TABLE OF CONTENTS

LIST OF BOXES

LIST OF TABLES

ACRONYMS

CAS	Country assistance strategy
CIDA	Canadian International Development Agency
CTF	Consultant trust fund
CTFP	Consultant Trust Fund Program
CWSSP	Community Water Supply and Sanitation Project
DANIDA	Danish International Development Agency
DGIS	Directorate-General for International Cooperation
FINNIDA	Finnish International Development Agency
GAP	Gender Analysis and Policy (group)
IDA	International Development Association
ILO	International Labour Office
INSTRAW	United Nations International Research and Training Institute for the Advancement of Women
IRC	International Reference Centre for Community Water Supply and Sanitation
ISW	International Secretariat for Water
IWTC	International Women's Tribune Center
JAKPAS	Janta Ko Khane Pani Ra Safai Karyakram
KAP	Knowledge, attitudes, and practices
KWAHO	Kenya Water for Health Organization
M&E	Monitoring and evaluation
NGO	Nongovernmental organization
NORAD	Norwegian Agency for Development Cooperation
NRM	Natural resources management
NRSP	National Rural Sanitation Program
O&M	Operation and maintenance
PHED	Public Health and Engineering Department
PROWWESS	Promotion of the Role of Women in Water and Environmental Sanitation Services
RGA	Rapid gender analysis
RWSS	Rural Water Supply and Sanitation Program
SARAR	Self-esteem, Associative strengths, Resourcefulness, Action planning, and responsibility
SIDA	Swedish International Development Cooperation Agency
SWACH	Integrated Sanitation, Water, and Community Health project
TWUWS	Water and Sanitation Division, Transportation, Water and Urban Development Department
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNDTCD	United Nations Department of Technical Cooperation and Development
UNICEF	United Nations Children Fund
UNIFEM	United Nations Development Fund for Women
USAID	U.S. Agency for International Development
VLOM	Village-level operation and maintenance
WASH	Water and Sanitation for Health
WHO	World Health Organization
WID	Women in Development

FOREWORD

More than one billion people in developing countries lack access to safe water and nearly two billion do not have adequate sanitation. Where clean water is available, it is often located at quite a distance from the household; the poor, usually women and girls, spend long hours collecting it—time that might have been spent more productively. Water and sanitation–related diseases lead to higher health costs, lost wages, and lower productivity.

Successful strategies for designing and implementing policies, programs, and projects in the water and sanitation sector now rely on demand-driven, participatory approaches rather than supply-driven, blueprint approaches. Such strategies require the active participation of both men and women at all stages of the project cycle.

Thanks to efforts ranging from the International Drinking Water Supply and Sanitation Decade (1981–90) to the Fourth World Conference for Women at Beijing in September 1995, women are now widely recognized as playing a central part in the water and sanitation sector. The design of programs, however, still does not sufficiently reflect this pivotal role. One reason is that practitioners often lack the tools and know-how for integrating gender perspectives in their work. This toolkit on gender in the water and sanitation sector has been prepared to respond to this need.

The toolkit comprises ready-to-use material designed expressly for World Bank task managers working in the water and sanitation sector. It presents a range of tools for gender analysis and practical "how-to" strategies collected from program and project experience around the world. It is one of a series of toolkits being designed to assist task managers in improving project performance by incorporating gender into their work.

This first edition will be tested for its usefulness in all Regions. It will then be revised to incorporate lessons learned, as well as new developments and issues, regional perspectives, and additional examples of good practice.

We are confident that staff in the Bank who are grappling with the day-to-day issues of gender-sensitive programming in the water and sanitation sector will find the toolkit useful and applicable in their work. To increase its value in the future, we would welcome users' feedback and suggestions. Please send them to Monica Fong, Gender Analysis and Policy/Group Poverty and Social Policy Department (GAP/PSP), or Wendy Wakeman, Water and Sanitation Division, Transportation, Water, and Urban Development Department (TWUWS).

Ismail Serageldin
Vice President
Environmentally Sustainable Development

Armeane Choksi
Vice President
Human Capital Development

ACKNOWLEDGMENTS

This toolkit was prepared by Monica S. Fong, Wendy Wakeman and Anjana Bhushan under the overall guidance of Minh Chau Nguyen, Cecilia Valdivieso (PSP), Bruce Gross and John Briscoe (TWUWS). The toolkit reflects advice given by a Bankwide consultative focus group guiding its preparation and the many thoughtful comments and contributions made by water and sanitation and gender staff across the Bank, in particular Michael Bamberger, Fathi Ben-Slimane, Gianni Brizzi, Chantal Dejou, Lea Donaldson, Karen Jacob, Vijay Jagannathan, Karl Kleiner, Dominique Lallement, Anthony Graeme Lee, Xavier Legrain, Alain Locussol, Andrew Macoun, Patricio Marquez, Andrew Mason, Rose Mulama, Josette Murphy, Erdogan Pancaroglu, Lars Rasmusson, Robert Roche, John A. Roome, Maria Teresa Serra, Najma Siddiqi, Anthony Van Vugt, Richard Verspyck and Julie Viloria. The toolkit was edited by Pamela Cubberly. Stella David and Zisa Lubarow-Walton provided word-processing and graphics support. The design and layout were done by Kathy Rosen.

The production of the toolkit was made possible through a grant provided by the Norwegian Ministry of Foreign Affairs, which has given strong support to the water and sanitation sector and to integrating gender issues in the Bank's work.

CHAPTER I: PURPOSE OF TOOLKIT

Despite increased gender awareness, well-documented research findings, and the availability of much more information on women's and men's roles in water and sanitation, gender is not yet mainstreamed into the World Bank's work in this sector. Bank task managers frequently lack practical tools to incorporate gender issues into water and sanitation programs and projects. This toolkit is designed to help fill that gap.

No single strategy or package can cover the many different situations that exist across countries. Instead, this toolkit shows *why* attention to gender is important and *how* such attention can be ensured. The toolkit is meant to familiarize Bank staff with some of the strategies and methodologies that are of practical use in introducing gender perspectives when working in the water and sanitation sector. To do so, the toolkit distills lessons from project and sector work experience and draws on examples of successful strategies, interventions, and promising approaches. It also helps identify resources available to task managers working in this sector. For the toolkit to best serve its purpose, however, task managers should at the same time consult two sourcebooks, the *Gender Issues Sourcebook for Water and Sanitation Projects* and *World Bank Participation Sourcebook.*[1] These resources contain checklists, sample questionnaires, and other detailed information on how to use some of the strategies and techniques introduced in the toolkit.

Organization of Toolkit

The toolkit starts in *Chapter II* by presenting the rationale for considering gender issues in water and sanitation. *Chapter III* brings together ten salient lessons learned from experience in the sector around the world and illustrates these lessons with concrete examples. The chapter discusses what has and has not worked as well as problems encountered and solutions found. *Chapter IV* then illustrates good practice in more detail in country case studies of Bank projects in the sector that have utilized effective gender strategies. *Chapter V* highlights some prominent agencies—international, bilateral, governmental, and nongovernmental—and Bank staff that constitute useful resources to which task managers can turn for expertise and advice on gender issues in water and sanitation. Because incorporating gender can entail costs for which funds have not been budgeted, *Chapter VI* lists additional financial resources that are available within the Bank for task managers to tap. *Chapter VII* presents samples of general terms of reference for gender experts hired at various stages of the project or business cycle. Task managers can adapt these to suit the particular country context in which they work.. For task managers who want to delve further into the subject, *Chapter VIII* furnishes a list of useful publications, all of

[1] W. Wakeman, 1995, *Gender Issues Sourcebook for Water and Sanitation Projects,* United Nations Development Programme/World Bank Water and Sanitation Program, Washington, D.C.; World Bank, 1996, *World Bank Participation Sourcebook,* Environmentally Sustainable Development Vice Presidency, Washington, D.C.

which are available in World Bank libraries. Finally, examples of interactive exercises that constitute learning tools are given in *Chapter IX*. These can be used in a variety of ways. For instance, they are useful in conducting meetings of project staff and participants to analyze local gender issues in water and sanitation and to reach decisions that reflect the voice of the entire community on project activities. The table in *Appendix 1* lists past and present World Bank projects in water and sanitation that include gender perspectives. *Appendix 2* reproduces a selection of key articles that provide task managers with succinct discussions of recent thinking concerning gender in water and sanitation, especially as it relates to increasing the sustainability of projects. *Appendix 3* contains a Power Point slide presentation giving an overview of gender issues in water and sanitation and outlining the main issues covered in this toolkit. Task managers can use this presentation to help build consensus for attention to gender in water and sanitation policy, programs, and projects.

CHAPTER II: GENDER ISSUES IN THE WATER AND SANITATION SECTOR

Incorporating gender and other social issues in projects has been shown to improve project performance and facilitate achievement of the Bank's goal of poverty reduction. Successful strategies for designing and implementing policies, programs, and projects in the water and sanitation sector now rely on demand-driven, participatory approaches rather than supply-driven, blueprint approaches.[2]

A. What is Gender?

In all societies men and women play different roles, have different needs, and face different constraints. *Gender roles* differ from the *biological roles* of men and women, although they may overlap in nearly all societies. Gender roles are socially constructed. They demarcate responsibilities between men and women, social and economic activities, access to resources, and decisionmaking authority. Biological roles are fixed, but gender roles can and do change with social, economic, and technological change. Social factors underlie and support gender-based disparities. These factors include:

- *Institutional arrangements* that create and reinforce gender-based constraints or, conversely, foster an environment in which gender disparities can be reduced
- *The formal legal system* that reinforces customs and practice giving women inferior legal status in many countries
- *Sociocultural attitudes and ethnic and class/caste-based obligations* that determine men's and women's roles, responsibilities, and decisionmaking functions
- *Religious beliefs and practices* that limit women's mobility, social contact, access to resources, and the types of activities they can pursue.

B. What is Gender Analysis?

At its simplest, gender analysis is *seeing what our eyes have been trained not to see*. It is asking questions about the differences between men's and women's activities, roles, and resources to identify their developmental needs. Assessing these differences makes it possible to determine men's and women's constraints and opportunities within the water and sanitation sector. Gender analysis can help ensure provision of services that are needed by men and women and are appropriate to their circumstances. This requires understanding men's and women's roles in the sector by analyzing quantitative and qualitative information about their *activities, resources and constraints,* and *benefits and incentives.*

---

[2] For a brief distinction between the conventional "blueprint" approach and the newer "learning" approach, see lesson 6. Also see D. Narayan-Parker, 1989, *PEGESUS: A Planning and Evaluation Framework in Partnership with People*, Technical Series, PROWWESS/United Nations Development Programme, New York.

C. Principles of Sound Water and Sanitation Management

An understanding of gender issues now informs statements made at international gatherings on water and sanitation, such as the 1992 Dublin International Conference on Water and the Environment. Among the four guiding principles set forth there, gender issues are explicit in principle number 3 and are also relevant to operationalizing the other three. The four principles are:

> *Principle No. 1:* Fresh water is a finite and vulnerable resource, essential to sustaining life, development, and the environment.
>
> *Principle No. 2:* Water development and management should be based on a participatory approach, involving users, planners, and policymakers at all levels.
>
> *Principle No. 3:* Women play a central part in the provision, management, and safeguarding of water.
>
> *Principle No. 4:* Water has an economic value in all its competing uses and should be recognized as an economic good.

Some of the gender-related aspects of these principles are briefly discussed below.

One of the first principles in sound water and sanitation management is that *water should be managed as an economic as well as a social good.*[3] When analyzing *water as an economic good*, gender analysis can be informative. It is important to note the gender differentials in activities, resources, and benefits of household water use. As women and girls are often primary users of water facilities, determining what kinds of services they—as well as men—prefer will be essential. In parts of Ghana, for example, water is seen as the women's responsibility; in some families, women are expected to pay the pump tariffs[4]. Knowing what is women's willingness to pay, therefore, is crucial. Women's preferences regarding sanitation facilities need to be known as well, if projects are to be truly demand based.

When analyzing *water as a social good*, assessing benefits separately for women and men can be instructive. Because women and girls are so closely involved in household water supply, they often benefit the most when the village supply is improved. When water quality and quantity improves and water is available closer to home, many advantages exist for women: girls and women take shorter trips carrying heavy containers, women may have more time for income-generating activities and for

---

[3] See Briscoe and Garn (1994), appendix 2 for a succinct analysis.

[4] Hilary Syme, 1992, *Women, Water, and Sanitation: A Guide to the Main Issues and Existing Resources.* Canadian International Development Agency, Water and Sanitation Sector, Ottawa.

leisure, and girls may be able to spend more time in school.[5] Recognizing these differences in benefits can help ensure projects are designed to take full advantage of them.

A second principle involves *management and decisionmaking at the lowest appropriate level.* Involving users in management and decisionmaking helps systems meet consumer demand and, thus, are more likely to be used and maintained. Here again, listening to both men and women will improve design and implementation of projects. As women are often the direct users of water facilities, involving them along with the men in management and decisionmaking helps ensure that systems meet women's needs. Women use systems on a frequent basis and are in a good position to provide accurate, up-to-date reporting on the functioning of a given system. If a system breaks down, women, not men, will most likely be the ones who must travel farther to get water; women, therefore, often have a greater incentive to keep systems functioning.

D. From Principles to Action

Operationalizing the principles of sound water and sanitation management requires a demand-based, participatory approach that assesses what consumers want and are willing to pay and facilitates their participation in project decisionmaking. Considering both men's and women's roles and interests is essential when determining community demand and designing projects. Participatory approaches require more time but increase the chances of the acceptance, use, and maintenance of water and sanitation facilities and the sustainability and final impact of a project.

Translating the principles into action implies understanding that:

- Services will result from, rather than precede, community initiative in water and sanitation.
- Both men and women will be actively involved in selecting the type and level of service.
- The cost of services and maintenance will be shared by men and women.
- Men and women will also share in the investment and ownership of facilities.

Participatory and demand-driven approaches require continuing close interaction with the communities involved.[6] They provide a mechanism through which

[5] The economic benefits of increasing girls' access to education have been well documented. See, for example, Elizabeth King, 1993, *Women's Education in Developing Countries.* The World Bank, Washington, D.C.; and Lawrence H. Summers, 1992, *Investing in All the People*, Policy Research Paper 905. The World Bank, Washington, D.C.

[6] A participatory approach potentially entails some costs or risks. It may, for example, require more time than that taken in conventional projects. In politically sensitive settings, participatory approaches may require the balancing of conflicts of political interest.

communities can be actively involved in making choices and communicating these to project staff. Community preferences need to be ascertained right from the design process and mechanisms devised to ensure community involvement throughout the project cycle. Provision of services needs to be based on what people want and are willing to contribute to. They are more likely to pay for construction and maintenance of water and sanitation facilities that have been built according to their choices.

There has been increasing recognition in recent years that a participatory approach is related to improved project outcomes and sustainability. Yet, communities are rarely homogenous entities: they are composed of subgroups that differ in income, ethnicity, gender, or religion. This is why it is important to incorporate both *social and gender analysis* into the project preparation and implementation process. Breaking down information about preferences and water and sanitation practices by major social subgroups is useful.

Truly participatory projects incorporate gender and social analysis to ensure that all groups can be involved appropriately in activities that are central to their lives. For example, project teams with technical and social skills can create capacity for collecting baseline data on gender and other social issues. Community men and women can be involved in selecting the level of service, location of facilities, and signing of contracts. Both men and women can receive technical and administrative training. Subprojects need to be evaluated in a participatory fashion and include indicators to assess performance relating to gender issues.

Special efforts may be needed to ensure that all groups participate adequately in decisionmaking and other project activities. Such initiatives can enhance women's roles in sector activities and ensure their involvement along with that of men in the community. For example, female extension staff can be hired to meet with women, and water user committees formed with members of both sexes. Women as well as men need to be involved in decisionmaking relating to tasks such as the siting of facilities and the organization of community O&M.

Stakeholder analysis.

One way to promote demand-responsive programs is to conduct stakeholder analysis early in the planning process. Stakeholder analysis is a tool for understanding the context within which a project or policy is designed and operates. Analysis of the perspectives of people who have potential interests in policy or project outcomes or who can influence them permits strategic planning to then involve them. Different local contexts call for different kinds of stakeholder participation; in each particular situation, the appropriate degree of stakeholder involvement is not uniform across the range of stakeholders.

Key stakeholders are clearly those *directly affected* by a proposed intervention, that is, those who may be expected to benefit or lose from Bank-supported operations or who warrant redress from any negative effects of such operations, particularly

among the poor and marginalized. Those *indirectly involved* or affected can include both persons and institutions *(a)* with technical expertise and public interest in Bank-supported policies and programs and *(b)* with linkages to the poor and marginalized. Such stakeholders may include nongovernmental organizations (NGOs), various intermediary or representative organizations, private sector businesses, and technical and professional bodies.

Stakeholder analysis in water supply and sanitation projects identifies the various groups of stakeholders along with the appropriate degree of their involvement in sector activities. This brings to light the different roles played by community men and women and the different incentives that motivate them. Men and women usually belong to separate subgroups of stakeholders and, therefore, will have different levels of involvement in project activities.

Incentives and Constraints

Often, adequate incentives for women's participation are already in place. The crucial issue, therefore, is to remove barriers to their involvement in project activities, so that they may respond to barriers in ways that increase chances for project success. For example, because women have an incentive to keep systems functioning, facilitating their involvement in system management and operation and maintenance (O&M) allows them to report regularly on the status of a system, perform regular maintenance, and quickly obtain the services of a mechanic when more expertise is needed. Without women's involvement in these activities, the incentives to perform these tasks as effectively and efficiently are reduced.

Distinguishing between the various levels at which barriers to women's participation may occur is useful in the same way that distinctions are made between trunks and feeders in discussions on urban sanitation. The feeder (collection network) of sewerage systems is located at the household and neighborhood levels. Through the feeder system, sewage is taken away from the neighborhood to the main trunk level, which operates citywide. Each of these two levels requires separate consideration and different technological responses. Yet, each level must also connect properly to the next. Similarly, *gender issues are relevant at various levels of operation* and can be analyzed and addressed separately; yet, *interconnections between levels* must also be examined. For example, at the household and neighborhood levels, projects can address barriers to women's participation in making choices concerning new systems and in managing these systems. A lack of awareness on gender issues at city, district, or national levels, on the other hand, may lead to project rules that impede rather than facilitate the implementation of projects at the field level.

E. Borrower Country Ownership

Attention to gender requires sensitivity to local culture. Gender issues are more complex and difficult to address than technical or managerial issues; they may need more time, sensitivity, and resources. The World Bank's policy[7] is to:

- Assist member countries in designing gender-sensitive policies and programs
- Review and modify legal and regulatory frameworks
- Strengthen the data base for gender planning and monitoring
- Obtain financing if necessary.

This cannot be done without country consultation and ownership. The Bank, thus, undertakes actions *to encourage country-level ownership* of gender-related policies and programs in the borrower country. To encourage ownership, the World Bank's gender policy directs the Bank to:

- Assist borrowers in developing the institutional capacity to formulate national policies
- Build a consultation process with governments, NGOs, and other donors on gender issues and so ensure the relevance of the Bank's country assistance strategy
- Enhance awareness and expertise by employing local consultants in data collection, surveys, and analysis
- Increase women's participation in the decisionmaking phase of project design.

It is, therefore, important for the task manager to take the opportunity to introduce gender considerations early and at all levels in the country policy dialogue and programming discussion. Understanding of gender issues and a commitment to them at the highest level is essential but must be complemented by the agreement and ownership of technical and field level staff.

F. Institutional Capacity

Strengthening the institutional capacity of the government and other partners to undertake gender-related actions required under a Bank-supported water and sanitation program may be necessary. To enhance local institutional capacity in gender, task managers can:

- Initiate policy dialogue to broaden the agenda
- Increase resources for gender
- Appoint national or regional gender coordinators
- Promote affirmative action to increase the number of women staff
- Develop gender training programs for ministry and sector field staff

[7] The World Bank's policy on gender is defined in World Bank, 1994, *Enhancing Women's Participation in Economic Development: A World Bank Policy Paper*, Washington, D.C., and in OD 4.20 The Gender Dimension of Development (April 1994).

- Improve gender-disaggregated data collection and analysis.

Taking some or all of these actions can help strengthen a country's institutional capacity for gender analysis. It is equally important to address what can become a far more serious problem, namely the gender biases that occur at the feeder or neighborhood level during planning, implementation, and O&M stages. Sensitization or training of technical and field-level staff has been found to be effective in overcoming such gender biases.

As this chapter shows, task managers of water and sanitation projects face the challenge of finding effective and efficient ways to incorporate gender and other social issues into projects. The challenge of infusing a gender focus extends from the design of programs and projects through to their actual implementation, supervision, and evaluation. This toolkit is intended to assist in this endeavor by providing examples of strategies utilized to date, lessons, best practice pointers, and other resources for task managers.

CHAPTER III: LESSONS FROM PROJECT EXPERIENCE

Lesson 1:	Gender is a central concern in water and sanitation.
Lesson 2:	Women's participation improves project performance.
Lesson 3:	Specific, simple mechanisms must be created to ensure women's involvement.
Lesson 4:	Attention to gender analysis needs should start as early as possible.
Lesson 5:	Gender analysis is integral to project identification and data collection.
Lesson 6:	A learning approach is more gender-responsive than a blueprint approach.
Lesson 7:	Projects are more effective when both women's and men's preferences about "hardware" are addressed.
Lesson 8:	Women and men promote project goals through both their traditional as well as nontraditional roles.
Lesson 9:	Women's groups and NGOs can be effective in involving women.
Lesson 10:	Gender-related indicators must be included when assessing project performance and impact.

A. Introduction

A rich collection of experiences on gender, water, and sanitation have been gained during the last decade, and many lessons have emerged. Successful experiences from projects, both Bank-supported and others, not only show *why* attention to gender is important but also suggest *how* such attention can be ensured. The following pages distill this experience and present some of the most important lessons. They identify effective strategies that task managers can use to improve overall project performance by incorporating gender concerns in the water and sanitation sector.

Lesson 1: Gender is a central concern in water and sanitation.

Recognizing that gender is a central concern in the water and sanitation sector is an important first step in incorporating gender issues.

Centrality of gender. Under the gender-based division of labor in most societies, women and men often have different roles and responsibilities in water and sanitation. Within this division, women have traditionally played central roles. In some societies, men are more concerned with water for irrigation or for cattle. They usually have a greater role than women in public decisionmaking about water and sanitation issues. Women, with the help of their children, are usually the primary collectors, users, and managers of water in the household. They select water sources on the basis of their perceptions about access, quantity, quality, and reliability of facilities and the time and effort required to use them. These perceptions and preferences determine the use and quality of water in the home. Box 1 gives an example of the ways in which women manage water in the household. Women also play an informal but often invisible role in the public maintenance of water sources.

Box 1: Recycling Scarce Water in the Household

In *Yemen,* where water is often scarce, women are the primary managers of household water use. Women use and reuse the same water. They save the cleanest and freshest water for drinking, personal washing, cooking, and washing drinking glasses, food, and flour-grinding stones. They save gray water for washing clothes and watering plants. Water that has been used for washing food is given to poultry and cattle; water used for clothes washing is reused to clean floors and wash dishes. In *Egypt,* where water is also scarce, the same water is recycled in washing clothes, vegetables, and, finally, dishes, in that order. The reuse sequencing conserves water and promotes household health.

In addition, women are traditionally responsible for disposing of household waste, maintaining sanitation facilities, and educating and training children in hygiene. Men, women, and children in various societies have specific and different customs related to sanitation and cleanliness. For example, sensitivity to women's sense of privacy is important in designing new sanitation facilities. Studies show that women's demand for privacy is a crucial determinant in the acceptance of latrines by both women and men.

Frequently, social norms involve gender segregation in practices related to the use of water and sanitation facilities. For example, norms may preclude time-sharing of one facility and instead prescribe separate locations for men's and women's bathing facilities. Tailoring project design to recognize such considerations helps ensure that project facilities will be used by both sexes.

Lesson 2: Ensuring both women's and men's participation improves project performance.

Experience shows that the participation of women along with men in project planning, implementation and maintenance can enhance project efficiency. Benefits to project performance include better functioning facilities, more hygienic and better use of facilities, enhanced coverage of capital and maintenance costs, and improved maintenance. At the same time, good water supply and sanitation can be integral to the success of other kinds of projects, for example, education projects (many school programs now include the construction of latrines and wells or hand pumps) and projects that promote women's employment, because women will have more time to seek work if they use less time to collect water.

A recent World Bank water and sanitation study[8] concludes that gender is an issue not only of equity but of efficiency, because involving both women and men enhances project results, increases cost recovery, and improves sustainability; thus, sectoral specialists, especially those interested in poverty and a community-based approach, must ensure the appropriate inclusion of both men and women. A World Bank review of 121 rural water supply projects[9] found that women's participation is among the variables strongly associated with project effectiveness in the sector. Women's participation serves both *practical* and *strategic* gender needs. The *practical gender needs* of women are needs based on existing divisions of labor and authority, whereas their *strategic gender needs* are those that require redress of gender inequalities and redistributing power more equitably.[10]Serving women's practical and strategic needs can do much to enhance project effectiveness.

Gender analysis can inform water and sanitation projects, whether seen from an economic, social, or participatory perspective[11]:

- Gender analysis enriches the conceptualization of water as an economic good. Women, as primary users, often have a greater incentive than men to keep facilities functioning, report breakdowns, and contribute their labor and money for construction and O&M of systems. Moreover, by recognizing women's

---

[8] A. Kudat and C. Jean Weidemann, 1991, "Gender in Urban Water and Sanitation Sector in South Asia," unpublished paper, The World Bank, Washington, D.C.

[9] D. Narayan, 1995, *The Contribution of People's Participation: Evidence from 121 Rural Water Supply Projects*, The World Bank, Washington, D.C.

[10] This distinction is from C. Moser, 1993, *Gender Planning and Development: Theory, Practice, and Training*, Routledge, London and New York.

[11] See Wendy Wakeman, Susan Davis, Christine van Wijk, and Alka Nathani's *Sourcebook for Gender Issues at the Policy Level in the Water and Sanitation Sector*, forthcoming, The World Bank, Washington, D.C.

preferences and willingness to pay along with men's, projects are more likely to be sustainable and women may have more time for income-generating activities.

- Gender analysis is equally revealing when water is viewed as a social good. Where water is of better quality and available in greater quantity and closer to homes, women and girls, as compared to men, benefit both directly and indirectly. They have more time through shorter trips to collect water. Where improved water supply reduces the incidence of waterborne disease, women have better health and spend less time caring for the sick.
- A demand-based, participatory approach that includes both women's and men's preferences can help ensure installation of facilities that are more likely to be used and maintained. Not taking these preferences into consideration can result in facilities remaining unused because they do not meet the preferences of the users. For example, in **India** compost pits located outside villages went unused and women continued to deposit waste near their homes—even when fined for doing so—because they did not wish to be seen carrying loads of refuse to the outskirts of the village.

Lesson 3: Specific, simple mechanisms must be created to ensure women's involvement.

In most rural societies, poor women are more disadvantaged than poor men, first, because women in general usually have less power, access, and control over resources than men, and second, because men have more prominent public roles. For these reasons, it is easy to overlook the importance of involving women in water and sanitation programs at all levels, unless a special focus on women is included. Gender analysis will, therefore, more often focus on women than on men.

A *participatory but gender-neutral*[12] *approach may not be enough* to ensure that women are involved in project activities. A World Bank study of 121 rural water supply projects[13] found that of twenty highly participatory projects, about half successfully reached women. The study also found that the factors affecting women's participation were different from those affecting overall beneficiary participation. These findings clearly suggest that programs need to make women's participation a specific goal with simple mechanisms built in to achieve it.

A World Bank sectoral review of gender issues[14] recommends that professionals working in the water and sanitation sector should try to understand what men and women in communities want and how much they are willing to pay and for what; the context in which they live; and the barriers, such as illiteracy and poverty, that hinder their participation in projects. Such efforts may require longer project gestation periods and special communication strategies yet are crucial for uncovering demand for improved facilities, their effective use, and project sustainability and replicability.

The following considerations are useful to keep in mind in developing mechanisms to include women:

- *Identifying barriers and constraints* to women's participation can suggest specific strategies to use at various stages of the program/project cycle. For example, where male opposition is a barrier, contacting male leaders in the community to explain why women should participate can help obtain men's support. Special measures may be needed to ensure that women know about the project. Where women's literacy is low, printed information can be supplemented by personal contacts, the use of nonprint media, and meetings with women's groups.

---

[12] "Gender-neutral," as used here, implies an approach that offers participatory opportunities equally to men and women without necessarily and specifically taking proactive steps to ensure women's involvement.

[13] D. Narayan, 1995, *The Contribution of People's Participation: Evidence from 121 Rural Water Supply Projects*, The World Bank, Washington, D.C.

[14] A. Kudat and C. Jean Weidemann, 1991, "Gender in Urban Water and Sanitation Sector in South Asia," unpublished paper, The World Bank, Washington, D.C.

- Both men and women should be interviewed when gathering information. Where gender segregation is the norm, *holding separate meetings* with women permits freer discussion of both water issues and sanitation and hygiene practices. In separate meetings, women find it easier to speak for themselves rather than through the men. In some settings, the strategy of women interviewing women will put women at ease. *In joint meetings*, culturally appropriate seating arrangements can ensure that women are not forced to sit in the back, making it difficult for them to hear or speak out. Meetings need to be held at a time and place suitable to both women and men: for example, not at the time when the main meal of the day is being cooked.
- Women need to be included in *local planning and management*. In particular, women's involvement is crucial in matters related to their own roles, knowledge, and interests and to water and sanitation. Providing for *adequate representation of women* in village and higher-level committees can give women a greater say in decisions about operations, management, financing, and sharing arrangements and facilitate including their knowledge in the project.
- *Linking women's activities under the project with their traditional work* can facilitate their participation. Gradually, their traditional tasks can be expanded to include newer roles. Women's more traditional roles include managing water, waste, and soil use or providing labor, whereas their newer roles can include maintaining and repairing water points, imparting health and hygiene education, collecting and managing funds, and constructing latrines. Women also feel encouraged to participate when project activities are linked with the possibility of *generating income*.
- Finally, it is often necessary to *raise the awareness of project staff* of the need for women's participation and strategies to facilitate it. This may require training, internal performance evaluations, as well as a good example set by the project manager.

B. Country and Sector Work

Lesson 4: Attention to gender analysis needs to start as early as possible.

Gender analysis is best considered as a process that starts with preproject planning and continues through O&M. Attention to gender is *not* an element that can be injected in the later stages of project planning as an add-on component. In fact, opportunities exist for planners to begin to address gender issues even before the actual project cycle commences. Key among these is incorporating gender issues into country and sector work.

Sector analysis in water and sanitation. To begin with, *sector analysis* in the water and sanitation sector can be strengthened by incorporating critical gender elements. Among these issues are:

- Women's and men's roles in water and sanitation
- Women's and men's relative access to resources
- Constraints to women's participation within the sector
- National development policies and programs in the sector that affect men and women as agents and beneficiaries
- The institutional framework needed to promote gender-balanced policies and projects in the sector.

