mapping and rope rating in the different sections of the community. It was visualized in the social map by using coloured wool to mark off well served and underserved areas. In consequence, the village assembly in which the groups presented the map and the outcomes of the rope rating decided that the new system would be designed for domestic water use. They also decided to use the social map in the design of the distribution net.

A hot debate developed on the addition of a sanitation component. The women disliked the lack of privacy and the inconvenience of having to go out at night for defecation in the local streams. The men had no problems with that and thought private latrines were too expensive for them to install. However, during the discussion it became clear that the men had taken the costly public latrine at the mosque as the model for domestic facilities. The MPA team then provided the groups with pictures of different options for latrines and latrine materials. Calculating what each model would cost, the groups soon realized that they could build any type according to their preferences and ability to pay. The women furthermore came up with the suggestion that up to five households could build and share one together.

In the two days of the MPA event, this issue could not be resolved. However, the women had become conscious of their common demand and had united around the issue. Pressure to solve the problem will therefore quite likely continue until a satisfactory solution has been found.

Women examine a range of latrine designs and cost options

Awareness of common interests and emergence of gender cooperation

Through the MPA process, the women of Sewukan became aware that they had a number of common development problems irrespective of their differences in personal and socio-economic backgrounds. They said that, although they were organized and held women's meetings, they had not previously discussed women's development concerns. In the assembly where they presented their findings along with the men, they stated that they wanted to set up committees in each of the six hamlets to participate in the design of the new water supply and monitor the contractors on the quality of construction. The male leaders supported this idea stating that, when the work was not done well, they would use the legal means open to them to ensure good quality design and construction.

Building self-confidence and loosening hierarchy

In the group sessions, women and men had agreed to alternate in presenting their outcomes in the plenary meeting. Presenters acted in pairs of two women or men for mutual support. The event started very formally with the leaders opening the meeting using a hand-held microphone, which they passed on to the presenting teams. The first male team used it with skill and confidence. The first woman did not know how to use it and was helped by a man. The second woman closely observed this and handled the microphone with more confidence. Soon thereafter, discussions became so lively that the circle broke up, participants gathered around the outputs from the MPA tools and the microphone was forgotten. Asked later about whether they could continue to use the tools, the older women were doubtful. Suddenly, a young woman spoke up and said that maybe it was not possible for everyone but that she thought she could do so. The facilitator then consulted the older women who in this hierarchical society will normally lead while the young women sit back. Here again change could be noted. The older women said that perhaps they, too, could learn how to use them, but "meanwhile, let the younger women take the lead."

Women's team presenting their assessment results at the village meeting

Achieving Sustained Sanitation for the Poor[51]

MPA application for policy research studies in Indonesia, Cambodia, Vietnam

MPA assessments were carried out in selected communities in three East Asian countries, using a common set of sampling criteria, a common sequence of tools and methods of analysis. The purpose of the assessments was to identify what helps or hinders demands for sanitation facilities in rural communities, what contributes to sustaining sanitation services once created, and how to reach the poor with sustained sanitation services. All three studies were conducted by country teams trained and assisted technically by WSP-EAP, as a part of WSP-EAP's policy reform and sector strategy development work with country partners. The learning gained in each country was integrated with national sector strategies being developed.

51 The following country reports and a regional synthesis from the 3 countries are available from WSP - East Asia and the Pacific, or the WSP website www.wsp.org. Interested readers should look for the following titles:

1. *Achieving Sustained Sanitation for the Poor: Policy and Strategy Lessons from Participatory Assessments in Cambodia, Indonesia and Vietnam*. (WSP-EAP, 2001).
2. *"Is it selling toilets?" "No, A lifestyle"* (Indonesia country report). (WSP-EAP, 2000).
3. *Selling Sanitation: What Works?* (Vietnam country report). (WSP-EAP, 2002).
4. *Learning What Works for Sanitation: Revisiting Sanitation Successes in Cambodia* (Cambodia country report). (WSP-EAP, 2002).

Major findings and learning emerging from the studies

1. Sanitation coverage figures generally masked the fact that the poor households within communities, which constituted between 20-54 percent of all households in the sample villages in the three countries, are not gaining access to sanitation. Sanitation programs everywhere have tended to promote only one type of technology/design of facility at a fixed cost, and have not developed options specially suited to the poorer sections of communities.