This information can be used in designing a country-level gender programming framework to identify and develop projects based on sector priorities. Such a framework will assess critical points of intervention in the sector:

- Identify goals and objectives for gender-balanced interventions within the sector, and the resources and time needed to achieve them
- Establish gender-based criteria for selection of projects and analysis of project proposals
- Develop a framework for monitoring and evaluating sector performance on gender issues.[15]

C. Gender in the Program Cycle

In the program cycle, program and project design needs to incorporate gender considerations early, preferably during the first stages. Involving key stakeholders, including government, NGOs, and the community, early in decisionmaking is also more effective. This is especially important to do with community members, rather than having them later utilize systems not suited to their needs. Moreover, if the

[15] For more details, see W. Wakeman, 1995, *Gender Issues Sourcebook for Water and Sanitation*, The World Bank, Washington, D.C.

community members' views are not included at this point, they will more likely be excluded at later stages as well.

Identification

The assessment of gender issues at the project identification stage is an important exercise. By including a strategy for gender issues in this phase, the task manager can ensure that women are not left out or that men and women are not cast in inappropriate roles.

At the identification stage, it is crucial to have information on:

- Men's and women's traditional roles in the sector and in similar projects in the country
- Factors that promote women's and men's participation in the project
- Constraints that hinder such participation
- Major organizations, especially women's organizations, active in the project area that could potentially be involved
- Whether the percentage of women heads of households in the project area is high or significantly higher than the national average.

When different project possibilities are considered, examining existing country-level studies on men's and women's roles and priorities is useful. Sources for such studies include the national Women's Bureau, local offices of bilateral and international donors, census or demographic survey offices, women's organizations, and social research institutions or universities.

Disaggregation by gender is critical in data collection. In collecting new data, field workers, especially women, and local residents can be good sources of information. Interviewing residents in groups helps planners understand gender roles and preferences and the reasons why women and men can or cannot become involved or change their existing practices. During primary data collection, useful informants include local health workers, teachers, leaders and members of local women's groups, community leaders, and traditional informal women's leaders. Interviews with local men and women can help establish their attitudes to gender-related issues in the project.

Table 1 summarizes the methodologies and benefits of a range of survey instruments and tools for gender analysis, most of which are suitable for village situations. Managers may find these useful when data gathering is needed to verify information from other sources or when other data are not available. They can supplement the more conventional sources of information, such as national surveys and research studies.

Table 1: Suggested Methods of Data Collection for Gender Analysis

Tool	Methodology	Output/Benefits	Time req'd.
At national level			
Policy inventory	List major policies affecting sector	Gives overview of recent sectoral performance; helps assess gender impact of policy	
Household sample survey	Structured questionnaire for a representative sample	Although time consuming and expensive, produces good quality data if well conducted and analyzed	1 year
Household record keeping	From representative households	Useful to determine family labor contributions. In nonliterate societies, pictures of activities can be substituted	1 year
At district/village level (some or all included in participatory approaches)			
Community calendars	On a monthly basis, identify by gender, family position, and wage status the person(s) responsible, among others, for water collection, upkeep of facilities, sanitation, family health and hygiene, and hiring out as labor.	Qualitative picture of activities for all enterprises and operations	
Seasonal water supply and sanitation profiles	Estimate person/days or months for water collection and management and sanitation tasks during average dry and rainy seasons by gender	Useful for showing quantitative changes in water and sanitation facility use and management and labor allocation when new facilities are introduced	
Walking tours	Conducted by interdisciplinary team of community members and staff, with community taking the lead and pointing out major features and problems of local water and sanitation facilities. Separate walks with men and women can be informative.	Yields map locating main hydrological zones, water and sanitation systems, social groups, and infrastructure; identifies main problems of community and key informants for various issues.	Team and community for half to one day
Spatial maps	Indicate by gender on maps of neighborhoods existing water and sanitation infrastructure and who is responsible, provides labor, and controls water resources and benefits	Yields a clear visual picture of existing facilities, constraints, participants, and beneficiaries.	Half to one day
Focus group interviews	Semistructured interviews, usually taped, and conducted with women separately	Preplanned but informal, in-depth investigation of processes, social networks, values, and beliefs	1–2 hours/ group (of up to twenty people)
Group and community interviews	Open-ended questioning of group representing more than one household	Quick, inexpensive overview of conditions and practices across villages	1–2 hours/ village
Community portraits	Profiles written jointly by community and staff of a variety of project villages with women and men	Compares and contrasts beliefs and practices across villages	1–2 hours/ village

Knowledge about differences in men's and women's preferences can help to explain subsequent failures and even predict constraints to project feasibility and sustainability. *Social feasibility analyses* are a useful tool for specifically taking into account both men's and women's needs and capabilities for the proposed project. Such analyses serve to:

- *Identify differences in women's and men's preferences*. For example, evidence exists that in many situations, women are more interested than men in improving sanitation, at least partly because of their greater interest in increasing privacy.
- *Ascertain women's specific concerns* in improving water and sanitation facilities. For example, if water supply is inadequate in quantity, unreliable, or inconvenient, the question of water supply may take priority for women over the need for sanitation; therefore, women may get more readily involved in a sanitation project if their water supply needs have first been met. Again, where women use open spaces for their sanitation needs, they sometimes do not want to give up the associated social advantages.

Social analyses can help planners ascertain *women's and men's existing knowledge, attitudes, and practices* (KAP) pertaining to water and sanitation. Gender-based social norms about cleanliness, purity, privacy, or modesty often determine specific patterns of water use and health and hygiene behavior. Taboos sometimes affect women's use of latrines during specific times. Privacy may be an issue for women in using public taps for bathing or washing. For example, in one East African country**,** households were directed to build latrines along the road, so that they would be easier for project staff to inspect; however, women did not use them because they did not like to be seen entering or leaving.

Gender also determines the acceptability of *arrangements for sharing water and sanitation facilities.* Often, cultural constraints may exist to sharing between family members of different ages, sexes, or marital relationships—such as those between fathers and daughters or fathers and son's wives. For example, in **Bangladesh, Malawi, Swaziland, South Korea,** and **Tanzania** the necessity of sharing of household latrines by males and females has constrained latrine use. In Bangladesh, such sharing constraints were reported to result in parallel use of old unsanitary facilities alongside the new, more hygienic ones. Women from *minority groups or castes* frequently lack access to public taps or hand pumps because they live in unserved areas or are not permitted to use communal facilities. Influential groups may determine the location of public taps or hand pumps. Other sharing problems, such as those between householders and their tenants, may exist. Women may object to cleaning latrines if such sharing occurs. When the community is consulted ahead of time about preferences in such matters, project design responds more to community demand and needs. Women may be the best sources of information on constraints to sharing.

Analyses can also throw light on *women's and men's roles in determining the acceptance rate* of project interventions. Although men's decisions are likely to prevail, they can be influenced by the opinions of women. Women's likely acceptance is particularly important where there are a large number of female-headed households. Female-headed households without working-age males often have greater financial and time constraints and are unable to make the cash or labor contributions required under

the project.

Project Preparation and Appraisal

Lesson 6: A learning approach is more gender-responsive than a blueprint approach.

The *blueprint approach* evolved from large-scale construction and engineering projects. It assumes that the engineering environment is known, predictable, and controllable before construction begins. This approach is not suitable for projects whose success depends on getting local people involved in decisionmaking—a condition that implies unpredictability, loss of centralized control, and lack of preprogrammed structure. The *learning approach* conceptualizes development as a learning process for all involved. It gives a central place to people and emphasizes flexibility and partnership in planning, implementing, managing, and evaluating a project. It assumes that everything cannot be known and planned in advance and that long-term project objectives can be better served through "learning-by-doing" in partnership with the community.[16]

The learning approach is particularly well-suited to promoting attention to gender and, through it, to overall project performance and sustainability. Key characteristics of this approach are:

- *Flexibility.* It can be effective to start small, perhaps through a pilot project, and later expand incrementally, using flexible project design. The learning approach makes such flexibility possible. Through careful monitoring of ongoing activities, timely corrective action can be taken when it appears that women are not benefiting along with men or not using facilities optimally.

- *Building trust.* For many demand-driven investment operations, the project start-up time has been longer than for standard projects, reflecting the quality of preparation and the difficulty of putting the appropriate institutional format in place. The opportunity costs of poor women and men are high because of their time constraints. Women also need adequate time and a reasonable degree of certainty with respect to the sustainability of the initiative before they choose and commit to a new activity. Because the learning approach emphasizes project processes as much as project activities, projects need to build in *longer preparation periods*. This time can be used for gaining access to women, building trust, and organizing them for taking up various responsibilities.

- *More integrated project design.* The learning approach allows *more integrated project designs* with cross-sectoral inputs that meet multiple needs of the community. In such projects, for example, water and sanitation may be an entry point for other project activities, rather than the sole component. Conversely,

[16] From D. Narayan-Parker, 1989, *PEGESUS: A Planning and Evaluation Framework in Partnership with People*, Technical Series, PROWWESS/United Nations Development Programme, New York.

activities such as nonformal education or income-generating opportunities can be useful entry points for initiating community dialogue on water and sanitation issues. These strategies have been used successfully as entry points in the Bank-assisted JAKPAS[17] project in Nepal and the India Rural Water Supply and Sanitation Project.

Although project experience points to the usefulness of small pilot projects that can gradually be expanded, making the actual transition from demonstration projects to regional or national programs can be difficult. It is helpful to distill experiences into principles within a logical and simple framework, identify an overriding criterion of success, and define tasks necessary to achieve it (also see lesson 10).

[17] JAKPAS stands for *Janta Ko Khane Pani Ra Safai Karyakram*.

Lesson 7: Both women's and men's preferences about "hardware" must be addressed.

Seeking both women's and men's views about technology options and design features helps when considering project design issues. Women's views about siting, safety, and reliability; convenience; and time and energy demands of various hardware options are crucial. For example, in one African country, latrines were not used regularly because women found them difficult to keep clean. They did not like even to be seen carrying water there because of the lack of their traditional privacy. Elsewhere in Africa, women discouraged their children from using latrines because they were afraid about their children's safety. Women's and men's preferences, therefore, affect not only their response to the project but also subsequent acceptance, use, and maintenance of facilities (see box 2).

It is also crucial to determine *differences between men's and women's willingness and ability to contribute* labor or materials. Women may have a strong demand for domestic facilities, whereas men may not be interested in expenditures for this purpose or may be interested only because they expect to benefit economically. If consulted, women may influence men's level of interest and willingness to contribute. Experience shows that women have often assumed the responsibility for initiating and sustaining capital cost contributions from the community. Their initiative and participation in financing arrangements has taken various forms, such as:

- Actual resource mobilization
- Collection of community capital cost contributions
- Contributions for O&M through:
  - Savings mobilization
  - Small income-generation schemes
  - Community projects, such as theater or musical performances
  - House-to-house solicitation of funds.

In **Kenya,** for example, members of a Masai women's group collected funds toward the local contribution to a project by selling traditional beadwork and obtained financial and technical support from urban women's organizations. Their husbands then became willing to donate money to the project.

Box 2: Women Have Preferences About Hardware

The following examples from diverse country settings show that women often have distinct preferences about hardware choices. They suggest that when projects incorporate women's concerns and preferences about design, siting, or technology, community acceptance and use of facilities can increase:

- In **Malawi, the Philippines,** and **Tanzania,** community consultation allowed women to help select reliable, gravity-based water-supply sources.
- In **Burkina Faso,** women were found to have information on the year-round reliability of traditional water sources, whereas village chiefs and elders lacked such knowledge.
- In **Sri Lanka,** children did not use latrines because they were far away and dark and because the children were afraid of falling in. Special child-sized latrines were built without walls under the eaves of houses, just outside the kitchen door. Mothers can now more easily train children to use them; the area is also used for bathing, and bath water is used for flushing.

On the other hand, many cases of incomplete adoption or even rejection of improved water and sanitation facilities have been recorded. Many of these can be attributed to failure to take into account the preferences of the community at large and women in particular. Such failures have significant implications for program success and sustainability. Some examples follow:

- Projects seeking to introduce improved systems need to ensure that these systems are perceived by the community as offering better quality, greater quantity, or more convenient water. Failure to pay attention to such user views was considered to be the main reason for the lack of village maintenance of hand pump wells in **Thailand.**
- Women from project areas in **Bangladesh, Guinea-Bissau, Malawi,** and **Tanzania** have rejected some types of facilities, such as foot and hand pumps, because of the difficulties that certain users, such as children, pregnant women, and the old, had in operating them or using them for such activities as bathing. As a result users have resorted to unsafe but easier-to-use water sources.
- In **Tanzania,** failure to consult local women resulted in the construction of hand pumps on shallow wells that dry up, whereas traditional wells in another part of the village never dried up.

Planners should be aware that women may have too many other responsibilities or be socially restrained from contributing labor to project activities. For example, in a rural sanitation program in **Lesotho,** the community was expected to contribute labor toward the school sanitation project; however, able-bodied men were often absent, and women in many villages lacked the time and skill to dig large pits in the rocky soil, leading to unexpected problems in implementation. Conversely, unless planners consult women in the community, planners may be unaware of labor or material contributions that women could and would make.

When *women accept the daily tasks* required by a project, the project is more likely to achieve its health objectives. Women's willingness and ability to carry out such tasks as cleaning and maintenance should be ascertained. For example, women usually have to ensure that water is available for flushing out pour-flush latrines when no house water connections exist. This water must often be collected at some distance by women or children.

Evidence exists that *eliciting both men's and women's views early* in the project cycle can ensure that projects are designed in accordance with community demand and willingness to pay. In one project, discussions with the community revealed that 80 percent of those who could not afford the planned flat fee were female heads of household. Box 3 gives examples in which consultations with women in particular contributed to better project design and thereby to project sustainability. Projects have benefited from women's knowledge of local circumstances in matters such as:

- Identifying reliable and accessible water sources
- Reducing construction costs by having shorter pipes
- Adapting designs to improve O&M
- Devising socially acceptable arrangements for sharing facilities.

Box 3: Finding Out Women's Priorities Promotes Project Acceptance

As the following examples suggest, consulting women early about aspects of design, feasibility, and specific components facilitates demand-driven project design and promotes project acceptability.

- When women in a low-income settlement in **Cuzco, Peru,** were consulted about project feasibility, they were outspoken in saying they did not want latrines because they were not traditionally used. Moreover, a previous course on latrines had been "condescending, preachy, and critical of the women's traditions." They did, however, want sewerage, nutrition centers, and more water taps.
- In a periurban community in **Latin America**, water and latrines were women's first priorities, and they were willing to contribute to these facilities.
- In the Orangi pilot sewerage project in **Karachi, Pakistan,** women's priorities differed from the men's. When consulted, women were often more concerned about disease and sanitation than their husbands, because they usually carried the burden of caring for the sick. The women were also able to persuade their reluctant husbands to pay their share of the low-cost sanitation component.
- In **Tanzania,** users, more than leaders, perceived maintenance of facilities as a village responsibility.

Where women are not involved as planners and users, programs run the risk that improved facilities will not be used, making the programs unsustainable. Experience suggests that low project acceptance by rural people is not due to lack of community interest or conservatism but is based on a rational cost-benefit calculus comparing old and new options. For example:

- In **Malawi, Togo,** and **Tanzania,** inadequate access resulted from one-sided decisions by project staff, contractors, and higher-level authorities in favor of promoting piped water schemes and reducing the number of hand pumps per village, resulting in substandard service for users.
- In highly stratified communities, women from poorer households living at village outskirts are often denied real access to new facilities, because water points may be installed at central points on the basis of practical considerations such as ease of access for technical teams or expectations of better community maintenance.
- Sanitation facilities may not be regularly used when insufficient attention has been paid to upkeep in designing the facility. This has led to problems, for example, in design, overuse, lack of maintenance, or difficulty in cleaning because of the construction material used (for example, rough concrete). Women and children are usually most affected by these deficiencies.
- Involvement of women in design and management is probably more important than self-help alone. In **Malawi,** laundry facilities were built with community labor but were not used, because the height of the laundry block was found to be inappropriate and the surroundings remained dirty.

Implementation

Lesson 8: Women and men promote project goals both through their traditional and nontraditional roles.

Potentially, men and women can participate in any of the project activities in which the community is to take part. In practice, local conditions determined by existing gender norms, class, age, caste, and other criteria influence the activities they actually perform. In addition, where women's participation is concerned, their skills, the time available to them, and existing organizational arrangements can pose some operational constraints. An integrated approach will offer opportunities for both men and women to take active part in the entire range of potential activities for the community within the specific local context.

Experience shows that, through their participation, men and women can not only improve project performance but, in taking on nontraditional activities, also serve as change agents to alter existing inequities and inefficiencies. For example, projects can consider targeting health education toward men as well as women, so that both men and women are given a wide range of project responsibilities.

Local conditions will determine the specific forms that men's and women's participation takes in a given setting; however, *some general principles* are:

- Care should be taken that men's and women's involvement does not place too heavy a financial or work burden on them without compensatory benefits. This is important, particularly in the case of women, because they are frequently already overburdened on both counts. A participatory, demand-based project that gives beneficiaries a strong role in decisionmaking will decrease chances of this occurring.
- Women's involvement too often remains confined to manual labor. Going beyond such tasks to increase women's authority in management decisions enhances benefits to the project, women, and other users.
- Where men and women participate in project activities, especially nontraditional ones, they often need special training in new skills.

Health and hygiene. Water and sanitation projects aim to improve health by providing safe drinking water not merely at the source but also up to the point of consumption. To promote behavior that ensures safe and hygienic transport, storage, and use of water, many projects incorporate health and hygiene education activities. Projects typically focus exclusively on women and children for these types of education, overlooking the need for men to support and adopt improved hygiene practices as well. Project design should, therefore, shift some of the responsibility for health and hygiene to men.

Traditionally, health and hygiene education activities have been the only aspect of projects in which women's participation was envisaged; however, projects did not always address constraints women faced in participating in such activities. More recent project experience suggests that projects can address such constraints if they do one or more of the following:

- State as a health education theme the changing of health behaviors specific to women—such as washing hands, filtering drinking water, and using a water dipper.
- Build on local knowledge in developing health education messages and techniques
- Select women trainers or health promoters
- Organize women's health clubs
- Use two-way interpersonal communication techniques for reaching women
- Utilize sites where women gather—wells, washing platforms, markets, grain-grinding sites, and clinics—as contact points for health education
- Choose suitable times and meeting places for women, especially where they are secluded
- Provide child care facilities
- Involve husbands and male leaders (see Box 4)

These strategies can facilitate women's participation along with that of men, raise their awareness of health issues, and make health education programs more effective.

Box 4: Dealing with Men's Opposition

Men's opposition to women's health education clubs can be overcome by involving husbands and male leaders. For example, to deflect potential men's opposition, mother's clubs in **Korea** and **the Philippines** appoint the most negative elders as official advisors, host ceremonial dinners for their husbands to explain their activities, and invite proud husbands to accompany wives to graduation ceremonies on completing their five-day course.

Construction. Community participation in construction activities under water and sanitation projects consists of voluntary contributions of money or labor, or paid work. Several gender-related considerations exist in construction activities of water and sanitation projects.

For one, whereas men engage in paid activity, women frequently contribute most of the voluntary labor to such projects. Even when confined to the house, they participate in construction if the need for facilities is acute and if they can work in private surroundings. For example, in Baldia, a low-income urban area in **Karachi, Pakistan,** women undertook or oversaw almost half the work of constructing soakpits, including the digging. In **Lesotho** women do most of the digging in water projects. Including women in construction skill training offers them a potential source of income. For example, projects have trained poor women in **India** in latrine

construction., whereas in **Thailand** and **Botswana** both men and women were trained to construct latrine slabs**.**

Conversely, where food-for-work activities are undertaken for constructing water and sanitation infrastructure and payments are given in kind, women rather than men constitute large proportions (as much as 80 to 85 percent in **Lesotho** and **Ethiopia,** and 34 percent in **Bangladesh)** of those employed. Evaluations show that most of these women are from landless families and a significant proportion are heads of households.

The large role that women play means that projects need to incorporate measures to cater to the requirements of both men and women construction workers. Where women's participation in paid construction is significant, arrangements for their needs at the construction site, such as child care facilities, flexible scheduling, and private spaces, may be required. Project managers also need to ensure that women are not underpaid, compared to men. Evidence suggests that such problems are more likely to arise in contractor-managed construction activities than in those directly managed by government departments. Special vigilance is, therefore, called for in projects that work through contractors.

Operation and maintenance. Site management, caretaking, local administration, and operating and managing self-sufficient systems constitute opportunities for community participation in local management and maintenance—particularly for women. Projects have frequently improved their efficiency by utilizing these opportunities.

Women, more than men, typically play an important role in site management. They have sometimes spontaneously organized to *manage communal sites* or supervise their upkeep (see Box 5). Government programs in several countries now train individual women, couples, or teams of women as *caretakers*. Women have performed as successfully as men in the capacity of diesel pump operators in Botswana, caretakers in Bolivia, source monitors in Angola, and well disinfectors in Colombia. Anecdotal evidence suggests that they maintain better hygiene than men.

Women have also taken part in *preventive maintenance and repairs*, either jointly with men or in women-only teams. Projects in **Guinea Bissau** and **Togo,** for example, have trained teams of one man and one or two women as voluntary caretakers of hand pumps, based on existing divisions of labor. The men are responsible for technical tasks, such as lubrication and tightening of nuts and bolts, and the women are responsible for site hygiene and user education.

Box 5: Women's Strategies for Maintaining Public Facilities

Women the world over have shown ingenuity and initiative in taking charge of the maintenance of communal water facilities. Some examples include:

- In **Malawi,** water tap committees composed mainly of women have been organized. They use the pipeline routes as paths and report leakages to the village caretaker.
- In **Samoa,** while women weave mats in open-walled watch houses, they keep watch over village bathing and drinking sources and ensure their proper use.
- In **Tanzania,** women chose a site attendant from a nearby household and maintained rosters for site upkeep and preventive maintenance.

Projects can creatively use such local strategies to develop sustainable community-based systems to maintain project facilities.

Where male out-migration is high or a women's project or organization already exists, training women to do preventive maintenance becomes an especially desirable option. Project experience shows that women make good hand pump mechanics: although some costs are higher, their effectiveness in regular and preventive maintenance is better, increasing overall economic efficiency (see Box 6).

Management. Community participation in local management often improves utilization rates and satisfactory functioning of project facilities. In recent years, projects have successfully involved both men and women as *members and office holders in local water management organizations*. Although men have usually functioned as the chairpersons, many communities have found women especially successful as treasurers in handling financial matters (see Box 7). Some projects stipulate a mandatory minimum number of women members or officers in water user associations to ensure their participation.

Projects must be careful not to unwittingly raise *barriers to women's election* to local management committees, such as by stipulating that only heads of households are eligible for election. When introducing such conditions, managers must first ascertain that women have a reasonable chance of being elected. In settings where gender segregation is the norm, projects can consider setting up separate women's committees for management.

Income-generating activities. Where communities need to raise money to be able to participate in project activities, building in opportunities for income generation can be useful. In particular, providing women with opportunities for income generation has been found to increase the likelihood of their participation. Because women usually have less income of their own than men, such opportunities can help them meet their cash contribution obligations.

Some *project activities* offer avenues for earning income. These include paid construction activities, working as trained caretakers and technical maintenance workers, and specific income generation components of projects, such as vegetable growing. Typically, men are trained or hired to perform these activities; however, scope exists for a more gender-balanced approach to training and hiring community members for such work. Women have also successfully *provided low-cost services* in underserved areas. For example, women's organizations in both **Kenya** and **Honduras** run water kiosks, purchasing water in bulk from the water agency and selling it at low cost in squatter and slum areas. In a low-income urban neighborhood in **Mexico,** women's cooperatives run urban waste recycling plants that produce and sell compost to local vegetable gardeners. In **Mozambique** and **Tonga,** women's cooperatives make and sell latrine slabs. Projects should also consider appropriate alternatives to improve women's *access to credit.* This increases women's ability to earn income and, hence, to contribute money to water and sanitation improvements.

Staffing. Ensuring a gender-balanced approach at the local level requires support from men and women at higher levels, from field staff to project managers and policymakers. Where women live in seclusion, women field workers can facilitate women's involvement in planning and training. When male staff are aware of gender roles and have been trained in communication skills and in working with women, they are also better able to involve women.

Box 6: Working with Women Hand-Pump Mechanics

The hand-pump maintenance system in **Rajasthan, India,** used village-based mechanics, each responsible for about forty hand pumps; however, women, the primary users of water, often hesitated to report breakdowns to mechanics, who were invariably men. Mechanics did not respond promptly to complaints about breakdowns, because—not being responsible for collecting water—they did not consider breakdowns urgent. Hand pumps, thus, broke down frequently and remained so for long periods, forcing the government to conduct annual repair drives before the dry summer season to ensure adequate supply.

In 1988, as part of a *pilot project* to improve maintenance, the Integrated Sanitation, Water, and Community Health (SWACH) project decided to train twenty-four rural women as hand-pump caretakers. The project had already begun promoting women's participation by *consulting local women*, in addition to village headmen, in deciding *about the siting* of hand pumps. This successful innovation significantly increased community ownership and use of hand pumps.

Practical difficulties, however, existed in hiring women as mechanics. First, hand pump repair entails traveling long distances. Some women's fears for their safety may deter them from agreeing to the work. Second, hand pumps are heavy. Some women mechanics may be unable to handle their weight and size. Third, the existing mechanics training program, designed for educated trainees, was unsuitable for women—usually uneducated—in the tribe-dominated project area. Fourth, the training required six months' residence at the training site, which few women would be able to complete.

The project responded by adopting a *flexible approach* and *modifying existing systems*. First, women were chosen to work in threes, instead of singly, as in the case of male mechanics. They could, thus, jointly handle the heavy hand pump and toolkits with ease. Second, the training was reduced to one week, followed by six months of on-the-job training and then a week-long residential refresher course. Trainers tailored their methodology to suit the illiterate trainees. The women learned about hand pump parts and assembly through songs, games, and stories. Instead of studying cross-sectional diagrams, which were too technical, they acted out the order in which the parts were assembled. The repair routes were designed so as not to exceed a few kilometers. Married women were preferred, being more likely to stay in the village than get married and move away.

Village women, the main users of the pumps, found the new women mechanics much *more accessible and responsive* than the men mechanics. The experiment was evaluated, using a social and economic cost-benefit analysis, taking into account the women's enhanced skills and access to new technology. One male mechanic or three women mechanics could maintain about thirty hand pumps. *Training costs per pump were, thus, three times higher* under the women-based system. The project bore the full cost of the toolkits given to women mechanics. Men had to buy their own with an average subsidy of 40 percent. When women's domestic, community management, and agricultural work was valued, the opportunity costs for the women mechanics were, therefore, high.

The women carried out much *more preventive maintenance* and had much *lower hand pump breakdown rates* than male mechanics. This resulted in *repair costs* during Public Health and Engineering Department (PHED) repair campaigns that were *four times lower per pump* in the women-based system. Under the men-based system, hand pumps remained broken down for longer durations. This meant higher costs to village women, because they had to spend extra time fetching water from distant sources. It also implied higher costs to the government, because public investments in infrastructure remained unproductive during breakdown periods. In the women-based system, *health messages were more effectively spread*. In terms of increased awareness among villagers, training women was, thus, more beneficial than training men. Among the *social benefits* was the likelihood, if the women performed well in hand pump maintenance, of improved attitudes on educating girls. Women also gained confidence, once they saw that they could do "men's" work.

(Adapted from, Christine van Wijk-Sijbesma and Eveline Bolt, May 1991, *Women, Water, and Sanitation, Annual Abstract Journals No. 2*, a joint publication of the IRC and UNDP-World Bank Water and Sanitation Program; personal communication, Indu Bhushan, SWACH project director, 1988.)

Box 7: Women Make Successful Office Holders of Water Committees

Qualitative evidence on women's involvement in management suggests that women will make special efforts to solve local problems such as collecting user fees and raising funds for repairs. For example, in **Niger,** a village water supply program started a campaign for financial contributions to cover the maintenance costs of hand pumps. In most villages, water committees appointed men as treasurers. In general, the initiative created community responsibility for O&M of hand pumps; however, some villagers were unwilling to pay and encouraged others to discontinue payments. In other villages, the contributions raised were managed improperly. Where women worked as treasurers, they managed their duties satisfactorily. Based on this experience, in several cases, villagers suggested that women should be treasurers.

At the *project management level*, some projects appoint gender specialists to systematically incorporate gender analysis in project planning and implementation and monitoring. Evaluations suggest the inclusion of gender specialists is effective if they are integrated in the team. Training in gender issues is another strategy adopted to increase awareness and sensitivity among staff.

Lesson 9: Nongovernmental organizations and especially women's groups can facilitate a gender-balanced approach.

NGOs[18] can act as partners or intermediaries to mobilize local communities. Projects can often take advantage of the presence of existing NGOs that have expertise and experience in working with local women in the project area to help project staff in reaching local women. Sometimes, women spontaneously organize to discuss project issues and take an active role.

Women's groups are an important mechanism for ensuring the involvement of women. As several examples in the previous sections show, women's groups can be useful in promoting women's involvement in project activities, from hygiene education to operations, maintenance, and income-generating activities. These may be existing groups or specifically created ones. Examples of groups that can facilitate women's participation are: savings and loan groups, family planning or mother's health clubs, local school parent committees, handicrafts and other income generation groups, and kinship, religious, or tribal groups.

Finally, it is not safe to assume that an NGO is, by definition, gender-sensitive. Care will be required in determining which NGOs can facilitate greater gender balance in programs and projects, taking into account such information as their overall track record on gender. Special mechanisms, such as targeting, separate committees for separate groups by caste or socioeconomic status, or affirmative provisions, can help to include poorer or otherwise marginalized women in project activities. These mechanisms may be required where more conventional women's organizations are dominated by relatively wealthier or higher status women.

At the *national level*, some countries have begun to involve national women's organizations systematically in water and sanitation sector policy planning. For example, in **Kenya,** both the national women's organization and the Women's Bureau are associated with national action committees on water and sanitation.

[18] The term "NGOs", as used here, includes formal and informal groups.

Supervision, Monitoring and Evaluation

Lesson 10: Gender-related indicators should be included when assessing project performance.

Experience from projects around the world clearly indicates that community management that gives central roles for both women and men can facilitate the achievement of project goals in water and sanitation. Project experience has also shown appropriate strategies to foster a more gender-balanced approach. But how can project managers assess whether attention to gender is adequate and proceeding satisfactorily? What criteria and measures can they use? Here again, experience points to some approaches that can be used to monitor and evaluate project performance with reference to gender.

Supervision

Even when projects are well-designed with respect to gender, it is not safe to assume that they will necessarily have a positive gender impact. Experience shows that gender perspectives may "fade away" if project staff do not actively keep track of them. The task manager has a crucial role in keeping alive the issue of the gender-responsiveness of a program or project. Attention to gender during supervision not only ensures that gender objectives are on track but can also identify deficiencies in the original design.