2. Demand-responsive approaches are essential to increasing sustained access to sanitation, since sanitation facilities tend to have the characteristics of consumer products. Household latrines that people build at their own cost are of higher quality, prove more satisfying to their users and are maintained much better than latrines that are subsidized or provided free of charge.

3. Demand for and ownership of sanitation facilities are not synonymous with improved community sanitation behavior, i.e., consistent use of safe excreta disposal practices by all members of the household. A very high proportion of latrine-owning households continue to occasionally use unsafe, outdoor defecation practices.

4. "Health improvements" are not the most important motivating factor for people to acquire household latrines. Sanitation promotion methods currently in use are not utilizing other, locally prevalent motivations for acquiring sanitation improvements.

5. Women are markedly more interested in acquiring household latrines, but programs have not adequately targeted promotional activities to women.

6. Even though some key hygiene behaviors are universally important, their promotion methods need to be varied because risky hygiene practices take many different forms in different cultures and vary from one community to another. Communities usually know best what triggers behavior change among their members.

7. Time frames for sanitation projects need to be longer than 4-5 years, because measurable changes in community sanitation behavior only happen after a viable, self-sustaining market for sanitation services has developed, i.e., demand has been generated and supply mechanisms have grown to service the demand. Changes in community awareness of improved sanitation as a more desirable way of life also requires substantial population coverage to be generated – which takes time.

How Well did those Development Projects in Flores Work?

An evaluation of water and sanitation interventions made in 52 villages in Flores, Indonesia

Richard Hopkins

In December 1992, Flores island in the eastern portion of the Indonesian archipelago suffered a major earthquake and tidal wave. This event claimed several thousand lives and destroyed most of the existing, meager infrastructure. Some of the subsequent emergency relief efforts progressively evolved into, or gave way to, longer-term development projects. The water and sanitation sector was a priority.

One such project was the AusAID[52]-assisted Flores Water Supply and Sanitation Reconstruction and Development Project (FWSSRDP, later known as FLOWS). Others included the World Bank-assisted Water Supply and Sanitation for Low Income Communities (WSLIC) project, and smaller programs implemented by NGOs. About five years after the projects had been completed it was considered a good time to evaluate how well they had worked.

As a part of a national water and sanitation policy reform initiative, WASPOLA[53], it was originally envisaged to conduct a longitudinal study of

52 AusAID – the Australian Agency for International Development

53 WASPOLA – Indonesian Water Supply and Sanitation Policy Formulation and Action Planning Project, a partnership led by the Government of Indonesia with the National Planning Agency, BAPPENAS as chair, facilitated by the Water and Sanitation Program – East Asia and the Pacific (WSP-EAP), with majority grant funding by AusAID.

sustainability and use of water supply and environmental sanitation services in a small sample of sites over a period of several years. The MPA was the chosen basis for the evaluation methodology. It expanded into a much larger-scale assessment when AusAID expressed an interest in gaining a better appreciation of the current conditions of WSES[54] facilities and services across the island, particularly those constructed under FLOWS.

To ensure representativeness of the findings and conclusions, sampling of villages for assessment was undertaken with adequate rigor. A stratified random sample of 33 sites was drawn from an estimated total of 260, properly representing the projects, scheme size and type, districts, topographical and climate variations across the main island. For reasons of lack of access and non-functioning of some facilities in the sample, it was possible to complete the full MPA sustainability assessments in some 52 of these 63 villages. For the rest, key informants provided the information.

Within each village, sampling was also carefully undertaken to ensure that all groups, especially those traditionally marginalized – women and the poor – were included in the assessments. Within MPA there are specific techniques, which focus activities on groups that may not otherwise participate.

The approximate total direct costs for the study were: for the international consultants US$45,000, and for the national inputs US$105,000 equivalent.

The outcomes of the assessment provide rich insights, mostly from the perspective of the end-users, for stakeholders at many levels:

- the beneficiary communities themselves;
- local governments and support agencies close to the communities;
- policymakers and decision makers in higher levels of government; and
- external support agencies (donors funding project/s).

Some key findings from the evaluation are highlighted here.

1. **Did aid work?** (More precisely, were the investments still providing benefits?) Of the completed water supply schemes, almost all were still functioning to some degree, three to eight years after construction. It was the communities themselves that kept the schemes operating, with minor maintenance and repairs. However, service levels had fallen seriously at more than half the sites, and 22 percent of the systems were providing little or no water for more than three months of the year.