One approach[19] suggests that having a clearly defined, overriding goal or criterion of success and specific strategies is useful to achieving that goal. Although projects have different and even multiple goals, an overriding goal can serve as the yardstick against which to assess progress and outcomes and under which to subsume secondary goals. The PEGESUS approach suggests the three criteria of *sustainability, effective use,* and *replicability* as the overriding goals to meet the dual objectives of production of facilities and capacity building among the community, both women and men.

When defining goals, especially those related to gender, it is important to go beyond number counts. Sole preoccupation with number counts can lead to water and sanitation systems that are considered successful but that may not be particularly responsive to gender considerations. Moreover, merely a number count of committees created or women trained, without attention to the quality of their functioning or effectiveness is no better than number counts of installations constructed without attention to how well they function.

Some general points to keep in mind during supervision include the following:

[19] This is the PEGESUS framework developed by PROWWESS/UNDP. See D. Narayan-Parker, 1989, *PEGESUS: A Planning and Evaluation Framework in Partnership with People*, Technical Series, PROWWESS/United Nations Development Programme, New York).

- Establish clear, explicit and manageable objectives for gender actions within the context of a project.
- Assess progress on gender-related actions during mid-term reviews.
- Prevent "fade-out" by emphasizing gender issues in the Terms of Reference of supervision, completion and evaluation missions, and including gender specialists on missions, particularly if *(a)* information on gender roles is lacking, *(b)* the project design contains many problems related to gender roles, or *(c)* a special impact on women is required. The interest and ability of a person to work on gender issues is important, whereas their sex is not. A woman on the team cannot automatically be expected to take responsibility for gender: she may be untrained, uninterested or unwilling.
- Build in flexibility during the project cycle, so that it is possible to modify existing projects or components and make mid-course corrections in response to a better understanding of gender issues than was available at preparation. Flexibility also enables projects to test promising approaches and expand successful strategies.
- Where it is difficult to identify gender-related project actions during project preparation because of inadequate information, include an unallocated fund earmarked for such initiatives. The fund should constitute resources over and above the components identified with detailed costing. Such a fund can give a project flexibility, enhance institution building and ensure that gender issues remain visible.
- Specifically identify gender-differentiated results and draw out lessons learned in implementation completion reports (ICRs), impact studies, and evaluation reports. Describe special efforts used to increase women's participation.

Monitoring and Evaluation

The inclusion of gender makes the evaluation of project outcomes more meaningful. It ensures that project success is evaluated in the context of the project's responsiveness to the needs of the community as a whole. To centralize gender concerns in a project, it is important to rely on separate indicators for men's and women's involvement as well as to integrate gender within the overall evaluation framework.

For example, to evaluate *effective utilization* of systems, managers need information on access to services and user behavior. They can assess:

- Whether significant gender differentials exist in access, use, and acceptability of facilities
- Whether women use safe water sources, even when traditional sources are closer
- Whether coverage of unserved areas and groups increases
- Whether awareness of the community overall and of men, women, and children separately improve about hygienic behavior

- Whether drinking water is stored and handled hygienically in the home
- Whether health-promoting behavior is adopted
- Whether the distance and time taken by women in fetching water decreases.

Similarly, the incorporation of gender considerations in developing indicators for project *sustainability*—or, the ability to maintain efforts and benefits even after the project assistance is phased out—improves the quality of such evaluation. In trying to assess sustainability, managers require information on whether facilities are functioning properly, whether the community is equipped and empowered to manage facilities, whether training is provided, and whether financial arrangements are sustainable. To address the gender dimensions of these issues, managers need to evaluate:

- Breakdown rates and durations for hand pumps, standposts, or latrines
- The attitudes of users, particularly women, to breakdowns
- The availability of spare parts and local skills among men and women
- Attitudes to cost sharing and willingness to pay—as reflected in the ability of men and women users to influence technology choice and service levels; gender differences in users' perceptions about benefits; and the transparency and effectiveness of collection and use of funds
- Male/female representation on water user committees
- Male/female decisionmaking in water user committees
- The emergence of women community leaders
- Organized sharing of knowledge and skills among men and women in the community
- Women's access to training courses
- Women's influence in management decisions.

To evaluate the gender dimensions of *replicability*, managers can consider:

- Degree of local involvement and their skills and knowledge
- The access of women, especially heads of households, to financial management systems, including revolving credit facilities
- Changes in the views of men and women in the community about future priorities
- Documentation of project experience
- Career prospects for trained village workers, especially women, within the agency, or in income-generating activities outside the project

Finally, *participatory evaluation*[20] broadens the scope of evaluation. It is collaborative and, thus, more compatible with the learning approach in project

[20] For details about participatory evaluation, see D. Narayan, 1993, *Participatory Evaluation: Tools for Managing Change in Water and Sanitation*, The World Bank, Washington D.C.

management. With participatory evaluation, community members become sources, analysts, and users of information on progress and problems in implementation. They serve as key actors in problem solving and in applying lessons learned from experience. Such evaluation is more effective than conventional techniques for the management of change. Participatory evaluation methods are useful in reaching those who are excluded. To ensure that women are included, participatory methods must often go hand in hand with special steps to build their confidence,[21] such as the following:

- Insure adequate representation in meetings
- Hold separate meetings
- Arrange seating appropriately
- Link women's participation with income-earning opportunities
- Raise the awareness of project staff.

[21] For details about some strategies for involving women, see lesson 3.

Checklist of strategy options for incorporating gender in water & sanitation

The following table broadly summarizes the choice of options discussed in the chapter for addressing gender in designing and implementing water and sanitation sector interventions.

Levels/Objectives/Options	**Key Stakeholders**[22]
Level: Country Policy **Objective:** Develop and implement more efficient, cost-effective, and demand-responsive water and sanitation policies by incorporating gender issues. **Options:** • Introduce gender issues in sector reviews, policy workshops, and other activities that are part of policy development. • Put gender issues on the agenda of annual sector meetings and policy implementation reviews. • Include gender expertise on policy development and implementation teams.	Government ministries, donor agencies, women's and other NGOs, and sometimes user groups
Level: National Water and Sanitation Programs **Objective:** Improve country-level program design and implementation by incorporating gender concerns. **Options:** • Include gender issues in country program framework. • Include gender-related guidelines and principles in country program. • Employ gender analysis in designing projects. • Include government staff with gender expertise in monitoring the national program. • Monitor gender issues regularly.	Government ministries, donor agencies, women's and other NGOs, and user groups
Level: Water and Sanitation Projects **Objective:** Design and implement projects that are driven by the demands of both men and women. **Options:** *Project Design:* • Structure project rules and procedures to facilitate participation by both men and women. • Determine gender roles in the sector in the proposed project area. • Determine barriers to gender-appropriate project implementation. • Determine steps to reducing or removing the barriers. • Make projects flexible so they may adapt appropriately as more is learned about gender issues. • Include a gender expert on the team during project design/preparation. *Implementation and Supervision:*	Project staff, local government, and user groups

[22] This column includes the broad categories of possible stakeholders at each stage of the program cycle. The stakeholders will vary by location and program and can be more accurately identified through a stakeholder analysis.

• Amend project rules and procedures as needed to facilitate participation by both men and women in implementation. • Ensure that project management is aware of the importance of gender issues through training, workshops, and study tours. • Include gender experts on project implementation staff. • Prevent "fade-out" on attention to gender through specific tracking during supervision *Monitoring and Evaluation (M&E):* • Collect, tabulate, and analyze indicators by gender as appropriate. • Include specific indicators addressing gender issues in project M&E systems. • Examine gender-related M&E indicators during supervision.	

Level: Community
Objective: Increase project sustainability by improving implementation at community level.
Options:
Project Design:
• Base men's and women's involvement on the local cultural context: for example, separate meetings of men and women or female staff meeting with community women, where necessary.
• Use participatory techniques to ensure both women's and men's participation in project decisionmaking concerning:
  ◦ Technology choice
  ◦ Cost recovery
  ◦ O&M arrangements.
• Obtain men's and women's preferences about
  ◦ Technology design
  ◦ Siting of facilities.
 	
Operations and Maintenance:
• Suggest that a certain percentage of water and sanitation committee members be women.
• Suggest that women should hold at least one water and sanitation officer post, such as treasurer.
• Provide training for both men and women in the roles they are to fill in the project.
• Include additional training for women in leadership and organization, as appropriate.
• Train both women and men in basic O&M techniques.
	Project staff, community members, and women's and other NGOs

CHAPTER IV: GOOD PRACTICE ON GENDER IN WATER AND SANITATION

This section contains detailed examples of good practice, all from World Bank–supported water and sanitation projects that also promote attention to gender issues.

A. Listening to Women in Project Design: the Baku Water Supply Project

The city of Baku in Azerbaijan faces a water supply crisis.[23] Water quality is poor, system losses are high, and cost recovery is grossly inadequate. Although nearly all of the city's 2.5 million people are officially connected to the public water system, many households receive water only 6 hours a day, 14 days a month. Of Baku's households, 87 percent believe that piped water is unsafe to drink.

Coping Strategies and Their Gender Implications

Although the public water service is inadequate throughout Baku, the poor suffer most. Households have developed strategies to cope with the unreliability and poor quality of the water, from boiling tap water and bringing water from distant sources to buying water from private vendors. Income, gender, age structure, and housing characteristics influence the type of coping strategy adopted, but most strategies require considerable time, effort, and resources. Households spend an average of 40 minutes a day securing water, a task that usually falls to women.

The Government and Bank Respond: Initiating a Social Assessment

In 1994 the government of Azerbaijan requested World Bank assistance in financing a project to improve the quantity, quality, and reliability of Baku's public water supply and support reform of the local water agency. A US$61 million IDA credit was approved for the project in June 1995. A *participatory social assessment* was conducted among local groups and households to help identify and involve key stakeholders in designing the project and to prepare measures to mitigate any negative impacts the project might have.

[23] Adapted from World Bank, 1995, *Advancing Gender Equality: From Concept to Action*, Washington, D.C.

Box 8: Key Strategies of Baku Project

- *Participatory social assessment* to identify stakeholders, evaluate social impact, and design mitigation measures for groups experiencing negative impact
- *Involvement of the Women's Committee*, a large women's NGO, in the social assessment, evaluation of social and environmental project costs, project design, and implementation
- *Contribution of social assessment to policy dialogue* on issues such as improved governance and privatization, pricing policies, environmental monitoring, and community specificity
- *Demand-responsive* project design based on findings of social assessment
  Increased community *ownership*

The social assessment included a series of rapid user surveys, consultations, and case studies. A stakeholder workshop brought together community members, user groups, government officials, local NGOs, academics, local experts, the media, and donors. The *Women's Committee*, a major NGO concerned with issues related to women and the family, played a large part in the assessment.

Costs of Unreliable Water Supply

The Women's Committee provided insights into the high social and environmental costs—including financial, social, and opportunity costs—associated with the unreliability and poor quality of water supply. One opportunity cost—often borne by women—is the added time spent fetching water. Women may spend hours a day trying to locate a source of running water and carrying the water home. Households headed by women, which are often poor, suffer the most in trying to cope, because they generally cannot afford to pay for alternative sources of water. Such households tend to expend more labor than capital in finding alternative water sources. They also are more likely to cope by reducing the amount of water they consume, so they bear a disproportionate share of the welfare losses associated with the unreliable water supply.

Implications for Policy and Project Design

At the stakeholder workshop, the Women's Committee proposed *ways to alleviate the burden on women* and identified *environmental interventions* to make the project more sustainable. The women also asked to be involved in designing and implementing a *consumer outreach program* to raise awareness about the need to conserve water, repair leaks, and ensure effective metering for improved cost recovery. The consultations led to the design of a *community-based program to reduce water leakages* in households. During implementation of the *Greater Baku Water Supply Rehabilitation Project*, the Women's Committee is helping *mobilize local communities* to participate in water conservation, meter repair, and leak prevention.

The participatory social assessment created opportunities to involve 800 households, neighborhood groups, the academic community, and NGOs in shaping the project. The insights gained from the assessment allowed project designers to make

adjustments to meet local needs. Most important, it allowed multiple groups of water users in Baku to voice their specific requirements and participate in planning and implementing the project.

B. Involving Local Communities in Low-Income Sanitation in Brazil

In February 1992 a World Bank mission went to Brazil to oversee a problem project.[24] The project was to bring water and sewerage to the urban areas, including the congested and difficult slums *(favelas)* of Rio de Janeiro; however, the implementing agency, Caixa Economica Federale, faced problems dealing with the slum dwellers. They did not pay their bills, illegal connections blossomed, and care and maintenance were the exception rather than the rule. For lenders and water companies alike, serving the slums was a losing proposition.

The Favela *Challenge*

Developing an effective and efficient water and sewerage system for the Rio *favelas* was a challenge: population density was high; the ground was often steep; virtually every bit of space was in use. The number of users and volume of water to be delivered determined the size of the pipe, regardless of whether a convenient place existed to lay it. At the same time, laying pipes, even underground, frequently generated disputes over ownership, which were difficult to adjudicate from outside. Engineers often disliked to negotiate their designs with nonengineers. Working closely with the people was necessary, but water companies could not negotiate directly with the 30,000 or more families that might inhabit the *favela*.

Toward Stakeholder Participation

Bank staff felt that *involving slum dwellers* in the design, operation, and maintenance of water and sewerage systems was the only way to prevent the cancellation of this innovative project. They adopted an action-research technique in community participation called *"structured learning."* The project team required the engineering companies bidding under the project to team up with community participation NGOs or individual specialists. *Stakeholder participation* was added as a criterion for bid evaluation to more standard items such as neighborhood size, income, and investment limits. The water companies defined participation on their own, and the project team used structured learning to keep abreast of what was happening. They structured the learning to track:

- Methods of "revealing" specific, price-sensitive demand, rather than assuming demand existed
- Effect of community involvement on speed, cost, and effectiveness of project design
- Financial responsibility for O&M—users, cross subsidies, or capital subsidies
- The nature, kind, and ease of collective decisionmaking

[24] Adapted from World Bank, 1996, *World Bank Participation Sourcebook,* Environmentally Sustainable Development Vice Presidency, Washington, D.C.

- Project outcomes and impact.

In one of the two basic approaches that evolved, project design emerged from community involvement. This approach was piloted in a *favela* near Rio called Morro do Estado.

Building Community Trust

For Morro, the project team identified an engineering firm that was willing to work with *favela* dwellers and had experience in designing small-scale, affordable, and effective water and sanitation systems. The firm first had to learn about the community, how it was organized, and how it operated. They identified stakeholders and also community leaders, most of whom were associated with religious, sports, or other kinds of clubs that exist in communities everywhere.

Box 9: Key Strategies of Brazil Project

- *Learning* approach
- *Stakeholder participation* through partnership between the community and engineers
- Recognition of *women* as effective representatives of the local community
- Community *negotiation* of project design and management, accommodating local demand with affordability and technical feasibility
- Community—especially women's—*ownership* and empowerment
- *Pilot* approach
- Use of *structured learning*

Women Representing the Community

The *women's clubs* proved the most effective instruments for working with the community. The women themselves became a critical factor in getting the subproject under way. More often than not, women were the actual heads of households. The men tended to come and go. The designers met the women first when they came into the community and worked with them on a daily basis to organize local involvement. In a real sense, women were the local community. Designing a functioning water and sanitation system run by a modern state water company became a social, iterative process involving trust and mutual learning between experts and users.

Early Procurement and the Condominium Approach

The procurement process was started early and made the project real for the community. It motivated them to organize and work effectively with the water company. The subproject developed the *condominium approach* in which groups of families negotiated and committed to operate and maintain service to a group of twenty to fifty dwellings. Designers were *flexible* in accommodating the women's wishes in matters such as condominium formation and water tank siting. This made it possible to work out *affordable solutions* that took care of both individual and communal needs.

The people could decide what they could afford, and the water company would recover its capital and operating costs.

Cost Implications

Is this approach cost-effective? The Morro do Estado pilot subproject took six months to design at a cost of about US$100,000. It was primarily a learning exercise, whose lessons flowed into work in larger *favelas.* The design cost of the pilot worked out to US$15 per capita. More important, it led to final total costs that were not only within the investment parameters set by the original Bank-financed project but were also almost *50 percent below* the state water company estimates.

Community Ownership and Empowerment

The project is doing more than providing water and sewerage to a *favela*. It has become a starting point for individual and community development. Women in the community now look forward to receiving water bills at "their" condominiums. They say, without being asked, that they intend to pay their bills. Project sustainability will also require other measures: governance, economic management, and job opportunities. But the empowerment of the community and its women generates confidence that these systems will endure.

C. Gender as a Critical Variable in Lesotho's Rural Sanitation Program

Lesotho's National Rural Sanitation Program (NRSP)[25] began in 1983 as a single-district pilot and has been expanded gradually into a nationwide program, with the assistance of various donors, including the UNDP-World Bank Water and Sanitation Program and the UNDP/PROWWESS (Promotion of the Role of Women in Water and Environmental Sanitation Services) program.[26] The sociocultural and educational aspects of the program have been critical to its overall success.

Innovative Features of NRSP

The NRSP is particularly interesting because it has successfully *integrated the private sector* into its implementation strategy, with government playing a largely organizational and facilitating role. The NRSP has achieved a significant degree of *user cost recovery*, in which beneficiaries pay for construction costs of improved pit latrines, including materials and builders' wages. This level of user cost recovery has been made possible by high user demand, raised through village-level health and hygiene education campaigns. User interest and understanding of improved sanitation has been heightened through attention to *community involvement and organization*, which has improved not only coverage rates, but long-term sustainability as well.

Box 10: Key Strategies in Lesotho's NRSP

- Training of latrine builders, of whom 25 percent are women
- Training of village health workers, usually women
- Focus on women as a target group for health and hygiene education
- Focus on community involvement and organization, resulting in improved coverage and long-term sustainability
- Responsibility of women's groups for overall community improvement
- Eliciting of user demand through village education campaigns, resulting in significant user cost-recovery levels
- Creation of a women's liaison adviser position to promote women's involvement in decisionmaking
- Upscaling from pilot project to national program

Women Latrine Builders

An important aspect of the program is training local latrine builders. One in four of all latrine builders trained is a woman (see Box 11). Interesting contrasts exist between men's and women's orientation and attitude toward the work. Men are generally better versed in construction techniques and have more of a market orientation then women.

[25] Adapted from World Bank, 1990, *Rural Sanitation in Lesotho: From Pilot Project to National Program*, Water and Sanitation Discussion Paper Series No. 3, Washington, D.C.

[26] In the early 1990s, PROWWESS merged into the UNDP-World Bank Water and Sanitation Program, now known as the Water and Sanitation Program (WSP).

Women are more aggressive in creating a demand for their latrine-building skills, having no qualms about house-to-house promotion. Unlike the men, they almost always work with a partner.

Although women latrine builders have built fewer latrines than the men, they often seem to be more strongly motivated by cooperation than profit. Even where the less well-off cannot ensure payment, the women builders are willing to take the risk of building latrines for them. Women are also more inclined to try to keep prices down, despite dissatisfaction with pay. They have also been known to put effort into voluntarily training other women as latrine builders, thus, creating greater local capacity for O&M of systems.

Women as Village Health Workers

The program has also trained volunteer village health workers, who are generally women and are elected by their communities to act as liaisons with the formal health system. The village health workers are the *final link between the NRSP's participatory health education activities and the community*. They are indispensable in translating health policies into reality. They assist in protecting water sources from contamination and help masons build latrines. They also render first aid, weigh babies, perform immunizations, give health counseling and referrals to members of the community, and assist in health emergencies. In this way, they serve as *change agents*. Through their efforts, they help to promote both awareness about health and hygiene and health-seeking behavior within the community. Many of the women latrine builders have also become village health workers.

Box 11: Profile of a Latrine Builder in Lesotho

Two latrine builders live in the Monnanyane household in Tsime, Butha-Buthe district: Mr. Monnanyane, who works as a house builder and occasional latrine builder, and his wife Mrs. Mateboho Monnanyane, who pursues latrine building full time and has completed forty of them, perhaps more than any other woman in the country.

Mrs. Monnanyane actively markets her skills, going to neighboring towns to offer her services. She goes house to house, telling of the importance of having a latrine; sometimes, she visits the local chief to get his support. She has trained five other builders, one man and four women, who are now constructing latrines on their own. Although the number of builders has increased, she says plenty of demand still exists for her work.

Because Mrs. Monnanyane belongs to the community, some people do not pay her as much as they would pay someone from the outside. Regardless of the labor involved in digging in each area, she is paid the same amount for each job—around 70 maloti (US$35) per latrine, which is also about 30 maloti less than many men earn. What keeps her going? "I want to make an impression on the village," she says. "There is competition when I go to other villages, but people request me because I have a good reputation. This is my work." Mrs. Monnanyane's success has led to thoughts of expansion. Her background as a village health worker has convinced her of the need for improved latrines. She is now considering buying materials and constructing latrine superstructures at her house to increase production.

Expanding Role of Support Organizations

Lesotho has 4,225 village health workers, often referred to as "village nurses" by rural residents. Recognizing their key placement and their generally high stature in their communities, the rural sanitation program has gradually increased the role of village health workers in health and hygiene education and latrine construction training courses. Three-day participatory workshops are held to include village health workers in the team approach to health campaigns in villages during pre- and post-construction phases.

The village health workers are motivated primarily by the desire to help their fellow villagers. Assessments show that the members of the community are satisfied with the services of the village health workers. Eighty-seven percent of the village people felt that health in their communities improved as a result of the work of these volunteers.

Targeting Women for Health Education

Women have also been identified as a specific segment of the rural community to whom hygiene education needs to be targeted. At any given time half of the able-bodied men in Lesotho are estimated to be away as migrant workers, leaving women with the major responsibility for managing rural economic and social life. Despite the fact that women hold senior positions within the government, head a majority of households, are more often physically present in the villages, and have higher levels of education than men, they have proved a *difficult group to reach* in the health and hygiene education effort.

Institutionalizing Gender in NRSP Management

To identify strategies to involve women actively in decisionmaking and to ensure that the benefits of extension services reach women, a *women's liaison adviser* position was created within the NRSP with UNDP/PROWWESS assistance. The adviser's mandate was to work closely with health education as well as monitoring and evaluation officers at the national level. At the district level, the adviser worked closely with district sanitation teams to identify existing women's groups and their modes of functioning, as well as their needs and problems.

Role of Women's Groups

Participatory approaches have been successful in raising the level of involvement of women's groups in the NRSP, because the groups have begun to take on more *responsibility for overall community improvement*. One women's group has created an informal *revolving credit* system to build household latrines, whereas others have recently sought advice on how to set up and manage credit systems for constructing latrines and communal water systems.

D. Learning About Integrating Gender Through a Pilot Project in Nepal

In 1992 preparations began for the proposed US$21.2 million national Rural Water Supply and Sanitation (RWSS) Program in Nepal. In March 1993, as part of project preparation, the innovative forty-month field-testing program JAKPAS[27], was initiated to test and refine proposed strategies.[28] The US$3.2 million pilot program is funded by a World Bank–executed Japanese grant and managed by the UNDP/World Bank Water and Sanitation program. The program includes an autonomous RWSS-fund to support demand-led, community-based water and sanitation initiatives.

Twenty-nine implementing agencies or support organizations, from the private sector, mostly NGOs, are participating, and 138 communities representing about 60,000 beneficiaries are participating in the pilot. The subproject cycle has three main phases:

- *Predevelopment phase.* Support organizations and subprojects are selected in the, based on a set of transparent eligibility criteria, including felt need, sustainability, and technical, economic, and environmental soundness. The support organization completes a prefeasibility study.
- *Development phase.* The water user committee with support organization assistance prepares a feasibility study of its own water supply and sanitation system, which forms the basis for a contractual agreement with the project.
- *Implementation phase.* The support organization provides hygiene and sanitation education, trains the water user committee and village maintenance workers, and supports the beneficiaries in constructing the subproject.

Box 12: Key Strategies of JAKPAS

- Field testing through the *pilot*
- *Learning* approach
- Mandatory membership on water user committees for both men and women
- Tapstand maintenance through women-only committees
- *Experimentation* with all-men's, all-women's, and mixed committees
- *Gender training* to support organizations
- Recognition of *differential incentives* for participation among men and women
- Women involved in *traditional and nontraditional* activities, including income generation and skill training
- Women's mobilization included as a project impact evaluation *indicator*

Gender Focus and Experimentation in Constituting Committees

[27] JAKPAS stands for *Janta Ko Khane Pani Ra Safai Karyakram.*

[28] Adapted from Wendy Wakeman, 1995, *Gender Issues Sourcebook for Water and Sanitation Projects*, UNDP-World Bank Water and Sanitation Program, Washington, D.C.; various quarterly progress reports of the World Bank's JAKPAS project, 1994–95.

The JAKPAS pilot project has a strong focus on gender. For instance, it requires the participation of both men and women in decisionmaking through membership on *water user committees*. Their involvement guarantees that decisions are practical and meet the needs and demands of the users.

In addition, women-only *tap stand committees* have been formed. These are responsible for maintaining the tap stands on a daily basis. Most villagers interviewed—both men and women—felt this was good: because women use the tapstand every day, they should be the ones to keep it clean. They are also the ones who will know when something has gone wrong and can report it to the water user committee.

Support organizations have been given *gender analysis training* and are encouraged to be more equitable in community-organizing activities. Some support organizations have experimented *with all-women's* water user committees, assisted by *all-male* construction committees. In general, the project has found *mixed committees* to be more effective for some purposes than single gender committees. For example, both men and women need to be involved in construction activities and to obtain full consensus on tap siting and similar decisions.

Recognition of Gender Differences

The project has also learned that it can make use of the differential incentives for men and women. For instance, women often benefit more directly than men from improved water facilities and so may have a greater incentive to work for project success. Rural communities in the project area recognized this. The water user committee in one area decided that each household should contribute an equal amount of cash for the new water system; yet, they had problems collecting the full amount required. Because they could not raise enough money, they returned what they had collected to the concerned households. Rather than give up, however, the water user committee asked some village women to go house to house to convince others and collect the money. These women, selected from those who would benefit directly from the project, were able to convince other women, who in turn convinced their husbands to contribute their share. Families who could not contribute their share of the money contributed labor instead.

Women in Traditional and Nontraditional Activities

During field visits, support staff of the support organizations identify the potential for engaging women in traditional and nontraditional activities in the project. The pilot has identified several *income-generating activities* and *skill training* needs for women. One of the *indicators for evaluating project impact* is whether more women have been mobilized as active partners. This is measured by women's *increased representation* on water user committees and in activities such as *healthy home studies* and *participatory planning* exercises. For successful scaling up of the pilot activities during the RWSS project, JAKPAS recommends that each district with an ongoing water supply and sanitation program should have enough staff to undertake hygiene and

sanitation activities. In particular, a sufficient number of *women* should be appointed *as district-level staff* and be given adequate authority.

Initial Results

Preliminary findings indicate that the project's demand-driven approach and participatory process has resulted in a *higher beneficiary willingness to contribute* to capital costs: on average, they are willing to contribute 40 percent of scheme costs. This is also resulting in greater willingness to contribute 100 percent to O&M costs. This willingness to pay contrasts with typical client participation in government schemes, in which both capital and O&M costs are fully subsidized. In addition, the *performance of support organizations* has been encouraging. With the support of support organizations, most communities have successfully formed water user committees, which have made advances in planning and construction. Membership in the majority of the committees are representative in terms of gender and ethnicity. Lastly, the participatory process adopted by the projects has *taken more time than originally expected*. The scheme cycle that has emerged has a duration of 36 months, as compared to the cycle of 18 months as originally foreseen. Although the development phase is sometimes considered time consuming, it generally results in much stronger water user committees and fewer post-construction problems.

E. Integrating Gender into a Community-Based Project in Sri Lanka

The Community Water Supply and Sanitation Project (CWSSP) is a joint initiative of the government of Sri Lanka and the World Bank for providing water supply and sanitation facilities and hygiene education to about 650,000 people in selected rural districts of Sri Lanka.[29] The project was approved in 1992 and is currently operational.

A Demand-Based Approach

The CWSSP strategy is based on recognition of the need to overcome past problems of community dependence on government assistance. It uses partner organizations as facilitators to create a sense of self-reliance in participating communities and to provide demand-based facilities to them. During the preparation phase, the project carefully developed a process for testing strategies, which were replicated on a larger scale if they were found sustainable. The community is involved in a step-by-step process of decisionmaking to generate ownership of the improved facilities. The technologies used are low-cost and suited to the varying natural conditions.

Importance of Ensuring Women's Participation

The CWSSP gives considerable attention to the role of women, both as users and as participants in project management. The following table, generated by the project team, shows how the project promotes women's participation through a series of incremental steps.

Table 3: Incremental Steps in Promoting Women's Participation in the CWSSP

Step	Activity
I	Data collection and analysis to assess gender issues and needs.
II	Small group formation, emphasizing participation of women at group discussions (often with representation of more than 50 percent women).
III	Selecting sufficient numbers of women representatives to form core groups. Awareness raising on resource mobilization, hygiene education, team work, and organization building.
IV	Facilitating representative decisionmaking at community-based organization level by ensuring women office holders (at least 30 percent) on executive committees.
V	Women's involvement in participatory survey, self-analysis, and project-planning activities. Responsibilities for hygiene education.
VI	Self-help group formation with women representatives to ensure proper construction management.
VII	Involvement of women in planning and execution of facilities, maintenance, and hygiene education.
VIII	Involvement in other village development activities: savings and credit, home gardening and nutrition, tree planting for water source protection, and training and skills

[29] Adapted from Julie Viloria and others, "The Community Water Supply and Sanitation Project [CWSSP]," unpublished project note, World Bank, ASTHR, Washington, D.C.

	development for income generation.
IX	Emergence of a sense of ownership for village development, shared by men and women.

Involving Both Men and Women

Despite the importance attached to the role of women, the CWSSP does not put women in a special position. Rather, it recognizes that the involvement of both men and women is required to plan and manage schemes and generate full community ownership. The project, therefore, seeks to improve women's influence and representation in the planning, execution, and management of activities. Tools such as village self-assessment and participatory planning exercises help ensure the participation of both sexes.

Box 13: Key Strategies of CWSSP

- Use of *partner organizations*
- *Strategies* are first *tested* for sustainability, then replicated on a larger scale
- Women as *users and participants* in project management
- Women's participation promoted through *incremental steps*
- Involvement of *both men and women* for full community participation
- *NGOs* facilitate integration of gender

Gender and NGO Participation

NGOs participate in all phases of the project. Their participation has especially facilitated the integration of gender, because NGOs have frequently challenged the validity of existing gender roles, the power relationships between men and women, individual perceptions about gender hierarchies, and changing gender roles in water and sanitation activities. The gender sensitivity of individual NGOs varies somewhat, and some have been found to be less gender-sensitive than others. Nevertheless, in general, their involvement has been catalytic in promoting attention to gender in the project.

Impact on Women's Roles

So far, the project has had a recognizable impact on women's role in society. Many young educated women in project villages who lacked employment opportunities received training and have joined the project as community facilitators. Some have been elevated to the position of community project managers. These women are now skilled in community development, mobilization, and demand-based project management. They have also functioned as trainers under the project. Women community facilitators have proved more efficient than men community facilitators in conducting village-level group discussions and training.