   Similarly in the area of sanitation, those toilets which had actually been constructed and were working during the projects, were almost all still functional. The distribution of toilets between and within villages was very uneven. The percentage of households with toilets ranged from 6 to 100 percent in different villages, reflecting wide inconsistencies in project approaches or in their application.

2. **Did aid work for the poor?** (Was the distribution of benefits equitable, and has it remained so?) The access to improved water supplies was still rated as "good"[55] by the users in 85 percent of villages, although in only 40

54 Water Supply and Environmental Sanitation (human waste, solid waste and drainage).

55 According to users "good" was a relative concept, only meaning that access was "better than before the project", when they used to have to walk to water sources much farther away.

percent was that access considered equally good for all households. While there was no evidence of systematic exclusion of the poor, the adequacy of water was generally less good for this group. Three to eight years after construction, one-third of all the systems were meeting the needs for drinking and cooking only; for all other needs households had to rely on other sources. Half the schemes were able to supply water 24-hours per day all year round. For the remainder, reliability and predictability were seasonal, and seriously problematic in 27 percent of all villages in the dry season. Interestingly, these problems were not correlated with source difficulties, or with ecological conditions, but were related to technical issues of design, quality of materials and construction.

More than half the water supply schemes had been modified from their original project designs; most of the modifications were to the distribution network, and almost all of those involved house connections from the piped network. As the systems were designed for communal standpipes only, take-offs for house connections affected flows in the rest of the network. Elsewhere, plastic hoses were used to make informal house connections and extensions to the distribution network, though mostly for the rich and middle-income households. These adaptations are clear indicators of:

- Poor consultation with end-users during the design stage of the schemes; and
- Inequitable capturing of benefits by certain sections of the community, usually the wealthier and the powerful.

Where public standpipes were functioning, some curious restrictions had been imposed on their use, ostensibly for hygiene-related purposes. These "rules" (see Box 26) forbade the washing of babies and clothes in the vicinity of the taps. Their origin and rationale were unclear (possibly to limit consumption, or to ameliorate drainage problems; if so neither result was effectively achieved by such rules) but the burden was felt mostly by those without house connections, i.e., the poor.

Access to toilets was improved by the projects, but was extremely variable, as noted above. Self-financed toilets accounted for high proportions of facilities in some regions. Almost all toilets were used, but this did not mean that behavioral changes had been achieved. Three-quarters of all adults and children (all age and gender groups) still defecated in other places at times.

3. **High rate of aborted projects, mainly due to social conflicts.** In 13 percent of the sample villages water supply schemes were never constructed, even though communities contributed cash and labor. Social conflict was

Box 26 Project "rule" discouraging hygiene?

Hygiene knowledge and perceptions regarding behavioral change were evaluated with representative groups of women and men villagers using the three-pile sorting (PHAST) activity. An interesting result was that washing children at public taps was classified by the community as a "bad practice." This is actually a good healthy practice, especially in dry areas, as prevention against skin and eye infections, amongst others, and it also reduces the workload of women and girls. If this project-imposed rule was aimed at eliminating drainage problems around public taps, it has failed to achieve this outcome. In a high proportion of the public taps still functioning, drainage problems continue to constitute a significant health risk.

the major reason, especially concerning the sharing of water resources. The projects had no particular mechanisms to deal with this important determinant of sustainability, neither in brokering agreements nor in facilitating alternative supply options in the absence of reasonable agreements. The more ambitious schemes were more likely to expose conflicts, and conflicts tended to be more severe in drier areas, where the competition for scarce resources, especially during the dry season, was more pronounced.

4. **A few made the decisions for many.** All the sampled projects were designed around participatory, community-based approaches. But in implementation, ordinary villagers (both men and women) had little say in the key project decisions. They had participated in 10 percent or fewer decisions about project initiation, choice of technology or level of service; in 19 percent of the decisions regarding locations for facilities; in 26 percent of the decisions about operation and maintenance arrangements, and less than half the decisions regarding the selection of committee members and financing arrangements. These matters were typically decided by project staff with the village elite or with community leaders.

   Where project planning had been more inclusive of both women and men, and of the poor households, water systems were significantly better sustained and used (see Figure 27 for correlations found).