In several villages, women have come together in groups to take up saving and income-generating activities. The CWSSP-led initiative to offer young engineers the opportunity to learn rural infrastructure development has been of particular benefit to women engineers. Of a total of twenty-two engineers in the project, eight are women.

One of the three regional directors is also a woman. Among partner organizations, the gender ratio is 65:35, with women comprising 44 percent of community facilitators.

CHAPTER V: WHERE TO TURN TO FOR ADVICE

Several sources of expertise and information exist on gender issues in general and their incorporation in the water and sanitation sector in particular. These constitute a resource for task managers to tap when working on gender issues in water and sanitation. This chapter briefly lists some of the human resources both within and outside the Bank to which task managers can turn for advice and to supplement existing resources.

Table 4: World Bank Staff with Experience in Water and Sanitation and Gender, June 1996

STAFF MEMBER	UNIT
TECHNICAL GENDER SPECIALISTS	
UNDP-World Bank Water and Sanitation Program	TWUWS
Wendy Wakeman (Headquarters)	
Gladys Aristizibal (Ecuador/Bolivia)	
Rekha Dayal (India)	
Karen Jacob (Philippines)	
Rose Lidonde (Kenya)	
Charles Pendley (India)	
Annie Sevina (Côte d'Ivoire)	
Others	
Ayse Kudat	EMTEN
Julie Viloria	ASTHR
Tauno Skytta	OEDD3
TASK MANAGERS OF INNOVATIVE PROJECTS	
Lea Donaldson	SA3EI
Xavier Legrain	SA1EI
K. Minatullah	Pakistan
Robert Roche	AF4IN

A. Bank Staff Working on Water and Sanitation and GenderError! Bookmark not defined.

Table 4 lists some Bank technical staff in water and sanitation with experience in gender issues as of June 1996. In addition, a network of gender coordinators has been established within each region of the Bank to ensure that gender is incorporated into all lending activities and analytical work. Different approaches have been used in different regions. Table 5 lists the gender contact persons in the World Bank as of March 1996.

Table 5: Gender Focal Points in the World Bank,[30] June 1996

STAFF MEMBER	UNIT
ASIA	
Departmental Gender Coordinators	
Regina Bendokat	SA1PH
Magda Khouzam	SA1CO
Rashid Faruqee	SA2AN
Richard Skolnik	SA2PH
Gallus Mukami	SA2AN
Jennie Litvak	EA1CO
Ruth Kagia	EA1HR
Haneen Sayed	EA3PH
Nisha Agarwal	EA3CO
Tamar Manuelyan	EA2CO
Julia Li	EA2CO
Honorary Gender Coordinators:	
Barbara Herz	SA1PH
Maria Clark	SA2PH
Resident Mission Gender Specialists	
Meera Chatterjee	New Delhi
Wahida Haq (agriculture); Milia Ali (education); Shirin Jahangeer (population and health)	Bangladesh
Carla Bianpoen	Indonesia
Gender Analysis and Poverty Team	ASTHR
Lynn Bennett (team leader): principal anthropologist	
Benu Bidani (economist): labor and poverty	
Carlos Cuevas (economist): rural finance	
Pam Hunte (anthropologist)	
Nandini Gunewardena (anthropologist): agriculture & natural resource management	
Maniza Naqvi: participation and microenterprise	
Cecile Fruman: microenterprise	
AFRICA	
Gender Unit	AFTHR
Mark Blackden (coordinator); Margaret Grieco (sociologist)	
Departmental Gender Coordinators:	
Ann Duncan (designated), Vandana Chandra (alternate),	AF1PH
Nathalie Johnson (designated), Jacqueline Coolidge (alternate)	AF2PE
Eileen Murray (designated), Elaine Hubert (alternate)	AF3CO
Elizabeth Morris-Hughes (designated), Shiyan Chao (alternate)	AF4PH
Angelika Pradel (acting), Mark Woodward (acting alternate)	AF5PH

(continued on next page)

[30] From World Bank, 1996, *Implementing the World Bank's Gender Policies: Progress Report No. 1*, Washington, D.C.

STAFF MEMBER	UNIT
MIDDLE EAST AND NORTH AFRICA	
Regional Gender Coordinator: Roslyn Hees	MN1HR
VP's Office: Marisa Fernandez-Palacios	MNAVP
North Africa and Iran: Meskerem Mulatu	MN1HR
Middle East: Arun Joshi	MN2HR
LATIN AMERICA AND THE CARIBBEAN	
Regional Gender Coordinator: Aysegul Akin-Karasapan (senior operations adviser)	LATSO
A gender strategy group coordinates the regional gender strategy.	
The Central America and Venezuela Department has a gender specialist.	
The department's technical assistance unit has recruited a gender specialist.	
Departmental gender coordinators have recently been appointed.	
EUROPE AND CENTRAL ASIA	
WID Advisory Board:	
Marcelo Selowsky / Timothy King	
Kathie Krumm / Helen Sutch	
Dominique Lallement / Michal Rutkowski	
Kyle Peters / Ayse Kudat	
Jean-Jacques Dethier	
Regional Gender Coordinator: Kathie Krumm	ECAVP
Alternate: Dominique Lallement	EC4IN
HUMAN CAPITAL DEVELOPMENT	
Gender Analysis and Policy Group/Poverty and Social Policy Department:	GAP/PSP
Minh Chau Nguyen (manager)	
Michael Bamberger (senior sociologist)	
Ann Elwan (senior economist)	
Monica Fong (human resources specialist)	
Shahidur Khandker (economist)	
Andrew Mason (human resources economist)	
Parita Suebsaeng (manager, poverty/gender monitoring unit)	
Jacqueline Baptist (economist)	
Anjana Bhushan (sociologist)	
Jo Bischoff (editor)	
Hussain Samad (research analyst)	
Tara Vishwanath (economist)	
OED	
Josette Murphy	OEDD1
EDI	
Jerri Dell	EDIHR
Pietronella van den Oever	EDIHR

B. Selected Agencies Working on Gender Issues in Water and Sanitation

Several agencies have special expertise in gender issues in water and sanitation. Some are listed below in alphabetical order, with brief descriptions of the resources they provide. For further information about local or regional NGOs with experience in gender and water and sanitation, Bank staff may also contact TWUWS field-based staff mentioned in Table 4 above.

1. CD Resources, Inc.
   118 West 74th Street, Suite 2A
   New York, NY 10023 USA

   Tel. 212-580-2263

This agency has "Libraries-to-Go," which includes a full-text CD-ROM data base on "Women, Water, and Sanitation: Impacts on Health, Agriculture, and Environment." It contains about sixty documents published from 1979 to 1989. It costs approximately US$350, and the data base can be revised annually for a nominal charge.

2. Canadian International Development Agency (CIDA)
   200, Promenade du Portage
   Hull, Quebec, Canada K1A OG4

   Tel. 819-994-3256
   Fax 819-953-6356

   Contact: Marnie Girvan, Director, Women in Development and Gender Equity

CIDA has several excellent resources: a reference collection on gender issues and community participation in the sector, a consultants roster containing about forty CVs; and several guidelines for project work.

3. Danish International Development Agency (DANIDA)
   Ministry of Foreign Affairs
   Asiatisk Plads 2
   DK-1448 Copenhagen K, Denmark

   Tel. 45-33-92-00-00
   Fax 45-31-54-05-33

   Contact: Birgit Madsen, Women in Development (WID) Adviser

DANIDA has developed guidelines for water sector policy supporting women's involvement at all levels, including design, construction, O&M, and management of facilities for water and sanitation. It has also developed a WID policy paper with a perspective up to the year 2000 and a strategy paper for enabling women to influence development and share its outcomes. According to its WID policy paper, DANIDA is

to prepare a manual on why, when, and how to incorporate gender in projects, programs, and procedures. The manual is to include background materials, the gender policy paper, procedures, gender analysis training guidelines, case studies, operational checklists for incorporating gender in the respective sector policy guidelines and the project cycle, and guidelines on recruiting personnel.

4. Environmental Health Project
U.S. Agency for International Development (USAID)
1611 North Kent Street, Suite 300
Arlington, VA 22209-2111, USA

Tel. 703-247-8730
Fax 703-243-9004

The Environmental Health Project is a follow-up project that has replaced the erstwhile Water and Sanitation for Health (WASH) project. The WASH project was established in 1980 by USAID to provide technical assistance, guidance, materials, and methods for host governments, USAID missions and bureaus, and other agencies. The project's literature collection contains nearly 7,000 articles and reports on water and sanitation issues in developing countries, including a series of reports published during the WASH project on gender issues in the sector. Some of these are listed in the reference section of the tool kit.

5. Finnish International Development Agency (FINNIDA)
Department for International Development Cooperation
Ministry for Foreign Affairs
Katajanokanlaituri 3
SF-00160 Helsinki, Finland

Tel. 358-0-13-41-51/358-0-13-41-64-27
Fax 358-0-13-41-64-28

Contact: Irma-Liisa Pertunnen, Counselor, Coordinator in Cultural and Gender Issues

The strategy paper for Finland's development cooperation emphasizes the goal of gender equity and the systematic analysis and incorporation of gender. They have developed guidelines for rapid gender analysis (RGA) and several sectoral guidelines incorporating gender issues.

6. The International Reference Centre for Community Water Supply and Sanitation (IRC)
P.O. Box 93190, 2509 AD
The Hague, The Netherlands

Tel. 31-70-33-141-33

Fax 31-70-38-140-34

Contact: Christine van Wijk

The IRC, set up in 1968 under an agreement between the World Health Organization (WHO) and the Netherlands government, provides information and technology support for improving water and sanitation. It has published several documents on women, water, and sanitation, some of which are listed in the reference section of this toolkit. The IRC also holds workshops on water, sanitation, and gender issues.

7. The International Secretariat for Water (ISW)
48, Rue Le Royer Ouest
Montreal, Quebec, Canada H2Y IW7

Tel. 514-849-4262
Fax. 514-849-2822

The ISW is a support and counseling bureau for the mobilization of local communities involved in freshwater resource management. Its main objective is to promote interaction among actors on the local, national, and international scenes to facilitate cooperation, exchange of know-how, and adaptation of partnerships to a variety of circumstances. It offers support services for the organization and animation of training seminars and international conferences, as well as the design and presentation of projects to funding organizations. Services are also available for the elaboration of communication strategies, translation and access to data banks. Bank staff can also contact the ISW for information about local NGOs with experience in water and sanitation and gender issues.

8. The International Women's Tribune Center (IWTC)
777 United Nations Plaza
New York, NY 10017, USA

Tel. 212-687-8633
Fax. 212-661-2704

Contact: Anne Walker

IWTC has published a collection of its newsletters on issues, activities, and resources on women, water, and sanitation needs. It contains background information, tools, brief case studies, and references.

9. Kenya Water for Health Organization (KWAHO)
P.O. Box 61470
Nairobi, Kenya

Tel: 254-2-557550/552405

Fax: 254-2 543265

Contact: Mrs. Margaret Mwangola, Executive Director

KWAHO's main objective is to assist local communities in improving their health by providing safe drinking water and adequate sanitation through their own efforts and at their own pace. It has been at the forefront of involving women in water and sanitation sector activities. In its projects, women help decide on the siting of wells and receive training in the construction, installation, maintenance, and repair of hand pumps. The organization has amassed useful experience in addressing gender issues in project design and implementation. KWAHO facilitates several types of gender activities in community-based projects. These include training of both women and men caretakers for O&M using the village-level O&M (VLOM) concept. KWAHO also facilitates income-generating activities that target mainly women's groups, with the aim of uplifting their standards of living.

10. Netherlands Ministry of Foreign Affairs
Directorate-General for International Cooperation (DGIS)
P.O. Box 20061
2500 EB
The Hague, The Netherlands

Tel. 31-70-348-66-04/64-70
Fax 31-70-348-48-83

Contact: Antoinette Gosses, Acting Director, Special Program for Women and Development

The Netherlands' government policy on women and development emphasizes the need for women's active involvement in development to increase economic independence and self-reliance. A specific objective is improving women's access to and control over production factors, services, and infrastructure facilities. Their water policy document emphasizes an integrated approach, the active participation of users, and economic and social sustainability.

11. Norwegian Agency for Development Cooperation (NORAD)
Nedre Vollgt. 5
P.O. Box 8034
0030 Oslo 1, Norway

Tel. 47-22-31-43-22
Fax 47-22-31-44-01

Contact: Unni Poulsson Kramer, Special Adviser on WID

NORAD has been giving more importance to the role of women in water supplies. It emphasizes the involvement of women in planning, implementation, and follow-up and educating both men and women in water and health issues. Several of NORAD's operational strategies, sectoral guidelines, economic analyses, and program manuals contain a gender perspective. It is currently developing a handbook for assessing sociocultural and gender-related aspects in NORAD-funded projects. NORAD's information division contains a collection of in-house and outside publications on gender, including a document surveying the gender literature available in NORAD's library.

12. PROWWESS/United Nations Development Programme-
World Bank Water and Sanitation Program
The World Bank
S4-133
1818 H Street, NW
Washington, DC 20433 USA

Tel. 202-473-3994

Contact: Wendy Wakeman

PROWWESS has published a number of documents on gender issues and community participation in the sector, some of which are mentioned in the list of references. Many of these publications are available free of charge.

13. Swedish International Development Cooperation Agency (SIDA)
Birger Jarlsgatan 61
S-10525 Stockholm, Sweden

Tel. 46-8-698-51-65/50-00
Fax 46-8-698-56-42

Contact: Carolyn Hannan-Andersson, Gender Adviser

Through its 1984 water strategy, SIDA has emphasized people's, particularly women's, participation as essential to the sustainability of water and environmental health projects. Its strategy includes emphasis on simple technologies, social mobilization, women's membership in and election to officers' posts in water users committees, and training. SIDA has prepared several country gender analyses since the 1980s for partner countries and is now working on developing country strategies.

14. United Nations Children's Fund (UNICEF)
3 United Nations Plaza
New York, NY 10017, USA

Tel. 212-702-7270

Fax 212-702-7150

Contact: Margaret Karp

UNICEF works with governments in about 100 developing countries to help build community-based sector services. Recognizing that water supply alone does not suffice in achieving health improvements, in its programs UNICEF combines water supply, sanitation, and hygiene education as an integrated package. The agency's activities in the water and sanitation sector include provision of safe water for domestic use in rural and periurban areas. It provides support to projects around the world for installing water supply systems, including hand pumps, and sanitary waste disposal systems. It also supports studies on cost reduction and cost-effectiveness, time and energy devoted to water collection, and hygiene practices.

15. United Nations Development Fund for Women (UNIFEM)
304 East 45th Street
New York, NY 10017, USA

Tel. 212-906-6400
Fax 212-906-6705

Contact: Ilse Marks, Technical Officer

UNIFEM, which works in association with UNDP, provides direct financial and technical support in developing countries to low-income women who are striving to raise their living standards, including support for small-scale water projects for rural and urban poor women. It also funds activities that bring women into mainstream development decisionmaking.

16. United Nations Development Programme (UNDP)
1 United Nations Plaza
New York, NY 10017, USA

Tel. 212-906-5082
Fax. 212-906-5857

Contact: Rosina Wiltshire, Manager, Gender in Development Program,
Bureau for Policy and Programme Support

UNDP chairs the United Nations Steering Committee for Cooperative Action, which leads the global initiative for accelerating the provision of water supply and sanitation services after the International Drinking Water Supply and Sanitation Decade (1981–90). Before and during the decade, UNDP included articles on water and sanitation issues in its quarterly publication *SOURCE*. It continues to treat the subject in its new

quarterly magazine *CHOICES*. UNDP's Division of Information has several publications and audiovisual materials on water and sanitation for dissemination.

17. United Nations International Research and Training Institute for the Advancement of Women (INSTRAW)
P.O. Box 21747
Santo Domingo, Dominican Republic

Tel. (809) 685-2111
Fax (809) 685-2117

Contact: Margaret Shields, Director

(or)

DCI-1106, United Nations
New York, NY 10017, USA

Tel. 212-963-5684
Fax 212-963-2978

INSTRAW, in collaboration with the International Labour Office/Turin Centre and United Nations Department of Technical Cooperation ;and Development, has prepared a multimedia training package, costing approximately US$700, on women, water and sanitation. It contains five modules with transparencies and slides, covering the International Drinking Water Supply and Sanitation Decade and beyond; women's participation in planning, choice of technology, and implementation of sustainable water and sanitation projects; women's role in hygiene education and training activities for water and sanitation projects; women's involvement in management of water resources, water supply, and waste disposal; and evaluation and monitoring of water and sanitation programs, projects, and the role of women. Each module contains a user's guide, trainer's guide, text, additional reading, bibliography, key issue checklists for group work, and two evaluation forms.

A version of this training package is targeted at audiences lacking literacy. Using a participatory approach, the package consists of a trainer's manual, a set of ten modules for trainers, and eighty large drawings with simple captions.

INSTRAW has also issued a series of reports on training seminars, held in Kenya, Ethiopia, Sudan, Somalia, Thailand, Nigeria, and the Gambia, which explore the application of this and an earlier training package.

18. WorldWIDE Network
1331 H Street, NW, Suite 903
Washington, DC 20005 USA

Tel. 202-347-1514
Fax 202-496-0552

The WorldWIDE Network is focused on establishing a network of women concerned about environmental management and protection. It publishes an annual directory listing the names, addresses, interests, and expertise of women who participate in WorldWIDE's international network. It has also compiled over 200 success stories that formed the subject of a global assembly on women and the environment convened by WorldWIDE on behalf of UNEP in 1991.

CHAPTER VI: SOURCES OF FUNDING

This section gives a brief idea of some of the supplementary sources of funding available to Bank managers in working on gender issues in the water and sanitation sector.

A. Trust Funds

Through the World Bank's Consultant Trust Fund Program (CTFP), participating donor countries make grant funds, generally tied, available to complement the Bank's own resources for technical assistance activities, preinvestment studies, and activities supporting the lending program. The CTFP now encompasses forty-seven consultant trust funds (CTFs) established by twenty-six different donors. The following briefly summarized the CTFs that managers can tap for gender-related work in the water and sanitation sector.[31]

1. AUSTRIA: General Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Austrian nationals only One assignment in a 12-month period (exceptions granted only with prior Government approval, in cases of follow-up activities)
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel and Subsistence
APPROVAL AUTHORITY	Up to 40 working days: World Bank Over 40 working days and special studies: Government (Ministry of Finance)
ELIGIBLE COUNTRIES	Borrowing member countries, excluding Central and Eastern Europe & the CIS countries
ELIGIBLE SECTORS	No restrictions. Primary sectors: agriculture, education (technical), energy, industry (rehabilitation of steel plants, etc.), health, transport, **water & sanitation**, project analysis (technical, economic, financial, social, institutional, environmental and procurement), and mining
ELIGIBLE ASSIGNMENTS	Short-term operational assignments for development projects, programs and studies
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Mag. Harald Sitta Ministry of Finance, Vienna, Austria Tel: (43-1) 51433-2282 Fax: (43-1) 513-0816 Mr. Walter Rill Executive Director Rm. D-12-041 Tel: (202) 458-4661 Fax: (202) 522-3453 Mr. Gunter Kleedorfer, Austrian Trade Commission

[31] The information on consultant trust funds provided here is up-to-date as of April 1996. Those interested in later updates should refer to the consultant trust fund data base on the Bank's All-in-One system.

	Austrian Embassy Commercial Office 1350 Connecticut Avenue, NW, Suite 501 Washington DC 20036 Tel: (202) 835-8962 Fax: (202) 835-8960
SPECIAL NOTES	Under negotiation to remove restriction on frequency of assignment

2. CANADA: Consultant Trust Fund (country specific)	
ELIGIBILITY OF CONSULTANT	Canadian nationals or landed immigrants Resident nationals of Canadian ODA-eligible countries (in conjunction with Canadian consultants)
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	World Bank
ELIGIBLE COUNTRIES	Funds currently earmarked for : China, Philippines, Egypt, Caribbean countries and South American countries (Bolivia, Colombia, Peru and Venezuela)
ELIGIBLE SECTORS	**No restrictions**
ELIGIBLE ASSIGNMENTS	Short-term missions relating to the identification, preparation, appraisal, supervision and evaluation of Bank loans and credits including economic and sector work and other Bank operational activities
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5-53) Tel: 473-1220
GOVT. CONTACT PERSON	Ms. Vivien Escott, Senior Program Manager International Financial Institutions Multilateral Programs Branch Canadian International Development Agency (CIDA) 200 Promenade du Portage Hull, Quebec, Canada K1A 0G4 Tel: (819) 994-3881 Fax: (819) 953-5348 Mr. David Brown, Commercial Counselor Office of Liaison with International Financial Institutions Embassy of Canada 501 Pennsylvania Avenue, NW, Washington, DC 20001 Tel: (202) 682-7719 Fax: (202) 682-7789
SPECIAL NOTES	The earmarked funds are managed by the Country Departments concerned. For use of the funds contact: China, Mr. D. Rix; Philippines, Ms. E. Jorgensen; Egypt, Mr. A. Bjorgung; Caribbean and South America, Mr. Robert Crown

3. DENMARK: General Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Danish nationals Local consultants
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	(1) Short-term: Up to US$100,000, World Bank Over US US$100,000, Government (2) Large studies: Government in principle
ELIGIBLE COUNTRIES	OECD's DAC list countries (GNP per capita of up to US$2,695) and Kyrgyz Republic, Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan
ELIGIBLE SECTORS	No restrictions. Particular attention given to environment, poverty alleviation, private sector development, **WID**, and technical training.
ELIGIBLE ASSIGNMENTS	(1) Short-term operational assignments in connection with economic and sector work, identification, appraisal and supervision of Bank-financed projects and programs, or other activities as may be agreed on (2) Large studies relating to economic and sector work and project planning
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Mr. Ole Blicher Olsen Head of Procurement Division Mr. Sigurd Schmidt/ Mr. Peter B. Jensen Ministry of Foreign Affairs, DANIDA, 2 Asiatisk Plads DK-1448 Copenhagen K, Denmark Tel: (45-33) 92-00-00 Fax: (45-31) 54-05-33
SPECIAL NOTES	

4. NETHERLANDS: General Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Dutch nationals Consultants of low- and middle-income member countries
MAXIMUM AMOUNT EACH ASSIGNMENT	NLG 400,000
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	World Bank (priority given to short-term assignments not exceeding US$50,000)
ELIGIBLE COUNTRIES	See Attachment I
ELIGIBLE SECTORS	See Attachment II
ELIGIBLE ASSIGNMENTS	Feasibility or prefeasibility studies, sector or subsector investment studies and sector or subsector assessment studies, etc.
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Mr. Marinus van Wier, First Secretary (Economic) Royal Netherlands Embassy 4200 Wisconsin Avenue, NW Washington DC 20016 Tel: (202) 244-5300 Fax: (202) 966-0737
SPECIAL NOTES	(1) **Special allocation for WID-specialized consultants to be engaged in the preparation of projects which promote more active participation of women in the development (WID) process, or for sector studies related to the participation of WID process**. (2) Allocations made in Netherlands Guilders (NLG)

List of Eligible Countries (Attachment I)

ASIA: Bangladesh, Bhutan, Cambodia, India, Kyrgyz Republic, Mongolia, Nepal, Occupied Territories, Pakistan, Sri Lanka, the Philippines, Vietnam and Yemen
AFRICA: Angola, Benin, Burkina Faso, Cape Verde, Egypt, Eritrea, Ethiopia, Ghana, Guinea-Bissau, Kenya, Mali, Mozambique, Namibia, Niger, Rwanda, Senegal, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia and Zimbabwe
LATIN & CENTRAL AMERICA: Bolivia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Netherlands' Antilles & Aruba, Nicaragua, Peru and Suriname
EUROPE: Albania, Armenia, Azerbaijan, Bulgaria, FYR Macedonia, Georgia, Moldova and Romania

List of Eligible Sectors (Attachment II)

1. **No restrictions, but preference** to activities closely corresponding with major Dutch development policy goals. Environment-related activities excluded.
2. For most eligible countries, this means that the assignments preferable support the major goal of Dutch development assistance, that is, poverty alleviation (e.g., activities that promote sustainable economic growth, equitable income distribution, the satisfaction of basic needs, **participation**).
3. For the following two categories of countries, the proviso about close correspondence to Dutch development policy goals will somewhat limit the use of funds.

> Dutch development policy in the following countries concentrates on emergency and humanitarian or reconstruction aid: Angola, Cambodia, Eritrea, the Occupied Territories, Somalia and Sudan.
>
> Dutch development policy in the following countries concentrates on institutional aid and macroeconomic support to stabilize and transform the economy: Albania, Armenia, Azerbaijan, Bulgaria, FYR Macedonia, Georgia, Kyrgyz, Moldova, Mongolia, Namibia, Romania, South Africa and Vietnam

5. NETHERLANDS: Eastern & Central Europe Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Dutch nationals Local consultants (in conjunction with Dutch consultants; residency required)
MAXIMUM AMOUNT EACH ASSIGNMENT	Up to NLG 1,000,000
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	Up to NLG 250,000: World Bank Over NLG 250,000: Government - requests channeled through CFSOC
ELIGIBLE COUNTRIES	Belarus, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Montenegro, Poland, Russia, Serbia, Slovak Republic, Slovenia, Ukraine
ELIGIBLE SECTORS	See Attachment
ELIGIBLE ASSIGNMENTS	Preparation, appraisal, supervision of Bank-financed projects and programs for special studies
CFSOC CONTACT PERSON	Mr. Myung-Kyu Lee (Q-5035) Tel: 473-1212 Ms. Jennifer Thomas (Q-5044) Tel: 473-1221
GOVT. CONTACT PERSON	Mr. Marinus van Wier, First Secretary (Economic) Royal Netherlands Embassy 4200 Wisconsin Avenue, NW Washington DC 20016 Tel: (202) 244-5300 Fax: (202) 966-0737 Mr. Loes de Maat, Senior Policy Advisor Directorate General Foreign Economic Relations Ministry of Economic Affairs P.O. Box 20101, 2500EC, The Hague, The Netherlands Tel: (31-70) 379-6437 Fax: (31-70) 379-7361
SPECIAL NOTES	Allocations made in Netherlands Guilders (NLG)

List of Eligible Sectors (Attachment)

1. Land and Water Development: rainfed and irrigated agriculture; land reclamation, drainage, dredging, land reclamation; "polder" development, dams and dukes, coast protection; erosion control; coastal management systems; planning, design and construction of hydraulic works; flood control; tunnels and aqueducts.

2. Agriculture and Rural Development: agriculture sector and policy analysis; integrated rural development policy approach; food security and food production strategies; institutional and physical infrastructure; animal husbandry (dairy, poultry, pigs); distribution and marketing of agricultural products; rural extension services.

3. Harbor, Road and Transport Development: Harbor organization, management and construction; inland water transport; road engineering and maintenance; shipbuilding, airport planning.

4. Industrial Development: logistics and distribution systems; urban traffic systems and technology; telecommunications; shipbuilding and trucks; aerospace industry; chemical plants and equipment; food processing; packing.

5. Management Development: government, private sector, and semipublic management development

6. Water Utilization and Environmental Development: water management systems; water quality control; aquatic eco-systems; energy efficiency; waste management; environmental impact assessment; environmental management (government and industry); drinking water supply; ground water identification; water purification, sanitation; solid and liquid waste disposal, waste recycling.

7. Energy Development: renewable and rural energy, including wind and solar energy; exploration and exploitation of gas; power generation design and engineering; energy saving in industry.

8. Agro-Industrial Development: marine and inland fishing; processing.

9. Financial Services: banking services; insurance service; government regulations according to monetary policy id.; financial engineering; agricultural financing and credit; export financing; government debt trading.

6. NETHERLANDS: Environment Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	No nationality restrictions
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	World Bank
ELIGIBLE COUNTRIES	See attachment
ELIGIBLE SECTORS	**Environment-related** activities
ELIGIBLE ASSIGNMENTS	Studies and technical assistance Activities related to the environment
CFSOC CONTACT PERSON	Mr. Myung-Kyu Lee (Q-5035) Tel: 473-1212 Ms. Jennifer Thomas (Q-5-44) Tel: 473-1221
GOVT. CONTACT PERSON	Marinus van Wier, First Secretary (Economic) Royal Netherlands Embassy 4200 Wisconsin Avenue, NW Washington, DC 20016 Tel: (202) 244-5300 Fax: (202) 966-0737
SPECIAL NOTES	Allocations made in Netherlands Guilders (NLG)

List of Eligible Countries (Attachment)

ASIA: Aral Sea area, Bangladesh, Bhutan, India, Kyrgyz Republic, Mongolia, Nepal, Pakistan, Sri Lanka. the Philippines and Vietnam.
AFRICA: Benin, Burkina Faso, Cameroon, Cape Verde, Egypt, Ethiopia, Ghana, Guinea-Bissau, Kenya, Mali, Mozambique, Niger, Occupied Territories, Rwanda, Senegal, Sudan, Tanzania, Uganda, Zambia and Zimbabwe.
LATIN & CENTRAL AMERICA: Bolivia, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Netherlands' Antilles & Aruba, Nicaragua, Peru and Suriname.

7. NETHERLANDS: Consultant Trust Fund for Poverty Assessments	
ELIGIBILITY OF CONSULTANT	No nationality restrictions
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel and Subsistence
APPROVAL AUTHORITY	World Bank
ELIGIBLE COUNTRIES	See Attachment
ELIGIBLE SECTORS	**No restrictions**
ELIGIBLE ASSIGNMENTS	Poverty assessment, including analytical and filed work, policy analysis, preparation of broad-based poverty reduction strategies, local workshops and other dissemination activities (the assignment should involve activities that are additional to regular World Bank poverty assessment work)
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Marinus van Wier, First Secretary (Economic) Royal Netherlands Embassy 4200 Wisconsin Avenue, NW Washington, DC 20016 Tel: (202) 244-5300 Fax: (202) 966-0737 Mr. Leen Boer, Poverty Coordinator Technical Advice Section (DST/TA) Directorate General International Cooperation Ministry of Foreign Affairs P.O. Box 20061, 2500 EB The Hague, The Netherlands Tel: (31-70) 348-5300 Fax: (31-70) 348-5956
SPECIAL NOTES	Funds under this CTF have been earmarked for Africa, Asia, ECA and LAC regions. For access to funds, contact the regional poverty coordinators.

List of Eligible Countries (Attachment)

Geographic distribution as follows:	
Africa	60%
Asia including Yemen, focusing on South Asia	20%
Latin America and the Caribbean, focusing on Central America	10%
Europe	10%

ASIA: Bangladesh, Bhutan, Cambodia, India, Kyrgyz Republic, Mongolia, Nepal, Occupied Territories, Pakistan, Sri Lanka. the Philippines, Vietnam and Yemen.
AFRICA: Angola, Benin, Burkina Faso, Cape Verde, Egypt, Eritrea, Ethiopia, Ghana, Guinea-Bissau, Kenya, Mali, Mozambique, Namibia, Niger, Rwanda, Senegal, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia and Zimbabwe.
LATIN & CENTRAL AMERICA: Bolivia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Netherlands' Antilles & Aruba, Nicaragua, Peru and Suriname.
EUROPE: Albania, Armenia, Azerbaijan, Bulgaria, FYR Macedonia, Georgia, Moldova and Romania.

8. NORWAY: Special Studies Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Norwegian nationals Nationals of borrowing member countries Other nationals (provided that the Bank will endeavor to select consultants from Norway and borrowing member countries)
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	Up to US$100,000: World Bank Over US$100,000: Government - requests channeled through CFSOC
ELIGIBLE COUNTRIES	IDA-eligible countries, priority given to Sub-Saharan Africa
ELIGIBLE SECTORS	Priority sectors: agriculture, natural resources management, education, health, and cross-sectoral issues (e.g., environment, poverty reduction, issues related to structural adjustment processes and **gender**)
ELIGIBLE ASSIGNMENTS	Innovative and catalytic studies, workshops and pilot activities in connection with the Bank's work program
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Mr. Helge Semb, Chief Ms. Kari Hirth, Executive Officer Development Bank Division Department of Multilateral Development Cooperation Royal Ministry of Foreign Affairs Oslo, Norway Tel: (47-22) 343-991 Fax: (47-22) 838-234 Mr. Asbjoern Lovbraek Office of the Executive Director Rm. D-13-031 Tel (202) 458-1083 Fax: (202) 477-6818
SPECIAL NOTES	Allocations made in Norwegian Kroner (NOK)

9. SPAIN: General Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Spanish nationals only
MAXIMUM AMOUNT EACH ASSIGNMENT	$25,000 Maximum daily fee rate: US US$600
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	Up to US US$25,000: World Bank (on the basis of Government's no-objection) Over US US$25,000 & studies: the Government (deemed approved after 10 days) - requests channeled through CFSOC
ELIGIBLE COUNTRIES	No restrictions
ELIGIBLE SECTORS	Energy generation, transport and distribution; industry, including agro- and forest industries; telecommunications; mining; **water supply & sewerage; water treatment plants; urban solid waste**; irrigation; urban transport; and health industry
ELIGIBLE ASSIGNMENTS	Short-term operational assignments and studies
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: (202) 473-1228 Fax: (202) 477-7019 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Mr. Eduardo Melchior Embassy of Spain 2558 Massachusetts Avenue, NW Washington, DC 20008 Tel: (202) 265-6704 Fax: (202) 265-9478
SPECIAL NOTES	THIS TRUST FUND IS CURRENTLY INACTIVE AND BEING RENEGOTIATED

10. SWEDEN (BITS): General Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Swedish nationals Local consultants (applicable to short-term assignments only, not to special studies) on a case-by-case basis **Priority given to female consultants**
MAXIMUM AMOUNT EACH ASSIGNMENT	(1) Short-term assignments: up to 40 working days (2) Special studies: up to US US$350,000 in principle Maximum daily fee rate: US US$750
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	Short-term assignments Up to US US$50,000: World Bank Over US US$50,000: Government - requests channeled through CFSOC Special studies Up to US US$80,000: World Bank in principle Over US US$80,000: Government - requests channeled through CFSOC
ELIGIBLE COUNTRIES	Borrowing member countries in the low- or lower middle-income categories
ELIGIBLE SECTORS	No restrictions (**highest priority** given to democracy, human rights and **Women in Development**)
ELIGIBLE ASSIGNMENTS	Economic and sector work, studies, preparation, appraisal, supervision and evaluation of Bank-financed projects; Special studies (preinvestment and other studies, advisory services)
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Ms. Stina Mossberg, Head of Division Mr. Johnny Andersson, Program Officer Economic Cooperation SIDA S-105 25 Stockholm, Sweden Tel: (46-8) 728-5100 Fax: (46-8) 249-290 Mr. Bo Stenberg, Senior Trade Officer Embassy of Sweden 1501 M Street, NW, Washington, DC 20005 Tel: (202) 467-2600 Fax: (202) 467-2699
SPECIAL NOTES	Under negotiation to increase approval authority for the Bank

11. SWEDEN (BITS): Environment Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Swedish nationals
MAXIMUM AMOUNT EACH ASSIGNMENT	Maximum daily fee rate: US US$750
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	Up to US US$100,000: World Bank Over US US$100,000: Government - requests channeled through CFSOC
ELIGIBLE COUNTRIES	Borrowing member countries with a GNP per capita not exceeding US$2,000
ELIGIBLE SECTORS	(1) Strengthening of **environmental policies**, institutions, information systems via investment or adjustment operations (2) Land use & management including land/resource surveys (3) Forestry projects having afforestation or prevention of deforestation as a major objective (4)Urban or industrial pollution control or **waste disposal** (5) Industrial pollution control w/ emphasis on improvement in production process
ELIGIBLE ASSIGNMENTS	Technical assistance activities specifically addressing environmental aspects of projects initiated for financing by the Bank, and other activities to be agreed on such as environmental health impact analysis
CFSOC CONTACT PERSON	Mr. Myung-Kyu Lee (Q-5003) Tel.: 473-1212 Ms. Jennifer Thomas (Q-5045) Tel.: 473-1221
GOVT. CONTACT PERSON	Mr. Gunnar Pihlgren Director Ms. Ann Kampe/ Ms. Ingrid Sandstrom, Desk Officer Department of Technical Cooperation Swedish Board for Investment and Technical Support (BITS) Hamngatan 6, S-111 47 Stockholm, Sweden Tel: (46-8) 678-5000 Fax: (46-8) 678-5050 Mr. Bo Stenberg Senior Trade Officer Embassy of Sweden 1501 M Street NW, Washington, DC 20005 Tel: (202) 467-2600 Fax: (202) 467-2699
SPECIAL NOTES	

12. SWEDEN (BITS): Eastern Europe Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	Swedish nationals Local consultants (in conjunction with Swedish consultants)
MAXIMUM AMOUNT EACH ASSIGNMENT	Maximum daily fee rate: US US$750 40 working days
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	Up to US US$50,000: World Bank Over US US$50,000: Government, requests channeled through CFSOC
ELIGIBLE COUNTRIES	Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Poland, Romania, Russia, Slovak Republic, Slovenia, Ukraine
ELIGIBLE SECTORS	**No restrictions** (emphasis on environmental protection and infrastructure development)
ELIGIBLE ASSIGNMENTS	Short-term operational assignments and technical assistance activities
CFSOC CONTACT PERSON	Mr. Myung-Kyu Lee (Q-5035) Tel: 473-1212 Ms. Jennifer Thomas (Q-5044) Tel: 473-1221
GOVT. CONTACT PERSON	Mr. Peeter Horm Deputy Director Central & Eastern Europe Department for Central and Eastern Europe SIDA S-105 25 Stockholm, Sweden Tel: (46-8) 728-5100 Fax: (46-8) 673-2141 Mr. Bo Stenberg Senior Trade Officer Embassy of Sweden 1501 M Street NW, Washington, DC 20005 Tel: (202) 467-2600 Fax: (202) 467-2699
SPECIAL NOTES	

13. SWEDEN SIDA: Environment Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	No nationality restrictions
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	World Bank
ELIGIBLE COUNTRIES	IDA-only countries
ELIGIBLE SECTORS	Environmental works
ELIGIBLE ASSIGNMENTS	Preparation of environmental action plans and environmental assessments **and other work related to the environment** in IDA-only countries
CFSOC CONTACT PERSON	Mr. Myung-Kyu Lee (Q-5035) Tel: 473-1212 Ms. Jennifer Thomas (Q-5044) Tel: 473-1221
GOVT. CONTACT PERSON	Mr. Christer Holtsberg, Director Natural resources management Division SIDA S-105 25 Stockholm, Sweden Tel: (46-8) 728-5100 Fax: (46-8) 612-0976
SPECIAL NOTES	The major portion of the funds under this CTF have been earmarked and allocated to Bank departments/divisions dealing with environmental work.

14. SWITZERLAND: Special Studies Consultant Trust Fund	
ELIGIBILITY OF CONSULTANT	No nationality restrictions
MAXIMUM AMOUNT EACH ASSIGNMENT	No restrictions
EXPENSES COVERED BY CTF	Fees, Travel, and Subsistence
APPROVAL AUTHORITY	Government - requests channeled through CFSOC
ELIGIBLE COUNTRIES	IDA-eligible countries (priority countries: see attachment)
ELIGIBLE SECTORS	No restrictions (priority sectors: see attachment)
ELIGIBLE ASSIGNMENTS	Special studies, training and workshops related to IDA activities
CFSOC CONTACT PERSON	Mr. Andrew Riordan (Q-5030) Tel: 473-1228 Ms. Parul Paka (Q-5053) Tel: 473-1220
GOVT. CONTACT PERSON	Ms. Kathryn Imboden, Chief Mr. Jean-Pierre Nyffeler, Economist Section for Economic Issues Federal Department of Foreign Affairs, 3003 Berne, Switzerland Tel: (41-31) 322-3574 Fax: (41-31) 324-1691 Mr. Caude Barras Assistant to the Executive Director Rm. E-1106 Tel: (202) 458-7050 Fax: (202) 477-9110
SPECIAL NOTES	This CTF is intended, in principle, for studies of a duration of 6 months to 2 years.

List of Eligible Sectors for the Priority Countries (Attachment)

WEST AFRICA:
BENIN: Structural adjustment issues, health sector adjustment, literacy, restructuring of public enterprises
BURKINA FASO: Agriculture, forestry, environment, education—literacy, cottage industry, livestock development, rural development
CHAD: Health, agriculture (rural development, vocational training), environment
MALI: Public health, forestry and environment, **water**, vocational training, informal sector, land use management, decentralization
NIGER: Hydraulic, national resources, forestry, environment, micro-realizations
EAST AFRICA:
BURUNDI: Cottage industry
MADAGASCAR: Health issues
MOZAMBIQUE: Public expenditure review, revenue mobilization, decentralization, financial sector adjustment, health (especially financial issues/cost recovery)
RWANDA: **Water** (involvement with groups and local organizations [NGOs])
TANZANIA: Health sector, rural roads and transport/travel, community development, sociocultural issues related to poverty alleviation
LATIN AMERICA:
BOLIVIA: Agriculture, national resources, adjustment issues, small-scale industry, issues related to social investment fund
NICARAGUA: Agriculture, **drinking water and sanitation issues**, vocational training, environment and natural resources, issues related to social investment fund
SOUTH & CENTRAL ASIA:
BANGLADESH: Small industry promotion and credit, rural infrastructure (private sector integration), health sector
INDIA: Financial sector issues, savings and rural credit issues, sericulture (for example, research assessment), national livestock policy, small industry promotion
PAKISTAN: Small industry promotion, agriculture and forestry and sustainable land use in NWFP
FSU IDA-ELIGIBLE COUNTRIES: All activities
EAST ASIA & HIMALAYAS:

BHUTAN: Forestry, primary education
LAOS: Formal education
NEPAL: Small-scale industry promotion and credit, labor market analysis, health sector, rural infrastructure, road sector, vocational/technical education
VIETNAM: Forestry and environment, formal education
MEDITERRANEAN REGION:
EGYPT: Activities related to the social fund

Eligible Sectors for Other IDA Countries

Human Resources: basic health services, cost recovery, AIDS prevention, basic education
Environment: biodiversity protection, **waste management**, renewable energy—efficient use of energy
Transport and Infrastructure: SSATP road maintenance initiative, **UNDP-World Bank Water & Sanitation Program**, rural transport
Macroeconomics and Structural Adjustment: public expenditure review work in concentration countries, civil service reform, fiscal policy (resource mobilization), support for east African cross-border trade and investment initiative, exchange rates issues, market access for commodity producers, training, regional integration
Poverty and Social Policy: poverty impact of structural adjustment programs, poverty-conscious restructuring of public expenditures, poverty assessments, monitoring/data collection issues and activities
Financial Sector: financial sector adjustment issues, savings mobilization, rural credit issues, including issue of long-term credit, training, private credit systems for micro-enterprise financing
Industry: privatization, promotion of private sector support institutions (e.g., small industry promotion), promotion of privatization mechanisms/instruments
Agriculture: sustainable land use, particularly in rainfed hillside and mountain agriculture, Sub-Saharan Africa (desertification), crop protection—integrated pest management and biological control in food crops, commodity programs—food crops, national program level and regional collaborative programs (networks), biodiversity/ biotechnology (policy issues, capacity building), in-situ and ex-situ conservation strategies for food crops, plant genetic resources policy (including farmers' rights, intellectual property rights issues), livestock production in mixed agriculture. livestock production systems
Cross-sectoral Priorities: gender-balanced agriculture development, institution-building in agri-research (national programs, regional networks), extension (extension-research linkages, extension concepts, strategies, institutional aspects), farmer participation, **empowerment**

B. Other Funding Sources

15. Fund for Innovative Approaches in Human and Social Development (FIAHS)	
NATURE AND PURPOSE	To improve the quality of Bank operations in areas that are yet to be mainstreamed through: 1. Operational support for *participation and social assessments* 2. In-house capacity building.
AMOUNT	Total US$2 million, average request for support about US$200,000–300,000.
EXPENSES COVERED	Expenses such as: 1. Travel, fees, workshop costs 2. Matching resources up to two years for incremental positions for staff and long-term consultants who are social scientists or have appropriate technical skills.
MANAGED BY	PSP, in consultation with ENV.
HOW TO APPLY	Requests from division chief or higher, or resident representative, to Mr. Ishrat Husain, director, PSP, copied to Mr. Aubrey Williams, PSP, and Ms. Gloria Davis, ENVSP. Requests should be limited to three pages and include information on proposed activities, name and MOC of requesting unit, task manager's name, expected outputs and timing, and projected costs and financing plan.
SPECIAL NOTES	1. Matching funds required from participating departments. Trust funds are not acceptable as matching funds. 2. Successful applicants are required to document use of funds and report to PSP with a summary of outputs within sixty days of completing the proposed activity. 3. Proposals should not be for work covered under existing budgets. 4. It is expected that, as they become mainstreamed —ideally over a two-year period—initiatives funded by the fund will become fully financed from regular regional budgets.

16. Institutional Development Fund (IDF)	
NATURE AND PURPOSE	Provides grants to strengthen institutional capacity to formulate national policy in the Bank's areas of special operational emphasis. Provides a quick response instrument for funding small, action-oriented schemes identified during, and closely linked to, the Bank's economic and sector work (ESW) and policy dialogue.
AMOUNT	1. For IDF Committee, ceiling of US$500,000 2. For regions, ceiling of US$200,000.
EXPENSES COVERED	Institutional development activities in the Bank's areas of special operational emphasis: *poverty reduction* and human resource development, *environmentally sustainable development,* private sector development.
MANAGED BY	1. IDF Committee, which allocates a portion of the IDF funds to individual grants, each limited to US$500,000. 2. Regions receive their allocations from the president and have their own procedures for approving grants, subject to a ceiling of US$200,000.
SPECIAL NOTES	1. Recipients are expected to demonstrate commitment by contributing to costs of activities funded by IDF grants other than staff salaries or office space costs. 2. Eligible activities financed must be completed within two years and executed by the recipient government with the help of local or international consultants or executing agencies. 3. The fund *supports gender-related institutional development* in Iran, Tunisia, and Chile.

17. Policy and Human Resources Development (PHRD) Fund	
NATURE AND PURPOSE	To support technical assistance for project preparation expected to be financed by the Bank and IDA.
AMOUNT	The fund averages about US$150 million a year. Approved grant sizes range from US$150,000–$1 million, averaging US$700,000.
EXPENSES COVERED	1. Consultants—both foreign and local—individuals, and firms 2. Equipment, if required to carry out the technical assistance and the recipient government is not in a position to supply it.
PRIORITY SECTORS	Infrastructure, *environment*, private sector development, primary education, *women in development*, population and public resource management. Priority also to proposed projects likely to receive cofinancing from Japanese and other sources.
MANAGED BY	The fund is financed by Japan. In the Bank, it is administered by: Albert Howlett, x31214 Fund Administrator Cofinancing and Financial Advisory Services (CFS) Department
HOW TO APPLY	Proposals for funding are processed biannually, in mid-September and mid-March. Task managers should submit proposals in the given format to the regional cofinancing coordinator. Final proposals are submitted to the Japanese authorities through the CFS Department.
SPECIAL NOTES	The PHRD Fund, financed by Japan, is the largest single-donor fund, providing grants in semiannual installments.

18. Africa Region's Client Consultation Fund (CCF)	
NATURE AND PURPOSE	Improving beneficiary feedback and involvement as required in all Africa Regional operations through systematic client consultation (SCC)
AMOUNT	US$500,000
EXPENSES COVERED	Any activity that enhances the quality of work and qualifies for financing on the administrative budget: consultants, workshops, travel, small equipment, seminars, and surveys of potential beneficiaries.
FUNDING PRIORITIES	Vary by individual departments but include tasks chosen as flagships for the department (AF1 and 4), ESW, project preparation, supervision, and implementation completion reports (ICRs) included in the plan (AF2). Priority to proposals that fit within the CAS offer the greatest possibility for sustainable results, have innovative or cross-sectoral impact, have a high level of buy-in by local audiences, and target ultimate beneficiaries rather than upper echelons of government. Special consideration to activities that enlarge the group of stakeholders consulted in preparation and implementation.
MANAGED BY	Various country departments in the Africa Region.
HOW TO APPLY	Proposals of one to two pages are to be sent by E-mail to designated persons, who have the authority to approve requests up to US$200,000, beyond which the departmental management team (DMT) has authority. In the Africa Technical Department (AFT), the departmental SCC Quality Group has full approval authority.
SPECIAL NOTES	1. The CCF funds only 50 percent of the proposed activity; the remaining is financed from the task budget, trust funds, and donor or government participation. 2. A report back on outcomes of use of funds is required, including a description of lessons learned and how client consultation has been integrated into subsequent work.

19. Country Operations Support Facilities (COSFs), Asia and Africa Regions	
NATURE AND PURPOSE	To support the efforts of country departments in Asia and Africa regions *to integrate gender* in upstream policy and analysis work (participatory assessments [PAs], CASs, and ESW), and project preparation. To improve *gender sensitivity* in Bank work and *involve women* stakeholders in project design and implementation.
EXPENSES COVERED	• Full-time local gender staff members at resident missions • Local capacity building • Strengthening linkages between government institutions and successful NGO programs • Gender-awareness building, training, and workshops • Consultation workshops • Seed funds for innovative pilot projects • Social assessments • Regionwide thematic or country-level gender issue papers, information sheets, and statistical analysis • IEPS-final executive project summary (FEPS) reviews.

20. Project Preparation Facility (PPF)	
NATURE AND PURPOSE	To support activities required to complete project preparation.
EXPENSES COVERED	Feasibility studies, design work, technical assistance, provision of goods and works (office space, equipment, and transportation) required to complete project preparation.
MANAGED BY	Country department directors
HOW TO APPLY	Task managers should send requests, through division chiefs, to the country department director, indicating the purpose, items to be financed, and expected refinancing date of the PPF (when the project loan becomes effective).
SPECIAL NOTES	The PPF advance becomes effective on the date of countersignature by the borrower. Before requesting a follow-up PPF, the task manager should ensure that earlier advances have been disbursed or committed.

CHAPTER VII: TERMS OF REFERENCE FOR CONSULTANTS

This chapter gives general terms of reference for a gender specialist in the water sector and specific terms of references for gender analysis during:

- Preparation and design phases
- Implementation phase
- Monitoring and evaluation.

The chapter presents samples of general terms of reference for gender experts hired at various stages of the project or business cycle. Task managers can adapt these to suit the particular country context in which they work.

A. Terms of Reference for a Gender Specialist in the Water and Sanitation Sector

Overall Responsibilities

The gender specialist will ensure that gender issues are considered in project activities for urban/rural water supply and sanitation.

Tasks

Preparation of sector plans. The sector plans prepared for this assignment will form the basis for implementing the World Bank–assisted water supply and sanitation project. The specialist shall ensure that adequate attention is paid to gender in conducting all surveys and collection and analysis of demographic, physical, economic, and financial data to attain this objective.

The specialist will ensure that gender-disaggregated analysis is conducted on all of the following aspects in preparing the sector plans. Each sector plan will include:

- Description of the situation of both men and women with respect to the geographic, economic development, and demographic features of the area
- Summary of the gender-disaggregated health statistics for the project area
- Description of women's and men's roles in the current status of water supply, covering both physical provision, O&M, and institutional development.

Implementation. The specialist will conduct on-the-job site inspections and furnish periodic progress reports about implementation. She or he will report on the participation of men and women and recommend opportunities for them to participate in the following activities under the project:

- Planning
- Implementation

- Management
- Operation and maintenance
- Monitoring
- Training
- Community development.

She or he will recommend mid-course corrections in the design and implementation plan of the project, as required, to ensure the above.

Report. Within one month, the consultant will prepare a descriptive and analytical report presenting the main findings and suggesting appropriate options and recommendations.

B. Terms of Reference for Gender Analysis During the Preparation and Design Phases

Overall Responsibilities

The gender specialist will ensure that gender issues are appropriately considered during the project preparation and design phases. Areas of emphasis include data collection, determination of overall project objectives and activities, and gender-sensitive project design.

Tasks

Data collection. The specialist will ensure that collected data are gender disaggregated. Sufficient data on gender issues should be gathered for appropriate project design. Data will be collected on such topics as:

- Government and agency policies on gender issues in general and water and sanitation in particular
- Summary of men's and women's status and roles in the project area, especially in activities relating to water and sanitation
- Inventory of existing community and NGO groups in the project area and men's and women's roles in each, including any women's organizations
- Previous experience with designing and implementing gender-sensitive water and sanitation projects in the project area or in similar areas in the country
- Women's and men's views on existing water and sanitation systems in the community.

Project planning and design. Based on the information collected, the specialist will work with community members and other project team members to determine priorities and project activities. A special effort should be made to incorporate the findings of gender analysis into the project design. In particular, the specialist is responsible for:

- Ensuring that project goals, objectives, processes, and activities are gender-sensitive and meet the needs and priorities of both village women and men.
- Identifying constraints to women's participation and developing strategies to minimize or eliminate them.
- Making adequate staff and budget provisions for women's as well as men's involvement, including plans for hiring women staff, especially if village women do not meet with men staff

- Developing a strategy for staff training in gender analysis (if staff have not yet been trained) and identifying community training needs related to women's involvement

- Where the project utilizes village committees, ensuring that project design provides for their constitution in a gender-sensitive manner, including creation of separate committees for women, if men and women will not meet together

- Ensuring that both women and men are involved in key project decisions, such as the choice of technology, service levels, arrangements for O&M, and cost recovery mechanisms.

Report. The consultant will prepare within one month a descriptive and analytical report presenting the main findings and suggesting appropriate options and recommendations.

C. Terms of Reference for Gender Analysis During the Implementation Phase

Overall Responsibilities

The gender specialist on the project implementation team is responsible for ensuring that gender-sensitive project design is well implemented. If gender was not addressed in the design, the specialist will propose a modification of the design during implementation. In particular, the specialist is responsible for:

- Developing a gender strategy for the project or refining the strategy developed during project preparation as needed
- Ensuring that project activities that involve women are carried out at times and locations convenient for women
- Hiring and supervising staff focusing on gender issues
- Conducting gender training sessions for the sensitization of all staff
- Organizing community-level training as needed concerning participation and gender issues and specific training for women in skills needed for the project
- Working with other project staff and the community to develop and maintain an M&E system that includes gender-disaggregated data and data that provide indicators concerning women's and men's involvement
- Reformulating the project and making mid-course corrections as needed during implementation for better attention to gender, based on the results of monitoring
- Developing adequate information channels between village women and men and project and government staff

Report. Within one month, the consultant will prepare a report presenting the main findings and suggesting appropriate options and recommendations.

D. Terms of Reference for Gender Analysis During Monitoring and Evaluation

Overall Responsibilities

The gender specialist will be responsible for developing and implementing gender-sensitive M&E systems.[32] Gender issues will form an integral part of an overall M&E framework. In particular, the specialist is responsible for:

- Ensuring that the project's M&E system can provide gender-disaggregated data and indicators that can be used to measure the gender appropriateness of project activities. The system should be designed to provide staff and the community with timely information that can be used to adjust and reformulate the project in the course of implementation, if needed.

- Measuring the effects and impact of the project separately for women and men.

- Analyzing men's and women's participation in the project and their access to and control over management and resources. This includes assessing types of involvement: decisionmaking, financial, participation on committees, management, maintenance, and so on. For example, how many women and how many men are on the committees and what roles do they play?

- Examining staff attitudes toward gender issues and how this affects project outcomes. Are staff supportive of gender issues? Have they received gender training? If so, what impact did this have? Should they receive additional or follow-up training?

- Assessing the training of men and women in maintenance, hygiene education, and other skill areas. What percentage of women as opposed to men were trained in each area? What were the benefits of the training? What could have been done differently? Is there any difference between the performance of women and men?

- Examining women's and men's roles in determining the type of technology chosen, the siting of facilities, and whether or not additional facilities such as washing and bathing facilities will be built.

- Involving community women and men in data collection and interpretation and in the design of the system(s).

- Organizing meetings, workshops, or both to inform project staff and communities of M&E findings.

- Identifying areas for further research.

[32] Ideally, the specialist will be part of an M&E team.

- Analyzing additional benefits, such as gains in time that women and men derived from the project.

- How were these gains in time used—for economic or social purposes—and why? Did the project anticipate or plan for these uses?

- Analyzing additional costs in time or labor for men or women created by the project activities.

- Drawing lessons and providing recommendations for future projects.

Report. Within one month, the consultant will prepare a descriptive and analytical report presenting the main findings and suggesting appropriate options and recommendations.

CHAPTER VIII: SELECTED REFERENCES

The last decade and a half has produced a wealth of articles and publications on gender issues in the water and sanitation sector. These constitute a valuable resource for task managers in planning and implementing projects with a gender focus in this sector. A list of selected references is given below.

Briscoe, J. and M. Garn. 1994. *Financing Agenda 21: Freshwater*. Paper prepared for the United Nations Conference on Sustainable Development, Rio de Janeiro, 1992. World Bank, Washington, D.C.

Elmendorf, Mary L. and Raymond B. Isely. 1981. *The Role of Women as Participants and Beneficiaries in Water Supply and Sanitation Programs*. Water and Sanitation for Health Technical Report No. 17. U.S. Agency for International Development, Washington, D.C.

Goodheart, Lucy. 1988. *Twenty Lessons Learned from Social Feasibility Studies*. PROWWESS/United Nations Development Programme, New York.

International Women's Tribune Center (IWTC). 1990. *Women and Water: A Collection of IWTC Newsletters on Issues, Activities, and Resources in the Area of Women, Water, and Sanitation Needs*. New York.

Melchior, Siri. 1989. *Women, Water, and Sanitation, or Counting Tomatoes Instead of Pumps*. PROWWESS, United Nations Development Programme, New York.

Narayan, Deepa. 1993. *Participatory Evaluation: Tools for Managing Change in Water and Sanitation.* Technical Paper No. 207. World Bank, Washington, D.C.

———. 1995. *The Contribution of People's Participation: Evidence from 121 Rural Water Supply Projects*. Environmentally Sustainable Development Occasional Paper Series No. 1. World Bank, Washington, D.C.

Narayan-Parker, Deepa. 1989a. *Goals and Indicators for Integrated Water Supply and Sanitation Projects*. PROWWESS/United Nations Development Programme, New York.

———. 1989b. *Indonesia: Evaluating Community Management*. PROWWESS/United Nations Development Programme: New York.

———. 1989c. *PEGESUS*. PROWWESS/United Nations Development Programme, New York.

Narayan-Parker, Deepa and Mary McNeill. 1989. *People, Pumps, and Agencies*. PROWWESS/United Nations Development Programme, New York.

Narayan, Deepa and Lyra Srinivasan. 1993. *Participatory Materials Tool Kit: Materials for Training Trainers and for Community Empowerment*. World Bank, Washington, D.C.

Perrett, Heli E. 1984. *Involving Women in Sanitation Projects*. TAG Discussion Paper Number 3, The World Bank, Washington, D.C.

PROWWESS, United Nations Development Programme. 1989. *Training in Community Participation: Report of an African Regional Workshop for Programme Staff*. New York.

Shallon, Elsie. 1988. *Volunteers Against Diarrhoea*. PROWWESS/United Nations Development Programme, New York.

Smith, Alice J. 1984. *Women's Roles in Water Supply and Sanitation in Developing Countries: A Four-Part Bibliography by Author, Subject, Phase of Development, and Country.* Water and Sanitation for Health Technical Report No. 21. U.S. Agency for International Development, Washington, D.C.

Srinivasan, Lyra. 1990. *Tools for Community Participation: A Manual for Training Trainers in Participatory Techniques.* Involving Women in Water and Sanitation, Lessons, Strategies, and Tools Technical Series. PROWWESS/United Nations Development Programme, New York.

United Nations International Research and Training Institute for the Advancement of Women (INSTRAW). 1991. *Women, Water, and Sanitation.* A multimedia training package produced in cooperation with the U.N. Department of Technical Cooperation (DTCD) and the International Labour Office-Turin Centre.

———. 1992. *Report of the Interregional Workshop on Women, Water Supply, and Sanitation*. Report of a workshop held in Bangkok, Thailand, September 21–25, 1992. Santo Domingo.

van Wijk-Sijbesma, Christine. 1985. *Participation of Women in Water Supply and Sanitation: Roles and Realities*. Technical Paper 22. International Center for Community Water Supply and Sanitation, The Netherlands.

van Wijk-Sijbesma, Christine and Eveline Bolt. 1991–94. *Woman, Water, and Sanitation, Annual Abstract Journals.* Nos. 1, 2, 3, and 4. International Water and Sanitation Center (IRC) and PROWWESS/UNDP-World Bank Water and Sanitation Program, The Netherlands.

Wakeman, Wendy. 1995. *Gender Issues Sourcebook for Water and Sanitation Projects*. United Nations Development Programme-World Bank Water and Sanitation Program, Washington, D.C.

Wakeman, Wendy, Susan Davis, Christine van Wijk, and Alka Nathani. Forthcoming. *Sourcebook for Gender Issues at the Policy Level in the Water and Sanitation Sector*. United Nations Development Programme/World Bank Water and Sanitation Program. The World Bank, Washington, D.C.

World Bank. 1996. *World Bank Participation Sourcebook.* Environmentally Sustainable Development Vice Presidency, Washington, D.C.

World Health Organization and PROWWESS/United Nations Development Programme. 1984. *Involvement of Women in Water Supply, Sanitation, and Health Education Projects: A Guideline for Case Studies*. New York.

World Bank Water Demand Research Team. 1993. "The Demand for Water in Rural Areas: Determinants and Policy Implications." *The World Bank Research Observer* 8 (1).

United Nations Development Programme-World Bank Water and Sanitation Program. 1996. *Demand-Based Approach: Making Large-Scale Rural Water Supply Projects Work*, Annual Report July 1994–June 1995, pp. 8–13. World Bank, Washington D.C.

CHAPTER IX: LEARNING TOOLS

Gender analysis is a powerful tool for planning, design, and evaluation. It is also a tool for raising people's awareness about gender differences in roles, access and control over resources, and distribution of benefits. Although much work has been done on gender analysis at the international, national, and program levels, participatory *tools* that actively engage people in ways that raise their awareness of gender issues have been relatively lacking. This section gives brief descriptions of some participatory gender analysis tools for use at the community and agency levels.