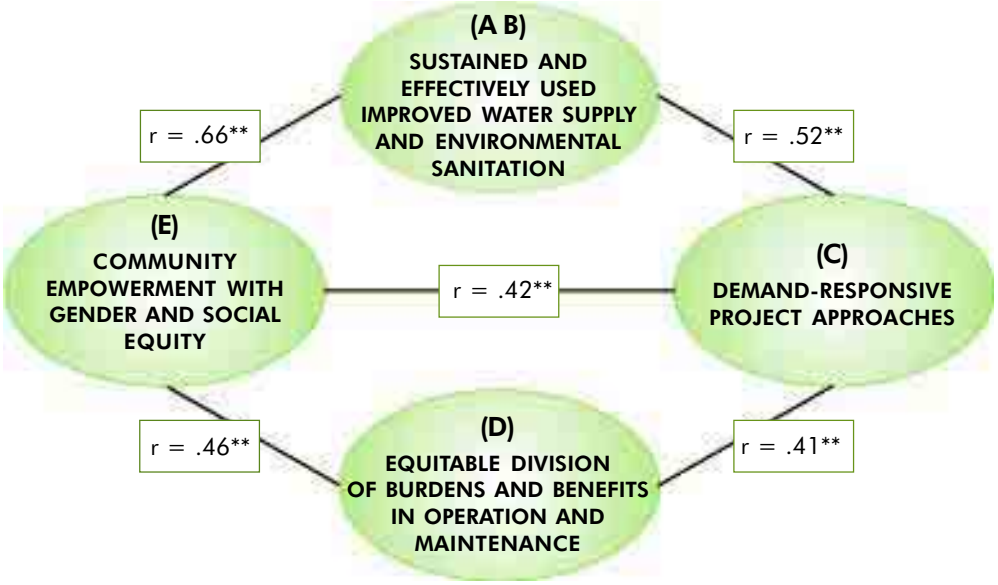
5. **Financial sustainability threatened.** Regular user payments do not cover full recurrent costs (operation and maintenance, repairs, plus depreciation) for water supplies in any of the sampled villages. 59 percent of communities have major shortfalls in covering just operational costs. Similar to the trend seen in determining contributions towards capital costs, almost all villages had set fixed water user charges for all consumers (flat rates per capita or per household) irrespective of economic means and lifestyles. Where these water user fees are actually collected, the flat rate disadvantages the poor, who tend to consume less water, but for whom the water tariff represents a greater proportion of their income. This inequity likely reflects their lack of participation in decision making as mentioned earlier.

6. **What makes for better management?** Only 31 percent of the communities still have active Water Management Organizations (WMOs) three to eight years after project completion. Those with higher proportions of women are more active. More equitable (gender and poverty inclusive) WMOs are associated with better performing services, more effective management and better cost recovery from user payments. These relationships are statistically significant (see Figure 27). The quality of local management was the most important group of factors correlated with sustainability outcomes. The communities which had better management arrangements (equitable control, setting own rules, accounting to users for services and financial issues) also tended to have better functioning and more regularly and universally paid-for services, although the level of financing was not optimal.

Emerging lessons for agency policy and practice

The findings point clearly towards the following conclusions and lessons for future projects:

Figure 27 Correlations between project approaches and sustainability and use of services on the ground.



*** - Significant at 99% level of confidence*

- The greater the gender and social equity achieved in community empowerment for operation and management (cluster E), the better the services are sustained and used (cluster A B).
- The more responsive the project approaches are to demands of different gender and socio-economic groups of users (cluster C), the better the services are sustained and used. (Cluster A B).
- The more responsive the project approaches are to demands of different gender and socio-economic groups of users (cluster C), the greater the community empowerment with gender and social equity (cluster E).
- The greater the demand-responsiveness of the project (cluster C) and the greater the equity in community empowerment achieved (cluster E), the greater the gender and social equity achieved in division of burdens and benefits during operation and maintenance (cluster D). In other words, a fair division of burdens and benefits happens in the post-construction phase, when project approaches in the pre-construction/planning phase have been responsive to what different user groups want. This also happens when projects have empowered different gender and social class groups equitably with voice in decisions, control over implementation and capacity building for service management.

For poverty reduction impact, equity needs to be addressed as a specific cross-cutting issue, not only as general policy but also within the details of implementation strategies. Failure to do so tends to result in the poor not gaining proportionally fair shares of development benefits, which in turn threatens sustainability of the interventions made in the long run. For example, the findings are clear that poor women and men within the user communities are rarely involved in deciding the technology type, levels of service and locations of facilities – all of which determine their ultimate access to services. If they could be better involved and afforded greater voice and choice, fairer decisions, which are more acceptable to the majority, could be reached, about contributions, tariffs and operation and maintenance arrangements. This would minimize later conflicts

and refusals to pay. In designing project strategies, it would therefore be cost-effective to allocate resources, skills and time for *engaging communities equitably* in early planning and decision making, along with providing them *equitable access* to relevant information for making decisions. This will help communities plan more realistically, especially in terms of:

- The scope and complexity of water supply schemes attempted, and
- The arrangements for sharing water resources with others.