It is important that gender issues be analyzed by local people themselves with tools that they can themselves use. At the same time, agency staff should also become aware of gender issues and meaningfully incorporate them in policies and programs. Participatory tools such as those described here have been used by communities to enhance their capacity to initiate and manage change and by agency staff to undertake gender analysis and apply findings to planning, implementation, and evaluation.

A. Principles of Participatory Gender Analysis

The underlying premise of these participatory gender analysis tools, based on the SARAR methodology,[33] is that people are their own most valuable resource and that development aims to fulfill human potential and draws strength from working in groups. At the community level, it is important to create and sustain a positive learning environment, in which people feel free to express themselves, make mistakes, and speak up without fear of being wrong—especially when working with poor and marginal groups and, in most societies, with women. It is usually effective to begin with groups separated into women and men, especially in the early stages. At the agency level, it is important to create small groups that mix individuals across gender, status, and discipline.

B. Participatory Tools and Exercises

Visual materials that reflect local reality help overcome class and literacy barriers at the community level. At the agency level, the use of visual materials helps staff break away from writing and other familiar ways of doing things, stimulating greater creativity. It helps lower interpersonal and status barriers and creates openness to working together across disciplinary specializations.

Almost all materials can be used in a participatory or nonparticipatory way. It is important to use innovative, visual materials to empower local people rather than merely to extract information from communities for external planning purposes. In participatory activities, the facilitator keeps a low profile after introducing the task or

[33] This methodology was developed by Lyra Srinivasan. SARAR stands for Self-esteem, Associative strengths, Resourcefulness, Action planning, and Responsibility.

activity. Tasks are open-ended to allow local perspectives, beliefs, values, and reality to emerge, rather than being focused on trying to elicit the "one correct" answer.

The following is a selected list of participatory exercises and tools for gender analysis that can be used at the community level with groups of men, women, and children after being pictorially and substantively adapted to the local context. More detailed descriptions of the materials and how to use them can be found in a series of PROWWESS/World Bank publications.[34]

A. *Gender analysis: access to resources*. This exercise uses three large drawings of a man, a woman, and a couple with fifteen to twenty cards depicting resources and possessions owned by local community members to elicit discussion and in the process collect information, raise awareness, and learn how access to and control of household and community resources varies according to gender.

B. *Task analysis and role flexibility by gender*. As in the previous exercise, this one uses three large drawings of a man, a woman, and a couple with twelve to fifteen cards depicting daily household and community tasks. The purpose is to elicit discussion and in the process collect information, raise awareness, and learn how household and community tasks are distributed according to gender and how much role flexibility exists by gender. When used together with the previous activity, it can dramatically shows that, whereas men control most of the resources, women do many of the burdensome tasks.

C. *Women's lives: needs assessments*. This exercise uses several cards depicting women performing various daily tasks that participants categorize by degree of difficulty. Its purpose is to elicit discussion and in the process collect information, raise awareness, and learn about the priority needs of women, based on their different tasks, concerns, and responsibilities. The same activity can be repeated with cards depicting men performing various activities to analyze men's needs.

D. *Gender analysis of poverty*. In this exercise, participants use cards depicting different possessions and categorize the likelihood of owning them by economic status (using the three labels "rich," "average," and "poor") and by sex of household head. The exercise helps participants determine what poverty means in a particular community and enables them to decide which community members should be targeted for assistance.

E. *Evaluation of gender differences in decisionmaking*. This exercise encourages and stimulates people to understand and evaluate the decisionmaking process and their participation in it. Participants discuss cards depicting key decision points or factors within a water supply project—site selection, construction, design, fee

[34] See, for example, Srinivasan (1990); Narayan (1993); and Narayan and L. Srinivasan (1993) in the bibliography in Chapter VIII.

collection, maintenance, and technology choices. They then vote on who—a man, woman, village leader, official, water committee, and extension worker—made what decision. Giving men and women different colored chips with which to vote brings out differences between men's and women's perceptions of who makes decisions.

APPENDIX 1: WORLD BANK PROJECTS IN WATER AND SANITATION WITH GENDER-RELATED ACTIONS

Project	Explicit Gender Objectives	Women as Beneficiaries	Women as Participants	Targeted Actions	M&E Indicators	Others
FY 1995						
Azerbaijan: Greater Baku Water Supply Rehabilitation Project (CR 2751 US$61.0 million) TM: Donaldson (EC3IV)		• Reduces women's burden and saves them time through improved service delivery		• During social assessment, discussions with two major NGOs representing vulnerable groups and women strongly indicated full beneficiary support for the project		• Social assessment conducted before project formulation
Malawi: National Water Development Project (CR 2753 US$79.2 million) TM: Shepherd (AF1C3)		• Improves the lot of women through better access to safe water				
Senegal: Water Sector Project (CR 2759 US$100.0 million) TM: Janssens (AF5IN)		• Time and energy savings for women				
Turkey: Antalya Water Supply & Sanitation Project (LN 3893 US$100.0 million) TM: Gomez (EC1IN)		• Positive gender impact from better water availability				• SAR contains section on poverty and gender impact
Zambia: Urban Restructuring & Water Supply Project (CR 2725 US$33.0 million) TM: Beardmore (AF1C2)		• Time savings for women and children			• Includes qualitative indicator on structure and composition of active community organizations, including women's groups, under demonstration component	
FY 1994						

Algeria: Water Supply & Sewerage Rehabilitation Project (LN 3743 US$110.0 million) TM: Rodriguez (MN1PI)		• Improves welfare of women and children through better availability of cleaner water				
Benin: Rural Water Supply & Sanitation Project (CR 2622 US$9.8 million) TM: Verspyck (AF4IN)		• Time savings for women and girls • Develops women's skills in decisionmaking and management	• NGOs will ensure women's participation in village-level mobilization and planning • Several committee members, usually women, will be trained to perform all routine maintenance and repair	• Women are the primary target of mobilization process, since their contributions will determine the sustainability of cost recovery mechanisms	• Women's involvement in key positions	
Ghana: Community Water & Sanitation Project (CR 2604 US$22.0 million) TM: Roche (AF4IN)	• Addresses social and equity issues and poverty	• Time savings, improved health, and reduced work burden for women and girls • Develops women's skills in decisionmaking and management	• SAR identifies women and women's groups among stakeholders at community level • Women have assumed responsibility for payment of water tariffs and maintenance of pumps • Women and minority group involvement will be ensured in planning • Two women trained and working on team of 3 resident community volunteers for hygiene education	• Village women are the primary target for hygiene education	• Community management: community members, including women and minorities, decide the type of system they want and how to manage it	

Guyana: Water Supply Technical Assistance & Rehabilitation Project (CR 2559 US$17.5 million) TM: Njomo (LA3EU)		• Time and energy savings and reduction of injuries and fatalities during water collection for women and children	• percent of pump operators are women; project will train and employ them at all levels • Public information campaigns about economic independence for women and training and employment opportunities, especially for women	• Training programs under HRD component specifically aim to recruit women for O&M and technical scholarships		• SAR has section on impact on women and children
Morocco: Fifth Water Supply Project (LN 3665 US$160.0 million) TM: Ben-Slimane (MN1PI)		Time savings to women • Indirect effect on girls' schooling				
Uganda: Small Towns Water & Sanitation Project (CR 2583 US$42.3 million) TM: Tschannerl (AF2EI)	• Alleviate poverty and improve the lot of women	• Lessens women's traditional health and child care burden and saves time for income generating activities	• Particular attention to involving women during mobilization phase in town implementation process • Adequate representation of women during community problem identification exercise • Preferably a woman caretaker will be appointed by committee for repairs, maintenance, sanitation, and hygiene extension • Extension staff should include men and women • TORs for data collection for project design include WID	• Extension staff will initiate women's mobilization through specifically targeted group activities • Strongly recommends that at least half the members of WSCs/WUAs should be women		
FY 1993						

India: Karnataka Rural Water Supply & Environmental Sanitation Project (CR 2483 US$92.0 million) TM: Oblitas (SA2AW)	•	• Time savings for women	• Lesson learned from other projects: the benefits derived from involving women as primary participants • Women as members of village committees • Uses women's groups to promote latrines and health communication • Women involved in deciding on siting of standposts and water supply hours	• Special studies during pilots on how to promote women's role • Tests approaches during pilot scheme for women's group formation, and women's involvement in O&M and health communications • Trains women as handpump caretakers • State-level training advisory committee includes director for Women and Child Development	• Beneficiary assessments on community participation and women's activities • Impacts on low income groups, tribes, and women • Number of women involved in village committees and O&M	

Indonesia: Water Supply & Sanitation for Low Income Communities Project (LN 3629 US$80.0 million) TM: Barnum (EA3PH)	• WID objectives mainstreamed throughout the project	• Especially beneficial for women's productivity, health, privacy, time savings, enhanced role and capability, and participation	• Women's role promoted through pilot schemes in five key areas: training in planning and implementation, hygiene education, O&M, gender study for project staff and community leaders, skill and management training for income generation in operation of facilities • Women's representation in all subcommittees • Where PKK groups are active, women to take lead in village committee formation and implementation • Trains women in both mixed and separate groups • Trains and assists WUAs, especially women, in managing O&M and other resource mobilization activities	• Community self survey and analysis includes gender • Project's national expert group includes gender specialist • Training in participatory techniques focusing on village women and community-based organizations • Meetings with women for preparation • Technical assistance includes women in development and women's KAP studies • Women's decisionmaking role in health education component • Health education by trained village women and men, focused on women • Technical support service for women • Links with other gender-based aspects of Bank-supported projects in the country	•	• SAR includes section on role of women • Assurances obtained from government to provide training and pilot schemes to enhance women's role

Paraguay: Third Rural Water Supply & Sanitation Project (LN 3519 US$23.0 million) TM: Moreno-Pineda (LA1IU)	• Improves rural productivity and health, particularly of women and children, by expanding access to potable water and environmental sanitation facilities	• Positive and direct impact on rural women's quality of life and productivity through time and energy savings, improved health, and cleaner environment • Enhances self-esteem and status of women			Time savings for women	

Sri Lanka: Community Water Supply & Sanitation Project (CR 2442 US$24.3 million) TM: Minnatullah (SA1IN)	• Enhances women's productivity and well-being • Improves women's involvement in planning and O&M	• Women are the main beneficiaries through accrual of time savings	• Gender issues in baseline surveys and project proposals • Recruitment of women to CWSPU • Includes gender issues in all training • Special efforts to involve women in community discussions • Income-generating activities for women • Potential partner organizations identified include women's NGOs • Community surveys during planning • Organizes small women's groups • Home visits with women • Reduces child care and health service-related barriers to women's participation • Village-based women's organizations for credit, training, extension, and project monitoring	• Institutional reform aims for women's full participation at all levels in sector institutions	• M&E indicators include: • Number of women leaders identified in community • Decrease of time and number of trips for water collection • Percentage of women participating • Percentage of women, men, and children (age-wise) using the facilities	• SAR peer review specifically included gender
FY 1992						
Burundi: Water Supply Sector Project (CR 2288 US$32.7 million) TM: Ghzala (AF3IN)		• Time savings to women	• Intends women to: • Participate in commune-wide user committees and communal water boards • Be responsible for collecting water charges			

China: Rural Water Supply & Sanitation Project (CR 2336 US$110.0 million) TM: Travers (EA2EM)		• Women are seen as the leading beneficiaries • Increases women's awareness of hygiene, sanitation, and safe water practices	• Promotes community participation, including women, at every stage • Women's organizations and other community support groups receive special attention • Community women will serve as key trainers for health education • Training and income-earning opportunities for men and women during construction and operation • Small-scale study will focus on reliability and women in development aspects of willingness to pay	• Health and hygiene education and training targeted to selected community women who will be key trainers for the general population	• Collects gender-disaggregated data on staffing and training	• Lesson learned: community participation, including that of women, is essential for sustainability, but has previously been deficient • SAR includes section on impact on women • Small-scale study focuses on reliability and women in development aspects of willingness to pay
Kenya: Second Mombassa & Coastal Water Supply Engineering & Rehabilitation Project (CR 2333 US$43.2 million) TM: Talai (AF2EI)			• Encourages the formation of women's associations as retailer owners of water selling kiosks, located at strategic points			
Lesotho: Highlands Water Project (LN 3393 US$110.0 million) TM: Roome (AF1C1)				• Rural training for literacy and income generation for householders, mainly women, who work at home or in the village		
FY 1991						

India: Maharashtra Rural Water Supply & Environmental Sanitation Project (CR 2234 US$109.9 million) TM: Oblitas (SA2AW)		• Benefits women from improved access and time savings	• State-level project task force includes NGOs and a women's group • Likely women's representation on district project steering committees • Men and women multipurpose workers primarily responsible for promoting latrines through community interaction	• Communications program targeted mainly toward women, adolescents and children • Training to TBAs, women's clubs, and NGOs • Pilot schemes for NGOs will focus on women's involvement	• PPMU periodic impact evaluation includes: • Time savings for women • Impacts low income beneficiaries and women • Women's health • Hand washing • Awareness of health education messages • Uses new water sources	• SAR recognizes that without women's involvement, the full benefits of investments in water and sanitation cannot be realized and the necessity of social scientific analysis in such projects; includes section on role of women
Mexico: Water Supply & Sanitation Sector Project (LN 3271 US$300.0 million) TM: Bengoechea (LA2EU)		• Improves welfare of women through time savings				
Nepal: Urban Water Supply & Sanitation Rehabilitation Project (CR 2239 US$60.0 million) TM: Legrain (SA2AW)			• Emphasizes women's role in community participation • Encourages women's participation in consumer health and education • Mandates at least two women on WUAs	• Expansion of staff of customer relations unit of NWSC, including women appointees and gender specialist		

Pakistan: Rural Water Supply & Sanitation Project (CR 2228 US$136.7 million) TM: Minnatullah (SA1IN)	• Improves rural productivity and health, particularly of rural women and children	• Rural women's time and energy savings in water collection • Economic development benefits • Improved health • Enable more girls' schooling	• MOU with community to ensure women's participation in WUA membership and decisionmaking	• Women as primary target group for hygiene education • Flexible pilot support to women's income-generating activities	• Includes M&E indicator for women involved in community organizations	• Includes section on project impact on women
FY 1990						
Côte d'Ivoire: Water Supply & Sanitation Sector Adjustment Program (LN 3240 US$80.0 million) TM: Verspyck (AF4IN)	• More than 4 million people, particularly women and children, would benefit	• Expected to reduce water collection time by women and girls to 10 percent				
Philippines: First Water Supply, Sewerage & Sanitation Sector Project (LN 3242 US$85.0 million) TM: Pancaroglu (EA1AE)	• Expected outcomes include opportunities for women's participation in planning, implementation, O&M, monitoring, training and community development activities	• Women's time and energy savings • Women's health benefits	• In planning, O&M of services, through agreement with government to ensure women's: • Role in forming and organizing WUAs • Equal access to membership and leadership roles in WUAs • Participation in technical training • Gender-disaggregated record keeping in WUAs	• Training by community-based program personnel, such as rural sanitarians, Barangay health workers, and midwives		• SAR includes section on Women in Development

Uganda: Second Water Supply Project (CR 2124 US$60.0 million) TM: Talai (AF2EI)	• To improve family well-being, including alleviating women's traditional burden of providing water		• The newly-formed Ministry of Women Development will promote women's role in the sector • Emphasizes strong involvement of women in urban water and sanitation committees as a prerequisite for success			SAR contains section on role of women
FY 1989						
Mexico: Water, Women & Development Project (LN 3101 US$20.0 million) TM: Donaldson (LA2IN)	• Improves the living standard of low-income populations, especially women	• Main beneficiaries: low-income women • More productive use of women's time	• Link between water and women's income-generating activities crucially increases possibility of success • Preproject household survey included women's roles, headship, decisionmaking authority, time allocation, and community participation rate	• Target of 70 percent women's participation in productive activities		• Pilot nature of the project

Note: The information presented here has been taken from the Staff Appraisal Reports of the concerned projects. Equally crucial as gender-responsive project design is ensuring that gender-related strategies that are included in the design of projects are actually implemented on the ground with the active participation of community men and women.

APPENDIX 2: SELECTED ARTICLES

.

FINANCING AGENDA 21: FRESHWATER[35]

Executive Summary

This paper takes the point of view that "financing the freshwater activities of Agenda 21" is principally a challenge of developing appropriate institutional and financial arrangements. The essence of such arrangements is that they ensure that societies mobilize appropriate levels of resources for providing water-related environmental services and that these resources are used in the most efficient and effective way possible. Accordingly, the paper makes no attempt to produce a "bill for implementing Agenda 21." Indeed, the paper provides evidence that the top-down approach (which sets targets and standards and then computes the bills for implementing such targets) itself has played a counter-productive role.

The paper, therefore, attempts to describe, in some detail, the characteristics of a "sound" water sector. Because the elements of sound policies are similar in different subsectors, the paper does not deal with all water subsectors (agricultural development, most importantly, is not addressed), but illustrates the general case by focusing heavily on the provision of water supply and sanitation services, sustainable urban development and water resources management.

The water supply and sanitation sector in developing countries faces two great challenges. The first is to complete the "old agenda," which is (appropriately) heavily focused on the provision of water supply and household sanitation services. Although considerable progress has been made, major challenges remain in, first, serving the 1 billion who do not have an adequate supply of water and the 1.7 billion who do not have adequate sanitation facilities, and, second, improving the reliability and quality of service to those who do currently have access. A major constraint in providing more people with better services has been the inefficiency and inequity with which existing public financing has been used. Accordingly, an indispensable ingredient in rising to this challenge is ensuring that water and sanitation supply organizations pay much greater attention to consumers' demands, and are structured in such a way that they are self-financed, efficient and accountable to users.

As a consequence, in part, of the progress made in delivering water, sanitation and sewerage services, the quantities of wastewater generated in developing countries have increased rapidly, and the quality of the aquatic environment has become severely degraded, especially in urban areas and especially in low-income countries. This degradation poses a major threat to the health and well-being of urban residents in developing countries. Accordingly, the "emerging new agenda" involves going beyond the household service level, and improving the quality of the aquatic environment.

The good news is that a remarkable consensus has emerged in recent years on the water resources management principles which have proved to be effective in industrialized and developing countries. These principles have been most clearly stated in the pre-UNCED International Conference on Environment and Development, with the "Dublin Statement" laying particular stress on "treating water as an economic good" and "managing at the lowest appropriate level, with involvement of stakeholders in all levels of management".

---

[35] From J. Briscoe and M. Garn, 1994, *Financing Agenda 21: Freshwater.* Paper prepared for the United Nations Conference on Sustainable Development, Rio de Janeiro, 1992. The World Bank, Washington D.C.

The bad news is that improving the quality of freshwater resources is a complex and exceedingly expensive business. The experience of many industrialized countries reveals massive and costly mistakes in the mobilization and allocation of resources for improving the quality of the aquatic environment. The experience from those (in developed and developing countries) who have met this challenge more efficiently shows that the key is the development of sound, integrated institutional and financial arrangements at different levels (ranging from the neighborhood to the river basin to the nation). The essence of the effective arrangements at all levels is that stakeholders decide on how much they wish to spend on improving environmental quality at that level, and that available resources be allocated to those investments which bring the greatest environmental benefit.

CONTENTS

Introduction

This paper is prepared at the request of the United Nations Commission on Sustainable Development, as a background paper for the ad hoc Working Group on Financing. The paper draws heavily on work done in the World Bank, and, in particular, on the World Bank's recent Water Resources Management Policy Paper.

The paper assesses the financing challenges which have to be met by developing countries if water resources are to be managed efficiently, if the quality of the aquatic environment is to be improved, and if water-related services are to be delivered in a responsive, efficient and equitable way.

The chapter on Freshwater in Agenda 21 deals with the following "program areas": A—integrated water resources development and management, B—Water resources assessment; C—Protection of water resources, water quality and aquatic ecosystems; D—Drinking water supply and sanitation; E—Water and sustainable urban development; F—Water for sustainable food production and rural development and G—Impacts of climate change on water resources. This paper takes the position that attaching "price tags" to these activities—as was tentatively done in Agenda 21—is a misguided approach and that what is needed is articulation of clear principles which should underpin the financing of freshwater investments. To illustrate the approach the paper focuses heavily on the water supply and sanitation sector, sustainable urban development and water resources management. (which together comprise about 75% of the indicative financing specified in Agenda 21). The paper does not address the important area of water for sustainable food production. This paper does, however, draw heavily on work done as part of the preparation of the World Bank's Water

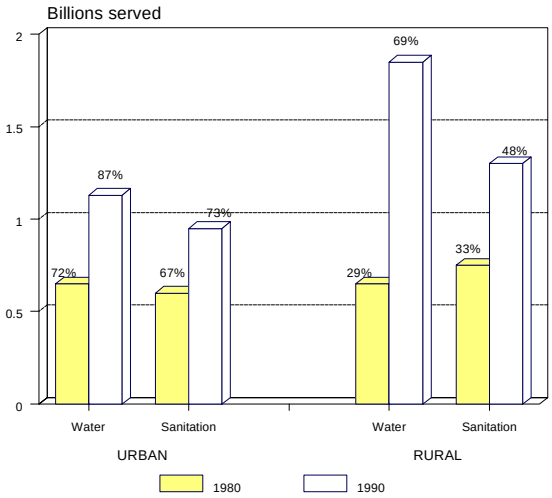
Resources Management Policy Paper. The principles articulated in this paper are consistent with the principles articulated in the paper are applicable to this important area as well.

The State of the Sector, Part I: Services, Impacts and Environmental Quality

The incomplete "old" agenda

Both the number and proportion of people in developing countries who have access to adequate water and sanitation facilities has increased dramatically. Figure 1 shows, for instance, that the number of urban people with access to adequate water supply increased by about 80% in the 1980s, and the number of urban people with adequate sanitation facilities increased by about 50%.

Figure 1: Access to safe water and adequate sanitation in developing countries in 1980 and 1990



These achievements notwithstanding, very large numbers of people remain unserved—an estimated 1 billion do not have access to clean water and 1.7 billion do not have access to sanitation. And an estimated 2 million children die and billions are sick (see Table 1) each year because of inadequate water and sanitation facilities.

Furthermore, those who are not served often pay high costs, especially the poor in urban areas who often rely on vendors who typically charge US$2 to US$3 for a cubic meter of water, which is at 10 or more times the price which the served pay for water from a tap in their houses.

Table 1: Effects of improved water and sanitation on sickness

Disease	*Millions affected by illness*	*Median reduct attributable i improvemer (percent)*
Diarrhea	900*	22
Roundworm	900	28
Guinea worm	4	76
Schistosomiasis	200	73

* refers to number of episodes in a year

The emerging "new agenda"

Although the "old" agenda, focused on household services still poses very large financial, technical and institutional challenges, a "new," broader agenda which considers both the provision of services and environmental quality has emerged forcefully in recent years.

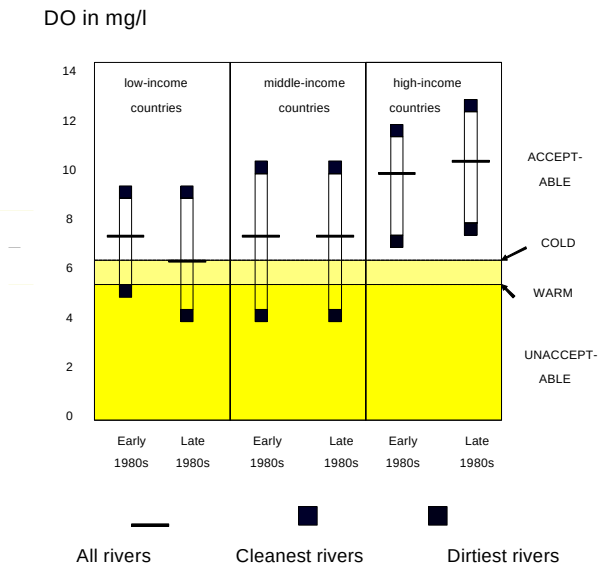
The quality of the aquatic environment is a global concern. The situation in cities in developing countries is especially acute. Over the course of the International Drinking Water Supply and Sanitation Decade (1981-1990) the number of urban inhabitants without access to adequate sanitation actually increased by about 70 million. And even in middle income countries little sewage—just 2 per cent in Latin America, for instance—is treated. As shown in Figure 2, water quality is far worse in developing countries than in industrialized countries. Furthermore, whereas environmental quality in industrialized countries improved over the 1980s, it did not improve in middle-income countries, and declined sharply in low-income countries.

In considering this nexus of service and environmental issues, it is instructive to consider the sequence in which people demand water supply and sanitation services. Consider, for instance, a family which migrates into a shantytown. Their first environmental priority is to secure an adequate water supply at reasonable cost. This is followed shortly by the need to secure a private, convenient and sanitary place for defecation. Families show a high willingness to pay for these household or private services (in part because the alternatives, as described earlier, are so unsatisfactory and so costly). It is natural and appropriate, therefore, that they put substantial pressure on local and national governments to provide such services. And it is, accordingly, natural and appropriate that the bulk of external assistance in the early stages of development goes to meeting the strong demand for these services. The very success in meeting these primary needs, however, gives rise to a second generation of demands, namely for removal of wastewater from the household, then the neighborhood and then the city. And, success in this important endeavor, too, gives rise to another problem, namely the protection of the environment from the degrading effects of large amounts of waste.

There are a number of implications emanating from this description. It means that the historic "bias" in favor of water (at the expense of sanitation and sewerage) is probably not only not wrong (as is currently often implied) but actually right. The historic experience of industrialized countries, and the contemporary experience of developing countries demonstrates clearly that it is only when the first challenge (service provision) has been substantially met that households and the societies aggregating them pay attention to the "higher-order" challenges of environmental

protection. And it is, thus, neither surprising, nor incorrect,[36] that the portfolio of external assistance agencies has focused heavily on the provision of water supply. For example, of World Bank lending for water and sanitation over the past 30 years, only about 15% has been for sanitation and sewerage, with most of this spent on sewage collection and only a small fraction spent on treatment. Boxes 1 (on the Orangi Pilot Project in Karachi) and 2 (on the provision of sewerage services to the periphery of Sao Paulo, Brazil) demonstrate graphically how forcefully poor people demand environmental services, once the primary needs for water supply is met. (These examples also illustrate many other points which will be referred to later in this report.)

Figure 2: Dissolved oxygen levels in rivers in developing and developed countries



[36] For a more detailed discussion of this point, see pp. 95ff of the World Bank's *World Development Report, 1993: Investing in Health.*

Box 1: How and when poor people demand sanitation services, and how to meet these: The case of the Orangi Pilot Project in Karachi

In the early 1980s, Akhter Hameed Khan, a world-renowned community organizer, began working in the slums of Karachi. He asked what problem he could help resolve. People in this area had a relatively satisfactory supply of water but now faced "streets that were filled with excreta and waste water, making movement difficult and creating enormous health hazards." What did the people want, and how did they intend to get it, he asked. What they wanted was clear—"people aspired to a traditional sewerage system... it would be difficult to get them to finance anything else." And how they would get it, too, was clear—they would have Dr. Khan persuade the Karachi Development Authority (KDA) to provide it for free as it did (or so they perceived) to the richer areas of the city.

Dr. Khan then spent months going with representatives from the community petitioning the KDA to provide the service. Once it was clear that this would never happen, Dr. Khan was ready to work with the community in finding alternatives. (He would later describe this first step as the most important thing he did in Orangi—liberating, as he put it, the people from the demobilizing myths of government promises.)

With a small amount of core external funding the Orangi Pilot Project (OPP) was started. The services that people wanted were clear; the task was to reduce the costs so that these were affordable and to develop organizations that could provide and operate the systems. On the technical side, the achievements of the OPP architects and engineers were remarkable and innovative. Coupled with an elimination of corruption, and the provision of labor by community members, the costs (in-house sanitary latrine and house sewer on the plot, and underground sewers in the lanes and streets) are less than US$100 per household.

The (related) organizational achievements are equally impressive. The OPP staff has played a catalytic role—they explain the benefits of sanitation and the technical possibilities to residents and conduct research and provide technical assistance. The OPP staff never handled the community's money. (The total costs of OPP's operations amounted, even in the project's early years, to less than 15 percent of the amount invested by the community.) The households' responsibilities include financing their share of the costs, participating in construction, and election of a "lane manager" (who typically represents about fifteen households). The lane committees, in turn, elect members of neighborhood committees (typically around 600 houses) who manage the secondary sewers. The early successes achieved by the Project created a "snowball" effect, in part because of increases in the value of property where lanes had installed a sewerage system. As the power of the OPP-related organizations increased, so they were able to bring pressure on the municipality to provide municipal funds for the construction of secondary and primary sewers.

The Orangi Pilot Project has led to the provision of sewerage to over 600,000 poor people in Karachi and to attempts by at least one progressive municipal development authority in Pakistan to follow the OPP method and, in the words of Arif Hasan "to have government behave like an NGO." Even in Karachi, the mayor has now formally accepted the principle of "internal" development by the residents and "external" development (including the trunk sewers and treatment) by the municipality.

The experience of Orangi demonstrates graphically how peoples' demands move naturally from the provision of water to removal of waste from their houses, then their blocks and finally their neighborhood and town.

Box 2: How and when poor people demand sanitation services, and how to meet these: The case of the favelas of Sao Paulo

In the 1980s the city of Sao Paulo, Brazil, made extraordinary progress in providing all of its residents with water supply and sanitation services. In 1980 just 32% of *favelas* (low-income, informal settlements) had a piped water supply, and less than 1% had a sewerage system. By 1990 the respective figures were 99% and 15%!

SABESP, the state water utility serving Sao Paulo, is a sophisticated technical water supply organization. Until the emergence of democracy in Brazil, SABESP had defined its role narrowly and technocratically. Specifically it did not consider provision of services to the *favelas* to be its responsibility, because it was not able to do this according to its prescribed technical standards, and because the favelas were not "legal." Before the legitimization of political activity in Brazil in the early 1980s, SABESP successfully resisted pressures to provide services to the favelas. Although SABESP was resisting this pressure, a small municipal agency (COBES) experimented with new technical and institutional ways of providing water and sanitation services to the poor. On the technical side this did not involve provision of "second-class" service, but of reducing the cost of providing in-house services by using plastic pipe and servicing of narrow roads where access was limited. On the institutional side it meant the community assuming significant responsibility for community relations, and for supervising the work of the contractors.

As the military regime withdrew and was replaced by democratic politics, the pressures on SABESP to serve the *favelas* increased. Pressure from the communities on SABESP were channeled through the municipal agencies, responsive officials and politicians (including the mayor and governor). Because COBES had shown how it was, in fact, possible to serve the *favelas*, SABESP had no option but to respond.

In the context of the present discussion, the lessons from Sao Paulo are:
(a) that once the poor have water services, then a strong demand for sanitation services emerges organically
(b) that where institutions are responsive and innovative, major gains can be made in the provision of these services at full cost to poor people.