- **Equality is not equitable. Nor are communities necessarily egalitarian.** Project rules, or rules set by community leaders which stipulate equal contributions by all households to capital or operating costs actually disadvantage the poor, particularly when the poor have little voice in community decisions.

- **Equitable gender and socially inclusive community level management organizations are a key to sustained services.** For long-term functioning and financial sustainability of services, it is necessary that projects help establish such organizations, through gender- and poverty-sensitive planning and capacity building. This is important enough to be a stated project objective, against which project performance should be judged.

- **Water supply scheme designs need to reconcile technically and environmentally feasible solutions with user community demands.** For instance, problems such as inadequate source flows cannot be overcome by project engineers setting arbitrary limits on the technical options and levels of service, when the majority of users want house connections. The only sustainable solution in such cases is for the user community to make properly informed choices about technical options and levels of service that the source can sustain, and to set tariffs to reflect the real costs of those choices.

- **Technically, water supply systems need to be realistic in terms of distribution of small source flows** (which need to be measured at minimum dry-season levels) and complexity of operations. It is the project's responsibility to advise communities so that their expectations are guided by the limits of technical feasibility. Compromises in quality of materials and construction due to over-ambitious schemes can then be avoided. It is better to meet the reasonable demands of fewer people within single independent schemes, if necessary having several independent schemes serving an area, rather than complex schemes spread over several villages.

At the policy level, the study confirms the general thrust of the new Indonesian sector policy, with its emphasis on sustainability and effective use, and the application of demand-responsive approaches through participatory methods.

Appendix A

Institutions that currently have MPA-trained facilitators

** Also have MPA trainers*

EAST ASIA

INDONESIA

- **Water and Sanitation Program - East Asia and the Pacific**
  Regional Office*
  Jakarta Stock Exchange Building
  Tower 2, 13th floor
  Jl. Jenderal Sudirman Kav. 52-53, SCBD
  Jakarta 12190, Indonesia
  Phone : 62-21 5299-3003
  Fax : 62-21 5299-3004
  Telex : 62141 IBRD IA
  E-mail : wspeap@worldbank.org
  Website : http://www.wsp.org

- **Pradipta Paramitha***
  Jl. Putri no. 19,
  Guntur - Manggarai
  Jakarta 12970, Indonesia
  Telefax : 62-21 831 2216
  E-mail : pradta@lycos.com

- **Mitra Samya***
  Jl. Sultan Salahuddin no. 17
  Tanjung Karang, Ampenan
  Lombok - NTB 83151, Indonesia
  Telefax : 62-370 624 232
  E-mail : mitra@mataram.wasantara.net.id

- **Dian Desa**
  Jl. Kaliurang Km. 7, Jurugsari
  P.O. Box 19 Bulaksumur
  Yogyakarta, Indonesia
  Phone : 62-274 885 247
  Fax : 62-274 885 423
  E-mail : anton@yogya.wasantara.net.id

- **Catra Darani**
  Jl. Pangkalan Jati IV/60E
  Jatiwaringin
  Jakarta Timur, Indonesia
  Phone : 62-21 857 2359
  E-mail : catradarani@hotmail.com

LAO PDR

- **Water and Sanitation Program - East Asia and the Pacific**
  Lao PDR country office*
  The World Bank
  Pathou Xay
  Vientiane, Lao PDR
  Phone : 856-21 415 729,
  856-21 413 710,
  856-21 450 014
  Fax : 856-21 450 015

- **Nam Saat - National Centre for Environmental Health and Water Supply***
  Ministry of Public Health
  Junchong That Luangond Nangbond Roads
  Vientiane, Lao PDR
  Phone : 856-21 415 726,
  856-21 450 130,
  856-21 450 126
  Fax : 856-21 413 310
  E-mail : soutch@laotel.com

VIETNAM

- **Water and Sanitation Program - East Asia and the Pacific**
  Vietnam country office*
  c/o The World Bank Resident Mission
  63 Ly Thai To Street
  Hanoi, Vietnam
  Phone : 84-4 934-6600
  Telefax : 84-4 934-6597

- **ADCOM Co., Ltd**
  No. 1 B1A, 25 Lang Ha Street, Ba Dinh
  Hanoi, Vietnam
  Phone : 84-4 514 2352
  Fax : 84-4 514 1157
  E-mail : adcom_info@hn.vnn.vn

CAMBODIA*

- **Partners for Development**
  No. 24, Street 294 (B.P.551)
  Phnom Penh - Kingdom of Cambodia
  Phone : 855 23 213 335
  Fax : 855 23 213 275

THE PHILIPPINES

- **Philippine Center for Water and Sanitation ITN Foundation**
  P-3 Minnesota Mansion 267,
  Ermin Garcia Street
  Cubao Quezon City, the Philippines
  Phone : +63 2 9120531
  Fax : +63 2 9115783
  E-mail : itnphil@compass.com.ph
  Website : http://www.itnphil.org.ph

SOUTH ASIA

INDIA

- **Socio Economic Unit Foundation***
  Easwara Vilasm Road,
  Post Box No. 507,
  Thycaud, Trivandrum - 14,
  Kerala - 695 014, India
  Phone : +91-471 325 907
  Fax : +91-471 325 914
  E-mail : seuf@md2.vsnl.net.in
  trc_seuftcr@sancharnet.in

NEPAL

- **NEWAH - Nepal Water for Health**
  P.O. Box 4231
  Baluwatar Kathmandhu, Nepal
  Phone : +977 1 377 107
  Fax : +977 1 370078
  E-mail : newah@newah.org.np

EUROPE

- **IRC International Water and Sanitation Centre***
  P.O. Box 2869
  2601 CW Delft
  The Netherlands
  Tel : +31 15 21 92 957
  Fax : +31 15 21 90 955
  Website : http://www.irc.nl

AFRICA

- **Water and Sanitation Program - Africa***
  West and Central Africa office
  Corner of Booker Washington and
  Jacques Aka Streets
  Cocody, Abidjan 01, Côte d'Ivoire
  Phone : 225 22-40-04-00,
  225 22-40-04-10
  Telefax : 225 22-40-04-61

- **Institute of Water and Sanitation Development***
  Maasdoop Avenue, Alexandra Park, Harare
  Box MP 422 Mount Pleasant
  Harare, Zimbabwe
  Phone : +4 250-522
  Fax : +263 4 735 017, 735 026,
  735 035, 250 522
  E-mail : admin@iwsd.co.zw
  Website : http://www.iwsd.co.zw

- **NETWAS - Network for Water and Sanitation**
  Plot no. 1, Norfolk Gardens, Lower Kyambogo
  P.O. Box 40223
  Kampala, Uganda
  Tel/fax : 256-041 286 352
  E-mail : netwas@swiftuganda.com; or
  netwas@africaonline.co.ug

LATIN AMERICA

COLUMBIA

- **CINARA***
  AA 25157
  Ciudad Universitaria Melendez, edificio 344,
  Cali, Columbia
  Phone : 57-2 339 23 45
  57-2 321 22 90
  Fax : 57-2 339 32 89
  E-mail : cinarauv@univalle.edu.co
  Website : http://www.cinara.org.co

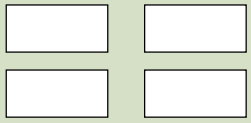
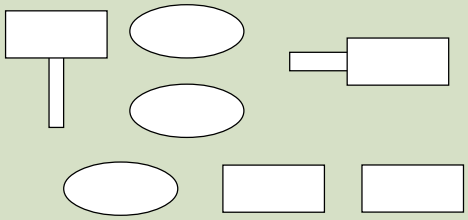
BRAZIL

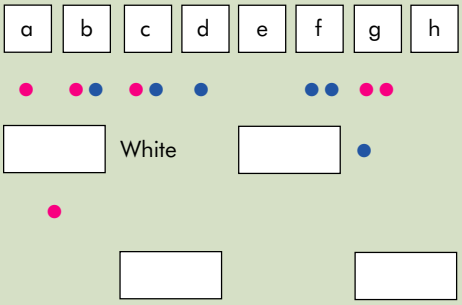
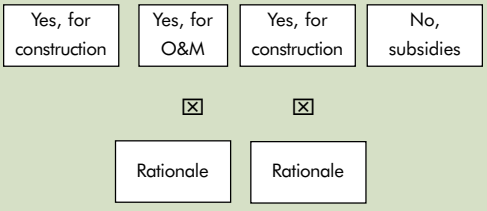
- *Contact* **Maria Lucia Cr. Borba**
  Rua Jose Guardiano
  Parque Primavera
  0632-190 Carapicuiba,
  Sao Paulo, Brazil
  Phone : +55 11 4186 0841
  E-mail : maluborba@yahoo.com