The State of the Sector, Part II: Costs of Services and How they are Currently Financed

The Cost of Providing Services:

What are typical service costs?

As shown in Table 2, costs of different levels of service vary considerably. Of particular note are (a) the modest increases in costs for urban water supplies when the level of service is improved from a public standpipe to a household connection, (b) the order of magnitude difference between simple on-site urban sanitation systems and conventional sewerage with treatment and (c) the high absolute costs of conventional sewerage.

Table 2: Typical investment costs for different levels of service

	RURAL	*URBAN*	
	Low	Intermediate	High
Water supply	~$10[1]	~$100[2]	~ US$200[3]
Sanitation	~$10[4]	~$25[5]	~$350[6]

[1] Hand pump, or standpost
[2] Public standpost
[3] Piped water, house connection

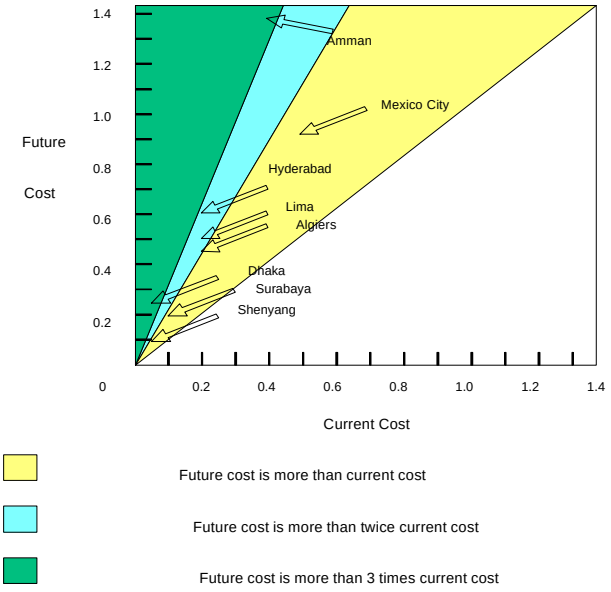
[4] Pour-flush or ventilated improved pit latrines
[5] Pour-flush or ventilated improved pit latrines
[6] Piped sewerage with treatment

How are costs changing?

Real costs of water supply and sanitation services are changing due to a number of factors, as discussed in greater depth in the World Bank's Water Resources Management Policy Paper. First are demographic factors. As the population of developing countries becomes more urbanized, per capita costs rise. This is partly because a number of the low-cost, on-site urban sanitation technologies become infeasible in dense urban settlements, and partly because the aspirations of urban people—as demonstrated in the Orangi case—is for a high level of service.

Second are resource factors. Twenty-two countries today have renewable water resources of less than 1,000 cubic meters per capita, a level commonly taken to indicate severe water scarcity, and an additional eighteen countries have less than 2,000 cubic meters per capita. Elsewhere water scarcity is less of a problem at the national level, but is nevertheless severe in certain regions, at certain times of the year and during periods of drought. The effects of these "natural" factors are seriously exacerbated by the widespread mismanagement of water resources, with scarcity induced by the provision of large quantities of water at no or low cost for low-value agricultural uses. Costs are also affected by the fact that cities have logically first sought water where it is easiest and cheapest to obtain. Finally, as cities grow so the "pollution shadows" around the cities often engulf existing water intakes, necessitating expensive relocation of intakes. In Shanghai, for instance, water intakes were moved more than 40 kilometers upstream at a cost of about US$300 million. The compound effect of these factors is, as illustrated in Figure 3, a large increase in the costs of capturing and transporting water of adequate quality to cities and towns throughout the world.

Figure 3: How the costs of supplying water is increasing



The efficiency with which financial resources are used

A recent comprehensive review of forty years of World Bank experience in water and sanitation documents compellingly that costs are much higher than they need to be, because of the low efficiency with which available resources have been used by water supply agencies in developing countries. The review, which examined more than 120 sector projects over twenty-three years concludes that only in only four countries--Singapore, Korea, Tunisia and Botswana--have public water and sewerage utilities reached acceptable levels of performance.

A few examples illustrate how serious the situation is:

- In Accra, Ghana, only 130 connections were made to a sewerage system designed to serve 2,000 connections.
- In Caracas and Mexico City an estimated 30 percent of connections are not registered.
- Unaccounted-for-water, which is 8 percent in Singapore, is 58 percent in Manila and around 40 percent in most Latin American cities. For Latin America as a whole, such water losses cost between US$1 and US$1.5 billion in revenue foregone every year.
- The number of employees per 1,000 water connections is between 2 and 3 in Western Europe, around 4 in a well-run developing country utility (Santiago in Chile), but between 10 and 20 in most Latin American utilities.

Financial performance is equally poor. A recent review of Bank projects found that borrowers often broke their financial performance covenants. A corollary is that the shortfalls have to be met by large injections of public money. In Brazil from the mid-1970s to mid-1980s about

US$1 billion a year of public cash was invested in the water sector. The annual federal subsidy for water and sewerage services to Mexico City amounts to over US$1 billion a year or 0.6 percent of GDP.

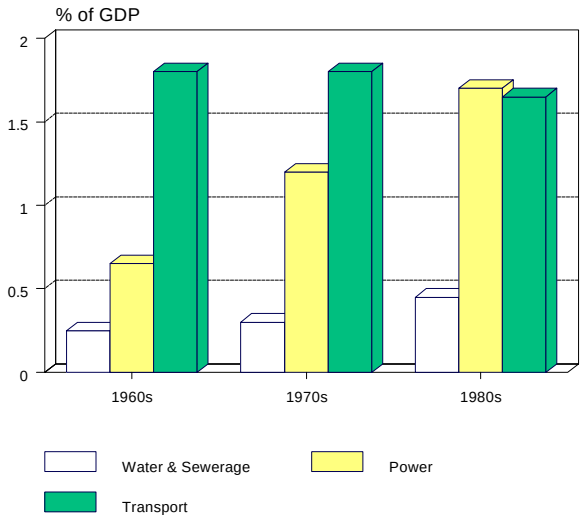
Another World Bank study of projects launched between 1966 and 1981 showed that actual outcomes fell short of expectations for reducing unaccounted-for water in 89% of projects, in sales volume in 84% and containment of O&M costs in 74% of cases. In short, the vast majority of water supply agencies in developing countries are high-cost, low-quality producers of services.

How Formal Services are Financed:

Levels of public financing

Two recent assessments by the World Bank provide a clear overview of public financing for the water and sanitation sector in developing countries over the past three decades. As shown in Figure 4 below, the proportion of Gross Domestic Product (GDP) invested in water supply and sanitation rose from about 0.25% in the 1960s to about 0.45% in the 1980s. Furthermore, although it was widely believed that the allocation to the sector fell during the difficult years of the late 1980s, a World Bank analysis of information from Public Investment Reviews in 29 countries showed that while public investment had, indeed, declined in this period (from 10.9% of GDP in 1985 to 8.7% of GDP in 1988), over this same period, investment in water and sanitation held virtually constant at about 0.4% of GDP.

Figure 4: Public investment in infrastructure in developing countries over three decades



Sources of financing for formal services

As will be discussed in more detail, sector performance and sustainability depends not only on the level of financing, but the sources of such financing. Experience shows unequivocally that services are efficient and accountable to the degree that users are closely involved in providing financing for the services. Or, stated another way, deficiencies in financing arrangements are a major source of the poor sector performance described earlier.

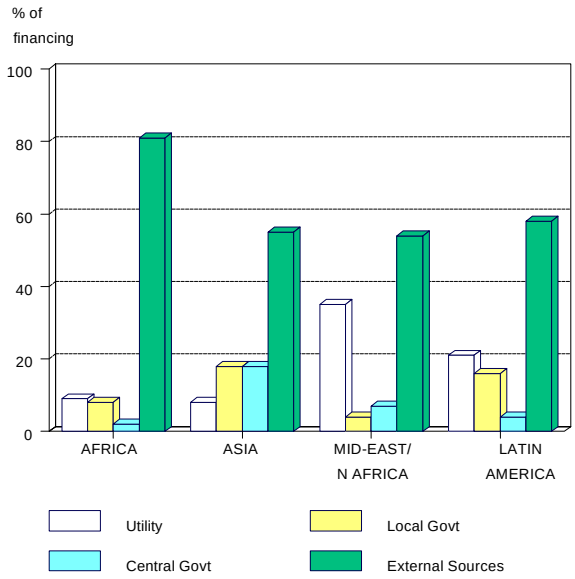
A World Bank analysis has assessed in detail the sources of financing for water and sanitation projects assisted by the World Bank. Internal cash generation in efficient, financially-sustainable utilities is high—67% in a World Bank-assisted water and sewerage project in Valparaiso, for example. As shown in Figure 5, there are wide regional differences in the relationship between financing and users. Africa has the longest way to go, with utilities and local government providing only 17% of investment financing. In the other three regions the proportion of financing mobilized by utilities themselves and from local government is higher. In Asia the supply institutions themselves generate relatively little financing, with domestic financing from central and local government in about equal shares. In the Middle East and North Africa utilities themselves generate most of the domestic financing in World Bank-assisted projects, whereas in Latin America the contributions of the utility and local government are similar. Unsatisfactory as these figures are, it appears that things are getting worse: Internal cash generation financed 34 per cent of costs in World Bank-financed projects in 1988, 22 per cent in 1989, 18 per cent in 1990 and just 10 per cent in 1991.

Relationship between costs and pricing

The relationship between the cost of providing services and the prices that are charged for these services has major implications for the technical and financial performance of supply organizations, and for the relationship of such organizations to the users it serves. Urban consumers in most industrialized countries pay all of the recurrent costs (for operations, maintenance and debt service) for both water and sewerage services. They also pay most of the capital costs of water supply and a large—typically more than half—and a rising portion of the capital costs of sewerage.

In developing countries, however, consumers pay far lower proportions of these costs. A recent review of World Bank-financed projects shows that the effective price charged for water is only about 35 per cent of the average cost of supplying it. As might be expected from the discussion on sources of financing, the gap between costs and prices was greatest in Africa and Asia, where the reliability and sustainability of services is the weakest.

Figure 5: Sources of financing in World Bank-assisted Water and Sanitation Projects



Who benefits from public subsidies?

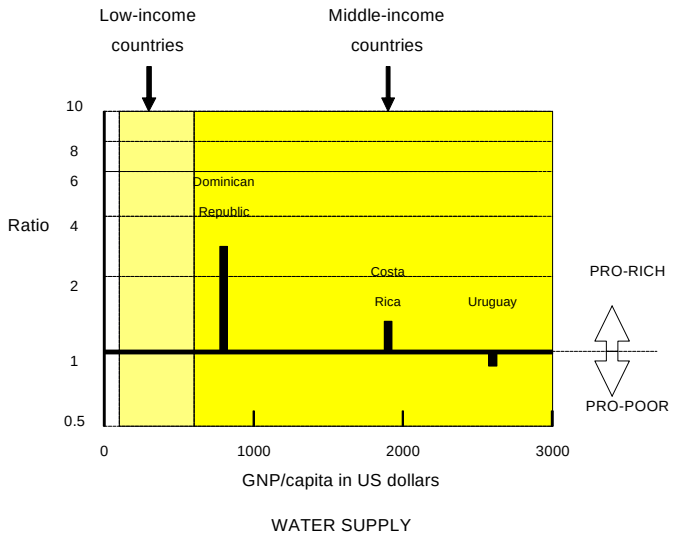
The justification for high levels of public financing for water and sanitation services in developing countries usually offered is the low ability of poor people to pay for services. In practice, however, it is the rich, not the poor, who virtually always benefit disproportionately from subsidized water and sanitation services.

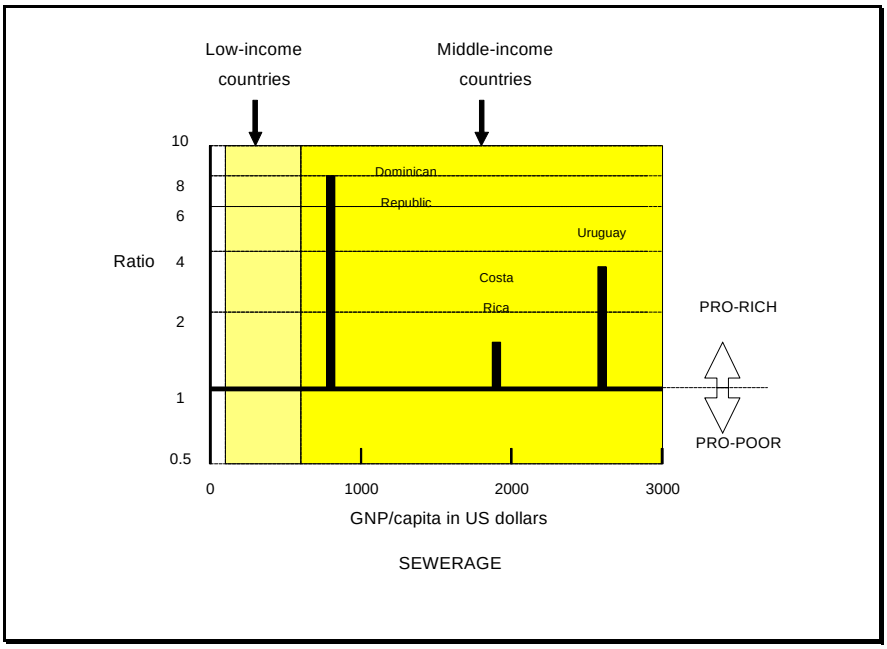
As described earlier, the unserved people, particularly those in urban areas, pay much higher prices for water. And it is the poor who are the unserved. Figure 6 reports the results of a detailed assessment of who benefits from public subsidies of water supply and sanitation services in several Latin American countries. The results are striking and the conclusions clear—although subsidies are justified as "being necessary because poor people cannot afford to pay," they end up heavily favoring the rich, with the inequity directly related to the degree of rationing of the service. Inequity is, accordingly, greater in low- than in middle-income countries, and greater for sewerage than for water supply.

The cycle is clear. Where services are heavily subsidized, service expansion is relatively slow, both because available resources are used inefficiently (because the supply organizations are not directly accountable to their customers) and because of constraints on public financing. The consequence is that "the lucky ones" get subsidized services while "the unlucky ones" who are not served pay an exorbitant human, social and financial price to get services. Data from Latin America (Figure 6 below) provide clear confirmation of the universal rule, namely that "luck" is not a random

outcome, but is the prerogative of the privileged. These data also show that inequities are greatest where services are most heavily rationed (namely in the poorest countries and for sewerage).

Figure 6: The incidence of subsidies for water and sanitation services in Latin America





Nonformal services and their financing

The above discussion, mirroring most discussions on the provision and financing of water supply and sanitation services, focuses exclusively on what is done by formal institutions, with the emphasis on formal public financing. In recent years it has become clear that there is, especially where formal institutions perform least adequately a very large "underground" industry for meeting those needs which the formal institutions do not meet.

Consider the following examples. In Jakarta, Indonesia, only 14 per cent of the 8 million people living in the city receive piped water directly. About 32 per cent purchase water from street vendors, and the remaining 54 per cent rely on private wells. In Jakarta, furthermore, there are over 800,000 septic tanks, installed by local contractors, fully financed by households themselves, and maintained by a vibrant and competitive service industry. In cities throughout the developing world, the reliability of the formal water supply service is unsatisfactory, and so households build in-house storage tanks, install booster pumps (which can draw contaminated groundwater into the water distribution system) and sink wells. In Tegucigalpa, for example, the sum of such investments is so large that it would be enough to double the number of deep wells providing water to the city. The size of this "hidden" water economy often dwarfs the size of the visible water economy. In Onitsha, Nigeria, for instance, revenues collected by water vendors are about ten times the revenues collected by the formal water utility!

And in rural areas, too, the "hidden" water economy is often huge. In Pakistan, for instance, over 3 million families have wells fitted with pumps, many of which are motorized. These are paid for in full by the families, and all equipment provided and serviced by a vibrant local private sector industry.

The degree of distortion involved in ignoring the informal provision and financing of services varies greatly by level of development (as is obvious from the examples discussed). For prosperous urban areas, formal services are the norm; for low-income countries the formal services may be totally dwarfed by the informal, especially in rural areas but even in some cities. What is critical is the realization that this "hidden" water and sanitation economy is extremely important in terms of both coverage and service. The nonformal sector offers many opportunities for providing services in an accountable, flexible way. When this is not possible because of economies of scale, then service by the informal sector offers a major source of supplementary financing which can be redirected if formal services can become more responsive to consumers' demands in an efficient and accountable way.

The existence of this "hidden water and sanitation economy" has important implications for service provision. First, there is a high demand for services which has not been met successfully by the formal sector. Second, although some of these services are provided efficiently by the informal sector (such as tubewells in Pakistan), in other cases (such as water vending in the urban periphery) the costs of service are exorbitant, in large part because the informal providers cannot take advantage of the large economies of scale involved in transmitting water by pipe rather than by person or vehicle.

The specific implication for the formal sector is profound and clear—there is an enormous reservoir of resources which can be drawn into the formal sector at reduced costs for all, as and when the formal sector is able to provide the services that consumers want in a responsive, accountable way.

Toward a Financially Sustainable Sector

An important backdrop to this discussion is the radical rethinking which has taken, and is taking, place in all aspects of economic development policy and natural resource policy. In this context, it is instructive to characterize and contrast an "old view" of sector policy (and the related financing challenges) which derives from the central planning model which dominated development thinking between the 1950s and the 1980s; and a "new view" that is emerging as a result of the central place now occupied by efforts to introduce more "market-friendly" policies, and by concerns of environmental sustainability.

The old view of sector financing

The "old view" assumes that government has the primary responsibility for financing, managing, and operation of services. It is government's task to define the services which are to be provided, to subsidize these services (especially for the poor), and to develop public organizations for the delivery of the services. And it is the function of external support agencies to assist by providing the resource transfers necessary for providing such services.

Over the past twenty years there have been many assessments of the "financing needs for the water supply and sanitation sector" based on this "old view." These analyses have followed a well-defined and often used format, comprising the following steps:

- an assessment of "the proportion of the population which is served";
- an estimate of the per capita investment costs of providing services to those "who are not served";
- an aggregation of these costs, globally and by country and region; and

- a comparison of these “investment needs” with current levels of investment in the sector.

With this format, the conclusions, too, are common and stress:

- the large “backlog” in services;
- the slow pace of improving coverage;
- the size of “the resource gap” if coverage targets are to be met; and
- the need for governments and external support agencies to increase the resources devoted to the sector so that targets can be reached.

> The calculations underlying Agenda 21 are typical of this approach:
> “The current level of investment... is about US US$10 billion per year. It is estimated that approximately US US$50 billion a year would be needed to reach full coverage by the year 2000.... Such a five-fold increase is not immediately feasible. A new strategy is based on doubling of current investments to US US$20 billion per year....”

To the advocates of the “old view,” what is needed is more strenuous advocacy so that external support agencies and national governments will dedicate larger proportions of available public resources to the sector.

The new view of sector financing

In recent years the limitations of the financing perspective implicit in the “old paradigm” have become painfully clear to many water and sanitation sector professionals (although they were becoming increasingly clear to governmental financing departments earlier).

At the most fundamental level, although complaints about “insufficient priority for the sector” remain common, a review of the record (see Figure 4 and accompanying discussion earlier in this paper) shows that allocations to the sector from public sources in developing countries increased from about 0.25% of GDP in the 1960s to about 0.45% of GDP in the 1980s and that these levels of public investment were maintained even in the years of financial stringency of the late 1980s. This privileged place at the table notwithstanding, and partially because of it, sector performance remains poor (in terms of the number of people served, the quality of service, the efficiency of the supply organizations and the quality of the environment).

The invocations at international water conferences pleading for “increased priority to the sector” and the repeated “commitment” to ambitious targets have become an embarrassment to sector professionals. The delegates at the pre-UNCED International Conference on Water and the Environment in Dublin specifically rejected proposed targets and the pleas for the resources to meet those targets.

Of greater significance, a sophisticated understanding of sector financing has begun to emerge in the sector. As is true for development policies in general, this has entailed a rigorous separation of wish from reality, with specific attention being focused on the incentives which face individuals and organizations.

Possibly the most important element of this new understanding is that “sector finance” is not a subject to be dealt with as a mechanical “requirement” (as was the case previously) after the major policies are decided on, but rather a set of considerations which are at the heart of developing a sector which provides the services that people want in an efficient, accountable and environmentally-friendly way.

Starting with this perspective, a remarkable, radically different, consensus has started to emerge in recent years on policies (including financial) for managing water resources and for delivering water supply and sanitation services on an efficient, equitable and sustainable basis. At the heart of this consensus are the two, closely related, "guiding principles" enunciated in the 1992, pre-UNCED, Dublin International Conference on Water and the Environment, namely that:

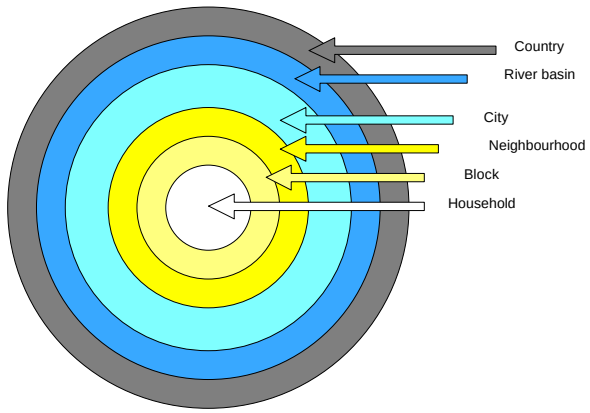
- water has an economic value in all its competing uses and should be recognized as an economic good; and
- water development and management should be based on a participatory approach, involving users, planners and policy makers at all levels, with decisions taken at the lowest appropriate level.

These principles are now being widely adopted (for instance in the World Bank's Water Resources Management Policy Paper and by the Development Assistance Committee of the OECD). The great challenges now facing the sector are articulation of the details implicit in these general principles and the translation of the Dublin principles into practice on the ground.

The new consensus gives prime importance to one central principle (long familiar to students of public finance) which should underlie the financing of water resources management and water supply and sanitation services. This principle is that efficiency and equity both require that private financing should be used for financing private goods and public resources be used only for financing public goods. Implicit in the principle is a belief that social units themselves—ranging, in this case, from households to river basin agencies—are in the best position to weigh the costs and benefits of different levels of investment of resources for benefits that accrue to that level of social organization.

The vital issue in application of this principle to the water sector is the definition of the decision unit and the definition of what is internal (private) and external (public) to that unit. And here it is useful to think of the different levels at which such units may be defined, as illustrated in Figure 7 below.

Figure 7: Levels of decisionmaking on water and sanitation



To illustrate the implications of the "decisionmaking rosette" (Figure 7), it is instructive to consider how water supply and sanitation services should be financed.

How water supply services should be financed

The economic costs of providing water include (a) the financial costs of abstracting, transporting, storing, treating and distributing the water and (b) the economic cost of water as an input. The latter cost arises because when water is taken, for example, from a stream for use in a city, then other potential users of that water are denied the possibility of using the water. The value of the most valuable opportunity foregone because of this water (known technically as the "scarcity value" or "opportunity cost") constitutes a legitimate element of the total production cost of water. In the most appropriate forms of water resources management (discussed later) charges are levied on users for this privilege. (As an empirical matter, the financial costs of water supplies to urban consumers and industries usually greatly exceed the opportunity costs. For low-value, high volume uses—specifically irrigated agriculture—this relationship is frequently just the opposite—opportunity costs comprise a considerable fraction of total costs, especially in situations of water scarcity.)

What of the benefit side? The provision of water supply to households has several different benefits. Households themselves value a convenient, reliable and abundant water supply because of time savings and amenity benefits and, to a varying degree, because of the health benefits it confers on them. Because these "private" benefits constitute the bulk of the overall benefits of a household water supply, the public finance allocation principles dictates that most of the costs of such supplies should be borne by householders themselves. When this is the case households make appropriate decisions on the type of service they want (for example, a communal tap, a yard tap or multiple taps in the household). The corollary is that, because this is principally a "private good," most of the financing for the provision of water supply services should be provided through user charges sufficient to cover both the economic costs of inputs (including both the direct financial cost of inputs such as capital and labor and the opportunity cost of water as an input.)

How sanitation, sewerage and wastewater management should be financed

The benefits from improved sanitation, and, therefore, the appropriate financing arrangements, are more complex. At the lowest level, households place high value on sanitation services which provide them with a private, convenient and odor-free facility which removes excreta and wastewater from the property or confines it appropriately within the property. However there are clearly benefits which accrue at a more aggregate level and are, therefore, "externalities" from the point of view of the household. At the next level, the block, this means that households in a particular block collectively value services which remove excreta from the block as a whole. At the next level, that of the neighborhood, services which remove excreta and wastewater from the neighborhood, or which render these wastes innocuous through treatment, are valued. Similarly at the level of the city, the removal and/or treatment of wastes from the environs of the city are valued. Cities, however, do not exist in a vacuum—the wastes discharged from one city may pollute the water supply of a neighboring city. Accordingly, groups of cities (and farms and industries and others) in a river basin perceive a collective benefit from environmental improvement. And finally, because the health and well-being of a nation as a whole may be affected by environmental degradation in one particular river basin, there are sometimes additional national benefits from wastewater management in a particular basin.

The fundamental axiom of public financing prescribes that costs should be assigned to different levels in this hierarchy according to the benefits accruing at different levels. This would

suggest that the financing of sanitation, sewerage, and wastewater treatment be approximately as follows:

- households pay the bulk of the costs incurred in providing on-plot facilities (bathrooms, toilets, on-lot sewerage connections);
- the residents of a block collectively pay the additional cost incurred in collecting the wastes from individual houses and transporting these to the boundary of the block;
- the residents of a neighborhood collectively pay the additional cost incurred in collecting the wastes from blocks and transporting these to the boundary of the neighborhood (or treating the neighborhood wastes);
- the residents of a city collectively pay the additional cost incurred in collecting the wastes from blocks and transporting these to the boundary of the city (or treating the city wastes);
- the stakeholders in a river basin—cities, farmers, industries and environmentalists—collectively assess the value of different levels of water quality within a basin, decide on what level of quality they wish to pay for, and on the distribution of responsibility for paying for the necessary treatment and water quality management activities.

In practice, of course, there are complicating factors to be taken into account (including transactions costs of collection of revenues at different levels, and the interconnectedness of several of the benefits). What is striking, nevertheless, is that the most innovative and appropriate forms of sector financing (and service provision) follow the above logic to a remarkable degree.

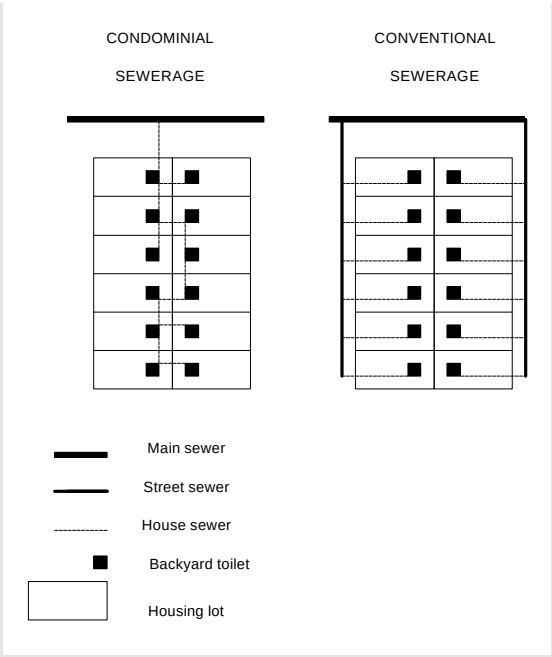
Box 1 (earlier in this paper) presents the case of the financing of sewerage services in an informal urban settlement in Karachi, Pakistan. In this case households pay the costs of their on-lot services, blocks pay the cost of the tertiary sewers, blocks pool their resources to pay for the neighborhood (secondary) sewers, and the city (via the Municipal Development Authority) pays for the trunk sewers. This evocative “feeder/trunk” distinction is now being applied on a much larger scale to the provision of urban services in Pakistan.

Box 3 presents the case of the financing of condominial sewers in Brazil. Although the arrangements are not quite as clear-cut as in Karachi, the same principle applies, and applies successfully—households pay for the on-lot costs, blocks pay for the block sewers (and decide what level of service they want from these), with the water company or municipality paying for the trunk sewers.

Box 3: The condominial sewerage system in Brazil

The "condominial" system is the brain-child of Jose Carlos de Melo, a socially committed engineer from Recife. The name "condominial" was given for two reasons. First, a block of houses was treated like a horizontal apartment building—or "condominial" in Portuguese (see Figure 8 below). Second, "Condominial" was a popular Brazilian soap opera and associated with the best in urban life! As is evident in Figure 8 below, the result is a radically different layout (with a shorter grid of smaller and shallower "feeder" sewers running through the backyards and with the effects of shallower connections to the mains rippling through the system). These innovations cut construction costs to between 20 percent and 30 percent of those of a conventional system.

Figure 8: Schematic layouts of condominial and conventional sewerage systems



The more fundamental and radical innovation, however, is the active involvement of the population in choosing their level of service, and in operating and maintaining the "feeder" infrastructure. The key elements are that families can choose: *(a)* to continue with their current sanitation system; *(b)* to connect to a conventional water-borne system; or *(c)* to connect to a "condominial" system. If a family chooses to connect to a condominial system, it has to pay a connection charge (financed by the water company) of, say X cruzados, and a monthly tariff of Y cruzados. If on the other hand, it wants a conventional connection, it has to pay an initial cost of about 3X and a monthly tariff of 3Y (reflecting the different capital and operating costs). Families are free to continue with their current system (which usually means a holding tank discharging into an open street drain). In most cases, however, those families who initially choose not to connect eventually end up connecting. Either they succumb to heavy pressure from their neighbors. Or they find the build-up of wastewater in and around their houses intolerable once the (connected) neighbors fill in the rest of the open drain. Individual households are responsible for maintaining the feeder sewers, with the formal agency tending to the trunk mains only. This increases the communities' sense of responsibility for the system. Also, the misuse of any portion of the feeder system (by, say, putting solid waste down the toilet) soon shows up in a blockage in the neighbor's portion of the sewer. This means rapid, direct and informed feedback to the misuser! This virtually eliminates the need to "educate" the users of the system in the do's and don'ts, and results in fewer blockages than in conventional systems. Finally, because of the greatly reduced responsibility of the utility, its operating costs are sharply reduced.

The condominial system is now providing service to hundreds of thousands of urban people in Northeast Brazil and is being replicated on a large scale throughout the country. The danger, however, is that the clever engineering is seen as "the system." Where the community and organizational aspects have been missing, the technology has worked poorly (as in Joinville, Santa Catarina) or not at all (as in the Baixada Fluminense in Rio de Janeiro).

Even when the appropriate financing and institutional principles are followed, however, very difficult issues arise with respect to financing of wastewater treatment facilities. In industrialized countries it is possible to discern two models which have been used.