Appendix B

Process designed for PLA POLICY ASSESSMENT WORKSHOP

Indonesia, September 1999

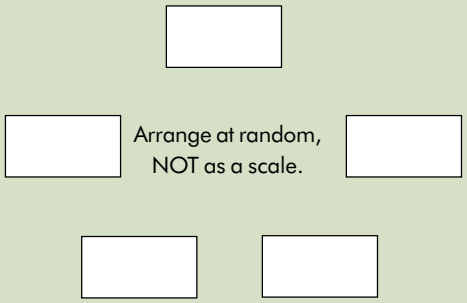
Step No.	Process	Explanatory Notes
1.	PLA Background – Policy Assessment – NOT an evaluation of projects (5 minutes)	Lead facilitator to explain.
2.	"Whose Voice ? Whose Choice ? " Film (10 minutes)	
3.	Feedback from field assessments (10 minutes)	By research team. Highlighting lessons learned from assessments in several projects which are relevant to national sector policy and having implications for policy changes, with a view to sustainability and impact on lives of the poor.
4.	*Ask participants to consider* : "What do you recall about the projects? Were they any different from other WATSAN projects you had worked with at that time? If yes, in what ways?"	2 Facilitators write-up answers that emerge from participants on WHITE cards, put up on the wall. Check if DRA/GENDER/PARTICIPATORY APPROACHES/SUSTAINABILITY mentioned at all.
5.	Put up 4 cards on policies , from Fieldbook scale on definition of : SUSTAINABILITY in sector policies at the time of project design and inception. Use a random order and placing for cards, not on a scale. Ask *"Which situation best describes the policies used to design projects?"* Let individuals vote their answers on the cards using given voting tokens. If anyone is unable to decide from among the cards, give them OVAL cards, BLUE (WSSLIC) / PINK (FLOWS) to write their reasons. Put them up too. Facilitate a discussion in plenary to probe the rationale for the way people voted. Either record the distribution of votes over scores, or see if a consensus can be reached about a score for the national policy. Help the participants draw conclusions related to action needed.	 Give ▲- shaped tokens for voting to each person. BLUE token for WSSLIC. PINK token for FLOWS.
6.	*Ask "How were coverage and use targets defined in defined in project design?"* Ask project-specific groups to discuss and select their response out of the 4 A-4 sheets carrying different scores and explanations from the scale on EQUITY , put up on the wall/board/sticky cloth. If unable to choose, give BLUE / PINK (WSSLIC/ FLOWS) oval cards to write reasons.. Project groups decide and put 1 rectangular vote next to the relevant A-4 sheet on the wall. Facilitate discussion on emerging consensus/lack of it - reasons and insights gained.	 Give different answers with different shape of cards. Record salient learning emerging along with score given.

Step No.	Process	Explanatory Notes
7.	*Ask "Were users expected to contribute in any way for the services?"* Let individuals mark their responses for contribution in different phases (Construction/O&M/ Any other) on a chart as shown on the right. Give out copies of the scale on COST SHARING & MANAGEMENT. Ask for each project group to decide where that project fits on it. Give each project group one ® BLUE / PINK arrow to place on the scale arranged on the wall/ cloth / board. Facilitate discussion on emerging consensus/lack of it - reasons and insights gained.	Let people vote on scale. Give colored tokens to each person, to put on this table.  Then give 1 arrow to each group. They should place it on scale.  Record salient learning emerging along with score given.
8.	*Ask "On which aspects could future user decide or co-decide?"* Project sub-groups discuss and mark their responses with BLUE/PINK votes for : a. Initiating services b. Technology choice c. Level of service choice d. Location of facility e. Implementing agency f. Local maintenance/management system g. Local financing system/fees h. Any other (specify) Then they choose the score on the policy scale for PARTICIPATION IN DECISIONS. Mark it with CIRCLE vote in BLUE / PINK. Facilitate discussion on emerging consensus/lack of it - reasons and insights gained.	 Record salient learning emerging along with score given.
9.	Ask "Was the government giving any subsidies to these services?" Put up chart as shown. Ask for project groups to mark their response by adding a cross (x) where relevant. Score according to principle of increasing score for declining subsidies, as : *Yes, to investment and O&M costs - score 1* *Yes, to O&M costs - score 2* *Yes, to investment costs - score 3* *No subsidies - score 4* *Then ask: "What was the rationale behind the subsidies? How did this influence sustainability of project outcomes?"* Discuss and conclude implications for policy.	 Explanation by the groups

<table>
<tr><th>Step No.</th><th>Process</th><th>Explanatory Notes</th></tr>
<tr><td>10.</td><td>Put up scale statements on “FINANCING STRATEGY FOR THE POOR”
Ask
“Which is the statement you most agree with?”

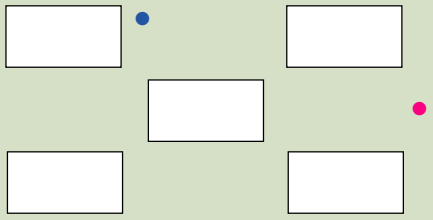
“Which statement best describes the policy in place at the time of creating WSS services under projects?”

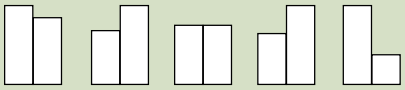
Ask about what happened as a result, in each project. Facilitate discussions on what implications can be drawn about how to improve access of the poor to <u>sustained</u> services.

Record conclusions.</td><td> 

Individuals to vote using BLUE/PINK tokens for specific projects. Scores are then added to show the gradation.</td></tr>
<tr><td>11.</td><td>Put up 5 statements from the scale on PRESENCE AND DEFINITION OF GENDER in the project, on 5 cards as shown on the left. Ask :
“Which statement best describes the policy in place at the time of establishing WSS services in projects?”

Groups discuss and each group puts 1 vote on the wall, using BLUE/PINK circles, next to the statement that best fits the answer.

Scores for statements are then placed on the cards. Discussion is facilitated on selected statements, their scores and rationale for the selection.</td><td>  </td></tr>
<tr><td>12.</td><td>Present all final scores to plenary on chart (which was gradually built up during the workshop). Ask which areas are most in need of sector policy reform. (Get them to discuss in 4 small groups of mixed project / non-project. Groups give their ranking to plenary, with rationale). Each group reports on flipchart with the following format :

<table><tr><th>Ranks</th><th>Policy Area</th><th>Rationale</th></tr><tr><td>1</td><td></td><td></td></tr><tr><td>2</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td></tr><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></td></tr><tr><td>6</td><td></td><td></td></tr><tr><td>7</td><td></td><td></td></tr></table></td><td> 

Ensure clarifications of why they say so.

If there is consensus about areas with the lowest scores, facilitate discussion about obstacles to policy changes therein, and what can be done at policy-makers’ level to improve the situation.

For areas which look like strengths, discuss how they could be utilized to improve the weak areas.

Record and distribute final conclusions along with final consolidated scores.</td></tr>
</table>

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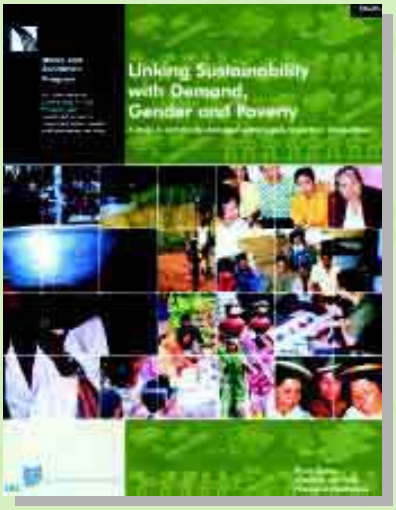
The original Metguide, 2000

Information flyer, 2000



15 - Country study report, 2001

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Water and Sanitation Program
Water Supply and Sanitation
World Bank
1818 H Street, N.W.
Washington, D.C. 20433
Phone: +1 (202) 473-9785
Fax: +1 (202) 522-3313, 522-3228
E-mail: info@wsp.org
Web site: www.wsp.org

IRC International Water and Sanitation Centre
PO Box 2869, 2601 CW Delft
The Netherlands

Telephone: +31 (0) 15 291 2939
Fax: +31 (0) 15 219 0955
E-mail: general@irc.nl
Website: http://www.irc.nl

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