In many industrialized countries the approach followed has been to set universal standards and then to raise the funds necessary for financing the required investments. As is becoming increasingly evident, such an approach is turning out to be financially infeasible, even in the richest countries of the world. In the United Kingdom, the target date for compliance with the water quality standards of the European Community is being reviewed as customers' bills rise astronomically to pay the huge costs (over US$60 billion this decade) involved. And in the United States local governments are revolting against the unfunded mandates of the Federal Government. A particularly pertinent case is the refusal of cities on the Pacific coast to spend the resources ($3 billion in the case of San Diego alone) required for secondary treatment of sewage. The National Academy of Sciences of the United States has advocated rescinding the "secondary treatment everywhere" mandate and developing an approach in which the costs and benefits are both taken into account in the management of sewage in coastal areas.

In a few countries a different model has been developed. In these countries, institutional arrangements have been put into place which (a) ensure broad participation in the setting of standards, and in making the tradeoffs between cost and water quality; (b) ensure that available resources are spent on those investments which yield the highest environmental return and (c) use economic instruments to encourage users and polluters to reduce the adverse environmental impact of their activities.

These principles were first applied immediately before the First World War to the management of the Ruhr River Basin in Germany's industrial heartland and have provided the underpinnings for the management of the Ruhrverband ever since. Learning from the experience of their German neighbors, France developed a national river basin management system based on the Ruhrverband principles and have been applying it since the early 1960s. Box 4 below describes the principles of these river basin financing and management models and shows how resources for wastewater treatment and water quality management are raised from users and polluters in a basin, and how stakeholders—including the users and polluters, as well as citizens' groups—are involved in deciding the level of resources which will be raised and the consequent level of environmental quality they wish to "purchase"[37]. This system, which obviously embodies the central principles codified in the Dublin Statement, has proved to be extraordinarily efficient, robust and flexible in meeting the financing needs of the densely industrialized Ruhr Valley for 80 years, and the whole of France since the early 1960s.

Box 4: Water resource financing through river basin agencies in Germany and France:

The Ruhrverband

The Ruhr Area, which has a population of about 5 million, contains the densest agglomeration of industrial and housing estates in Germany. The Ruhrverband is a self-governing public body which has managed water in the Ruhr Basin for eighty years. There are 985 users and polluters of water (including communities, districts, and

[37]With respect to the discussion in sections A and B of the chapter on Freshwater in Agenda 21—on, respectively, integrated water resource management and development, and on protection of water resources, water quality and aquatic ecosystems—it is relevant to note that the administrative and technical budgets of the River Basin Agencies are also decided on by the governing "Water Parliaments."

trade and industrial enterprises) which are "Associates" of the Ruhrverband. The highest decisionmaking body of the Ruhrverband is the assembly of associates, which has the fundamental task of setting the budget (of about US$400 million annually), fixing standards and deciding on the charges to be levied on users and polluters. The Ruhrverband itself is responsible for the "trunk infrastructure" (the design, construction and operation of reservoirs and waste treatment facilities), whereas the communities are responsible for the "feeder infrastructure" (the collection of wastewater).

The French River Basin Financing Agencies:

In the 1950s it became evident that France needed a new water resources management structure capable of successfully managing the emerging problems of water quality and quantity. The French modeled their system closely on the principles of the Ruhrverband, but applied these principles on a national basis. Each of the six river basins in France is governed by a Basin Committee (also known as a "Water Parliament") which comprises between 60 and 110 persons who represent all stakeholders—national, regional and local government, industrial and agricultural interests and citizens. The Basin Committee is supported by a technical and financial "Basin Agency." The fundamental technical tasks of the Basin Agency are to determine (a) how any particular level of financial resources should be spent (where should treatment plants be located; what level of treatment should be undertaken, and so on) so that environmental benefits are maximized and (b) what level of environmental quality any particular level of financial resources can "buy." On the basis of this information, the Water Parliament decides on (a) the desirable vector of costs and environmental quality for their (basin) society, and (b) how this will be financed (relying heavily on charges levied on users and polluters). The fundamental financial task of the Basin Agency is to administer the collection and distribution of these revenues.

In the French system (in contrast to the Ruhrverband) most of the resources which are collected are passed back to municipalities and industries for investments in the agreed-on water and wastewater management facilities.

For developing countries the implications of the experience of industrialized countries are crystal clear. Even rich countries manage to treat only a part of their sewage—only 52% of sewage is treated in France and only 66% in Canada. Given the very low starting points in developing countries-- only 2% of wastewater is treated in Latin America, for example—and the vital importance of improving the quality of the aquatic environment, what is needed is a process which will simultaneously make the best use of available resources, and provide incentives to polluters to reduce the loads they impose on surface and ground waters.

Against this backdrop, developing countries face an awesome challenge. The "old agenda," namely the provision of water supply and household sanitation services, is clearly a relatively "easy" task if sensible financial policies are adopted, because consumers want and are willing to pay for these services. And yet only a handful of developing countries have been successful in meeting this "easy task" in an efficient, responsive and financially sustainable way. The "new agenda," which centers of management of wastewater and the environment, is a much more difficult and expensive one, and one in which successes (in terms of efficiency and financial sustainability) are few and far between even in industrialized countries.

What is heartening is that there is evidence that the right lessons are being drawn from the experience of many developed countries. Just five years ago the Baltic Sea Clean-up was conceived of in classic terms—setting quality standards and then determining what was needed to finance the needed investments. In this case (as in all others) once the calculations were done it became clear that the necessary money (over US$20 billion) could not possibly be raised. In the Interministerial Conference on Financing of the Baltic Sea Clean-up in Gdansk in 1993 this approach was abandoned for a far more productive one, namely ensuring that limited available resources were invested in such a way as to develop financially sustainable, efficient water and sanitation utilities,

and to ensure that the limited resources for wastewater treatment were allocated to the highest priority investments.

Daunting as the "new agenda" is, there is cause for hope. It is encouraging that delegates from over 100 countries could agree at the International Conference on Water and the Environment in Dublin on the global relevance of the principles underlying the Ruhr and French water resource management systems. Even more important are the signs that the Ruhr/French system is now being adopted, with appropriate modifications, in Spain, Poland, Brazil, Venezuela and Indonesia, and is likely to be applied in many developing countries in the near future.

Summary of the financing implications of "the new view"

In summary, the articulation of the "new view" of sector financing represents a radical departure from the old. Financing is seen not as an exogenous afterthought. Rather it is seen as central to the development of a sector which will provide people with the services they want and are willing to pay for, and to developing the right balance between environmental quality and cost. The way in which investments are financed matters for all issues—resource mobilization, the efficiency of allocating these resources, the efficiency with which assets are operated, and the accountability to customers and stakeholders—which are central to the development of the sector. Indeed, if financing policies can be "got right," all of the other key sector issues—involvement of users, the assignment of responsibility for different actions to "the appropriate level," the development of accountable institutions, appropriate standards, technology and service selection— will more readily fall into place. Where the "new view" of financing is adopted, the focus will be precisely on the central sector problems,[38] namely:

- managing water resources better, taking account of economic efficiency and environmental sustainability;
- providing, at full cost, those "private" services that people want and are willing to pay for (including water supply and the collection of human excreta and wastewater);
- mobilizing and using scarce public funds only for those services (specifically the disposal and treatment of wastes) that provide wider communal benefits;
- developing flexible, responsive, financially sustainable institutions for providing these services, with a larger role for community organizations and the private sector.

Some common beliefs about the new approach to financing:

Finally, it is important to explore three commonly-held beliefs which may impede the adoption of the "new" financing perspective.

Belief #1: The existence of externalities means that a demand-based, participatory approach to sector development cannot work

It is frequently asserted that a demand-based approach is fine for "private goods" but not for "public goods" (such as environmental quality).

In this context, it is important to note that a central feature of the approach advocated in this paper is respect for the capacity of stakeholders to make the right decisions. First it should be noted that the principle which applies at the household level—namely that the household is in the best position to decide how to spend the resources available to it—can successively be applied at greater

[38] For example, see the World Bank's *World Development Report, 1992 on Environment and Development.*

and greater levels of social aggregation (remember that "the household," too, is a social aggregation!) to solve the resource allocation issues appropriate to that level.[39] Second, it should be noted that there is no appeal to override the basic behavioral-based decision process by appealing to "externalities," but simply a need to deal with externalities at any particular level by "kicking them up" one level, where they are internalized.[40] And third, that a successively smaller and smaller number of decisions needs to be made at higher levels.

There is clear evidence from the experience of the World Bank that the (appropriate) concern with environmental quality can easily lead to a supply-driven approach which mandates investments on the basis of "technocratic criteria" and which ends up serving the interests of consultants and contractors, but not the people to be served or the environment in which they live. In such a context it has correctly been asserted that "externalities are the first refuge of scoundrels"!

Belief #2: The new approach to financing does not address the needs of the poor

A second myth about the "new" approach to financing is that it does not take adequate account of the situation of the poor and their need for subsidies.

First is an empirical issue. Although virtually all developing country governments contend that public funds are and should be used to subsidize the poor, the reality is quite different. Figure 6 (earlier in this paper) shows who, in fact, benefits from subsidies for water and sewerage services—it is overwhelmingly the rich, not the poor, with the discrepancies particularly pronounced n poor countries. (This has appropriately been termed "the hydraulic law of subsidies"—the subsidies go with the service, and it will always be the better off and more influential who, public pronouncements notwithstanding, benefit first. And it will always be the less influential—the poor—who are at the end of the line both literally and figuratively and who either do not get services or who suffer most from poor quality services.)

Second is an issue of income transfers to poor people. Although subsidies often (as in the above case) work perversely in practice, the transfer of resources to poor people is obviously a legitimate (and desirable) instrument of public policy. In the present context the key is to resist the temptation to wrap those transfers up into the transfer of particular types of services (which the poor may or may not value). Once again this comes down to the question of trusting people—even poor people—to know how best to spend the resources which are available to them. In practice then, where block grants are made to poor communities, these can, appropriately, be used by the community to pay for water and sewerage services, if these are the services which the communities value most. (This is a practice which is becoming fairly widespread in the social development funds which have become common in developing countries in recent years.)

An issue of considerable importance for the poor is that of the difficulties they face in raising the capital required for the initial costs of connecting to a piped water supply system. Studies in India and Pakistan have shown that connection rates can be increased very substantially if water companies provide financing (not subsidies) to poor customers for the costs of connecting to piped systems. This practice—of amortizing the costs of connections over, typically, five years—has been practiced to considerable success in Latin America for many years.

---

[39] The critical concept here is that one party's externalities are another party's costs (or benefits).

[40] The situation is similar for health benefits, as discussed in pp. 92–95 of the World Bank's *World Development Report, 1993: Investing in Health*.

Belief #3: The financing problem can be overcome by mobilizing financing from the private sector

Faced with constraints on public financing, some countries have looked to the private sector for financing of the massive investments required. There are many reasons—efficiency, innovation, and separation of provider and regulator—suggesting that it is often appropriate to involve the private sector in the provision of these services. And there are an increasing number of examples of private sector financing being mobilized for wastewater investments (especially for Build-Operate-Transfer schemes) in Mexico, Malaysia, Indonesia and other developing countries.

In the context of the present discussion, there are two major factors to be taken into account in assessing the role of the private sector in financing of wastewater investments in developing countries. First, as shown in Figure 9 (overleaf), public facility projects are often "characterized by a long construction period, followed by a gradual increase in the revenue extracted from the operation, with the result that the investors may have to wait 8 to 10 years before receiving their first dividend and will almost have to wait 15 to 20 years before obtaining a rate of return comparable to that offered by an industrial investment. In addition, the entire construction period may be characterized by considerable uncertainty about the ultimate profitability of the investment (because of potential cost overruns and because about the uncertainty about operating revenues). During this period of great uncertainty, remuneration of the investor's risk should compare to that of venture capital and run at the level of 25 to 30%. In contrast, when tariff levels are known following commencement of operation, revenues are not likely to vary as much as in an industrial project. The risk (and appropriate return) is, thus, less.[41]"

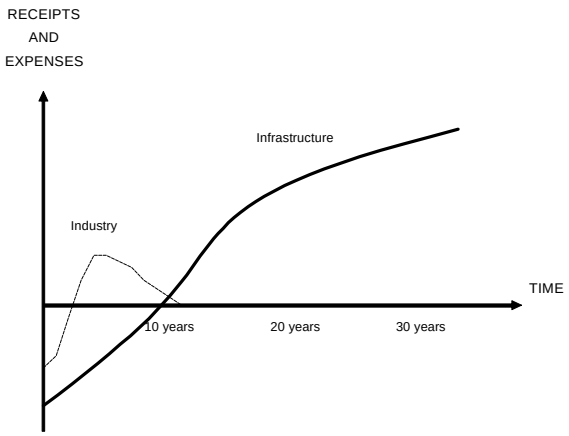
Three observations are relevant in this context. First (see Table 3), in the country with the longest history of private sector participation in the water sector—France—the bulk of privately-operated water supplies are privately financed (concession contracts), but the majority of privately operated sewerage is publicly financed (affermage contracts). Second, where capital markets are relatively shallow—as is the case in most developing countries—the transition from public financing to long-term private financing is going to take time and ingenuity. And third, because the investment costs are so large, cost recovery frequently has to be scheduled over a number of years.

Table 3: Private and public financing of privately-operated water and sewerage services in France (approximate)

	Water supply	*Sewerage*
Affermage (public financing)	30%	70%
Concession (private financing)	70%	30%
All delegated management	100%	100%

[41] Laurent Davezies and Remy Prud'homme, 1993.

Figure 9: The time profile of expenses and receipts for typical infrastructure investments



After Davezies and Prud'homme, 1993

Financing of Freshwater in Agenda 21 in Context

The verdict on the "old," top-down, populist, supply-driven financing policies is clear: despite the good intentions which underlie these policies they have failed on all counts —they are inequitable, inefficient and unsustainable. The overwhelming supporting evidence notwithstanding, in certain political fora populism and good intentions still hold sway.

To take but two examples. The 1990 New Delhi Consultation (the end-of-the-Water-Decade event) declared that the driving principle should be "some for all rather than more for some," a noble intention which had manifestly failed in practice.[42]. What is particularly striking is that such a declaration was made just as the counterproductivity of such policies was leading many developing countries to take a less romantic, more pragmatic and more productive policy position.

Next consider the freshwater sections (Chapter 18) of Agenda 21, the outcome of the United Nations Conference on Environment and Development. The preparatory technical meeting (the International Conference on Water and the Environment, held in Dublin) was, attended by delegates from over 100 countries. Many of the delegates were veterans of previous international water conferences and were acutely aware both of the seductiveness of the populist positions which had

[42] Interestingly, nowhere had the "some for all rather than more for some" maxim been followed more closely than in India, the country which hosted the New Delhi Consultation. In India this approach led to a "low level equilibrium trap," in which, in the name of equity, service quality was low, willingness to pay low, revenues low, etc., with the end result being poor services to those who had service and no service to those who the policy was ostensibly designed to benefit!. (Singh et al, 1993) Interesting, too, is the fact that the Indian government itself now recognizes the counterproductive nature of these policies and is in the process of abandoning them. (Government of India, Ministry of Urban Development, 1993).

prevailed at such conferences, and of the ultimately counterproductive nature of those positions. The delegates at Dublin resisted the standard calls—for unachievable targets, for additional resources, for unimplementable laundry lists. In particular they drew attention to the total impracticality of the draft recommendations on financing (which formed the basis for the discussions on financing in Agenda 21), where the volume of external resources "required" for freshwater exceeded the total volume of official development assistance! Instead the Dublin delegates focused on defining the two key principles which had proved to be effective in managing water resources. The result was a document—the Dublin Statement—which has proved to have widespread acceptance and applicability and has come to frame the debate on water resources policies in many external support agencies and countries alike.[43] And what happened to the Dublin principles in the political atmosphere of UNCED? The core principles which Dublin had articulated and prioritized—specifically "water as an economic good" and "responsibility at the lowest appropriate level"—disappeared as guiding principles. Instead the Chapter on Freshwater (Chapter 18) of Agenda 21 comprises long list of unreachable and unfundable targets, with no fewer than 184 activities advocated in this chapter alone!

The hopeful sign is the way in which these policy pronouncements are playing in developing countries and with external support agencies. The rhetoric of the Delhi Declaration is being disregarded even in India (which had pursued the "some for all rather than more for some" policies for decades). And Chapter 18 of Agenda 21 is seldom read or even referred to while numerous countries and external support agencies are showing the way by developing participatory, efficient, and financially and environmentally sustainable policies of the sort described in this paper.

References

Danida, The Copenhagen Report, Implementation Mechanisms for Integrated Water Resources Development and Management., Ministry of Foreign Affairs, Copenhagen, 1991.

Davezies, L and Remy Prud'homme, "The economics of public-private partnership in infrastructure," in Private Financing of Public Infrastructure: The French Experience, ed. Claude Martinand, Ministry of Public Works, Transportation and Tourism, Paris, 1993.

de Melo, Jose Carlos, "Sistemas Condominiais de Esgotos," Engenharia Sanitaria 24, no.2, 1985.

Financial Times: "Warning on costs of European Union 'green' law," Financial Times, Feb 21, 1994, page 8.

Garn, Harvey A "Financing Water Supply and Sanitation Services," a paper prepared for the Collaborative Council As a Background Paper for the Delhi Conference, Water Supply and Sanitation Division, World Bank, Washington D.C., 1990.

Garn, Harvey A. "Patterns in the Data Reported on Completed Water Supply Projects," Water Supply and Sanitation Division, World Bank, Washington D.C., April 1987.

Government of India, Proceedings of National Conference of Urban Water Supply and Sanitation Policy, Ministry of Urban Development, New Delhi, 1993.

Government of India, "Water Supply and Sanitation Chapter:" in The Eighth Five Year Plan (1992-97), Planning Commission, New Delhi, 1992.

[43] To cite just a few examples: the "Dublin Principles" underlie the recently-formulated World Bank Water Resources Management Policy Paper, and provide the benchmark against which the OECD countries have agreed to assess their water resource assistance strategies. The principles are being implemented in a concerted fashion by many bilaterals, most notably the Nordic countries and the French. And several governments in developing countries—including the states of Sào Paulo and Cearà in Brazil, Venezuela, Poland, Peru—are basing their new water resources policies on the Dublin Principles.

Hasan, Arif “Innovative Sewerage in a Karachi Squatter Settlement: The Low-cost Sanitation Programme of the Orangi Pilot Project and the Process of Change in Orangi,” Orangi Pilot Project, Karachi, 1986.

Hasan, Arif:, "Community Groups and NGOs in the Urban Field in Pakistan," Environment and Urbanization 2 (1990).

International Conference on Water and the Environment, The Dublin Statement and Report of the Conference. Dublin, January 1992.

Petrie, AH, El Gasto Publico Social y sus Efectos Distributivos, Santiago, Chile, ECIEL, 1989.

Ruhrverband, “Tasks and Structure,” Essen, 1992.

Singh, Bhanwar, Radhika Ramasubban, Ramesh Bhatia, John Briscoe, Charles C. Griffin, and Chongchun Kim. “Rural Water Supply in Kerala, India: How to Emerge From a Low-Level Equilibrium Trap,” Water Resources Research, Volume 29 Number 7 July 1993.

United States’ National Research Council, Wastewater Management for Coastal Urban Areas Water Science and Technology Board, Washington D.C., 1994.

Watson, Gabrielle "Water and Sanitation in Sao Paulo, Brazil; Successful Strategies for Service Provision in Low-Income Communities,” Masters thesis in City Planning, Massachusetts Institute of Technology, Cambridge, 1992.

World Bank, Utility Reform and Environmental Clean-up in Formerly Socialist Countries, Report of a Workshop on the Baltic Sea, Water and Sanitation Utilities Partnership Report # 3, Water and Sanitation Division, Washington D.C., 1992.

World Bank, Water Supply and Sanitation Projects, The Bank's Experience - 1967 - 1989, Operations Evaluation Department, Washington, D.C. 1992.

World Bank, Water Resources Management: A Policy Paper, World Bank, Washington D.C., 1993.

World Bank, World Development Report 1992, Development and the Environment, Washington, D.C. 1993.

World Bank, World Development Report 1993, Investing in Health, Washington, D.C. 1994.

World Bank, World Development Report 1994, Infrastructure (draft), Washington, D.C., 1994.

World Bank, “FY88 Annual Sector Review Water Supply and Sanitation ,” Water and Sanitation Division, The World Bank, Washington, D.C, 1988.

World Bank, “FY90 Sector Review Water Supply and Sanitation,” Water and Sanitation Division, The World Bank, Washington, D.C., 1990.

World Bank, “FY91 Sector Review Water Supply and Sanitation,” Water and Sanitation Division, The World Bank, Washington, D.C, 1991..

World Bank, “FY92 Sector Review Water Supply and Sanitation,” Water and Sanitation Division, The World Bank, Washington, D.C., 1992.

World Bank Water Demand Research Team, “The demand for water in rural areas: Determinants and policy implications,” World Bank Research Observer 8 (1): 47-70, 1993.

Yepes, Guillermo “Water Supply and Sanitation Sector Maintenance. The Costs of Neglect and Options to Improve it,” Latin America and Caribbean Region Technical Department, World Bank, Washington D.C., 1991.

.

OVERVIEW OF GENDER ISSUES IN THE WATER AND SANITATION SECTOR[44]

Introduction

Gender issues in the water and sanitation sector are a subset of gender issues in development. The main concepts and tools used in the latter form the overall basis and context for the former. Accordingly this overview will begin with a brief synopsis of some general conceptual frameworks and proceed to highlight several gender analysis models. This will provide a background for a review of gender issues in the water and sanitation sector.

The characteristics of a sector determine the specific role gender issues will have. Since the beginning of the International Drinking Water and Supply Decade, this role in the water and sanitation sector has been delineated and its implications for projects elaborated. Gender issues have been placed within the overall context of community participation. Much has been learned about the importance of participation and gender issues. There has been a wealth of experience with applying this to the project process. Yet there remain further issues to be explored.

Strategies used to address women in development(WID)/gender issues have evolved over the years to reflect changing development contexts. Gita Sen spoke of the "glow" around socialism in the 1970s, when socialist revolutions around the third world seemed to be succeeding. This resulted in a focus on class/gender research and on basic needs.[45] Goals for the development field pertained to welfare, equity and anti-poverty goals, and so did those of the WID movement.[46] In the 1980s attention turned to efficiency.[47] Structural adjustment was emphasized, and the WID field considered related policy issues. This period also marked the beginning of a shift from WID to gender issues. Focusing on gender issues, as opposed to WID, is seen as an important way of avoiding the marginalization of women. This change in approach also recognizes that the roles of both women and men must be considered if equitable and effective development is to take place.

Conceptual Frameworks

There is a range of conceptual frameworks for addressing gender issues. There are those, for example, which fundamentally question existing development strategies and societal structures. One of these has been elaborated by Peggy Antrobus and others of Development Alternatives with Women for a New Era (DAWN). They question the structural adjustment model, on the grounds that it assumes that women's time can be exploited.[48] They argue that when social services programs are

---

[44] From Wendy Wakeman, 1995, *Gender Issues Sourcebook for Water and Sanitation Projects*, pp 4–11 UNDP-World Bank Water and Sanitation Program, The World Bank, Washington, D.C.

[45] Gita Sen, remarks given during Panel #18 of 1989 Association of Women in Development (AWID) Conference.

[46] Caroline O.N. Moser spoke of these and other WID approaches of the 1970s and 1980s during her presentation at Panel #18 of the 1989 AWID Conference.

[47] Moser, Panel #18, 1989 AWID Conference.

[48] Antrobus and Sen, 1989 AWID Conference. For an elaboration of the DAWN philosophy, see Gita Sen and Caren Grown, 1987, *Development, Crises, and Alternative Visions,* Monthly Review Press, New York.

curtailed during the structural adjustment process, it is often women who are expected to fill the gap. Women are usually the ones who must cope with fewer child and health care services at a time when dire economic circumstances necessitate an increased focus on their income-earning capabilities. Antrobus stresses that what is needed is not to integrate women into this sort of development, but to arrive at another vision, another paradigm.[49]

One such paradigm or framework was developed by Riane Eisler[50]. Looking back at the millennia of human history, she classifies societies as either 'dominator' types or 'partnership' types. A fundamental determinant of a society's classification is the relationship between the sexes. When this is a hierarchical one, which usually means patriarchal, then the society is a dominator one. Other hierarchical sorts of relationships are often found in these societies as well, for example slavery, class or caste systems, racial discrimination, and so on. By contrast, in partnership societies, women and men act as partners. In these there is no matriarchy and no patriarchy. There is also no other form of rigid hierarchy. Eisler believes the last true partnership society was that of Minoan Crete, which ended about 1500 B.C; however, she also feels that the world is currently at a crossroads, where it has the opportunity to once again choose a partnership mode of existence.

Gender Analysis Models: Roles and Relationships

From these conceptual frameworks, one can move to models that relate more directly to the project process. Moser has focused on three categories of roles for women: market or productive roles, reproductive or household maintenance ones, and community management roles.[51] She also speaks of women's practical gender needs (needs women identify from within their socially accepted roles in society, reflecting the existing divisions of labor and authority) and strategic gender needs (which emphasize requirements for reaching a more equitable society). Project objectives and activities can be examined in the light of these categories. Paula Roark has written of investigating local learning systems (LLS) and of an LLS Operational Framework.[52] This framework includes four components: technology analysis, participation, information, and knowledge outcome. She speaks of hardware (technology) aspects of a project as well as software (community participation and health education) aspects. She argues that the integration of hardware and software elements of projects can be designed through the LLS Operational Framework, and at the same time community men and women can have voice and make decisions during the project process.

There are several specific gender analysis models used in program and project design and implementation[53]. One developed in the early 1980s is called the Harvard Institute for International Development (HIID) approach. It has four parts: an activities profile, a profile of access to and

---

[49] Antrobus, 1989 AWID Conference.

[50] Riane Eisler, 1987, *The Chalice and the Blade, Our History, Our Future,* Harper Collins Publishers.

[51] Caroline O. N. Moser, 1989, "Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs," *World Development* Vol. 17, No. 11: 1799–1825.

[52] See, for example, Paula Roark, 1980, *Successful Rural Water Supply Projects and the Concerns of Women,* USAID, Washington, D.C.

[53] The descriptions of the first four tools are summarized from Rekha Dayal and A. Rani Parker, *Gender Analysis and Planning in the Bank Project Cycle* (draft, The World Bank, Asia Technical and Human Resources Division, 1993). This document also gives an excellent summary of additional tools and of multilateral and bilateral agency experience with gender analysis.

control over resources and benefits, a profile of factors influencing the first two profiles, and project cycle analysis. Each profile gives information for each gender. The last activity, project cycle analysis, inputs the data from the profiles into the project process.

The Canadian International Development Agency (CIDA) has utilized a method called social/gender analysis. It uses a participatory process to pinpoint groups affected by a problem, identify who is relatively advantaged and disadvantaged by the problem, determine which factors help maintain the disadvantage and how this is experienced by the various groups, and ascertain what resources, institutional changes and strategies are necessary and available to resolve the problem.

The United States Agency for International Development uses a Gender Information Framework (GIF). It has two parts: Gender Analysis Map and a Gender Considerations Guide. The Map is used to pinpoint where gender is a salient variable in social and economic systems which will be affected by development activities. Data are collected concerning four "exploratory factors"- the allocation of labor, sources of income, financial responsibilities, and access to and control of resources. After the Map, is completed the Guide is used to analyze the implications of gender differences for a specific project or program. It includes assessing constraints to men and women's participation.

The Gender Analysis Matrix (GAM) was developed by A. Rani Parker. The analysis is repeated throughout the project process by community groups, with a development worker acting as a facilitator in the beginning. The GAM consists of four levels of analysis (women, men, household and community) which are assessed in terms of four categories (labor, time, resources, and sociocultural factors). When the GAM is repeated throughout the project process, communities can compare results against expectations.

Instead of focusing on the separate roles and activities of each gender, another set of models considers the public interactions between women and men which have an impact on project design and implementation[54]. This type of analysis is called Interaction Analysis. The first model is the Interaction Index. This assesses the degree of public interaction between men and women. For example, do women and men meet together in village meetings or do they prefer to meet separately; do women prefer to meet with female or male project staff or either; do women go outside the village for training; and do men or women go to the market. The Variability Index indicates the range of interaction situations existing in the project area and, thus, the range of project strategies needed. The Access Channels model helps project designers provide women with access to mainstream project activities. For example, an access channel might be having female project staff who can meet with rural women about an agricultural development project. Such access channels are especially crucial in areas of 'low interaction', that is, where women will not attend meetings with men and will not meet with male staff.

[54] These tools are taken from Wendy Wakeman, 1992, *A Case Study of Women, Islam and Development: Strategies and Models for Conducting Projects with Women in the Islamic Context of Um Ruwaba, Sudan*, Ph.D. thesis.

Women's Roles in the Water and Sanitation Sector

Women's involvement in sector activities springs logically from their traditional roles.[55] Women are most often the users, providers and managers of water in the household. Women are usually the guardians of household hygiene. Women, and to a lesser degree children, are generally the ones who obtain water for the home, transport it, store it, and then use it for various household purposes. Because of this they may have a great deal of knowledge about water sources, their quality and reliability, restrictions and advantages of their use, acceptable storage methods, and so on.[56]

Women and children will most likely be the prime users of any new or improved water systems, and women may be the main disseminators of new hygiene messages (or, if not involved in a hygiene project, the ones hindering the spread of safe hygiene practices). As Siri Melchior states, "...women are not a special interest group in water and sanitation, they are a mainstream interest group....without their involvement, projects risk being inappropriate, and failing."[57] Within a demand orientation to the sector, one may say that if women are not involved, a significant portion of demand is not being measured. This could have a crucial impact on project sustainability. For example, if women's demand and willingness to pay for a particular type of water system is not assessed, a system may be installed that women will not pay for and will not use. This system may then fall into disuse and be unsustainable.

Benefits women may receive with improved or new water and sanitation facilities can be classified into health and socioeconomic categories[58]. Water sources that are closer to homes and that provide an adequate supply can decrease collection time. This leads to gains in both time and energy. It also can reduce physical strain due to walking and hauling water long distances. Water of a better quality and which remains uncontaminated helps to decrease water-related diseases. For women in some contexts, access to adequate sanitation ends their need to suppress urination or defecation until nightfall. Time and energy gains may be applied to a variety of activities, including leisure and income-generation. An increase in the water supply can result in increased agricultural activities (such as home gardens) and in food and drink production for sale. If community women and men are involved in project planning and implementation, they may learn new skills and develop more self-confidence.

---

[55] See van Wijk-Sijbesma, 1.

[56] For a further discussion of women's roles in the sector, see, for example, Mary L. Elmendorf and Raymond B. Isely, 1981, *The Role of Women as Participants and Beneficiaries in Water Supply and Sanitation Programs*, USA: USAID, WASH Technical Report No. 11; Siri Melchior, 1989, *Women, Water and Sanitation, or Counting Tomatoes as Well as Pumps*, USA: PROWWESS/UNDP Technical Series; Mary Elmendorf, 1990, *The IDWSSD and Women's Involvement*, WHO, on behalf of the Steering Committee for Cooperative Action for the International Drinking Water Supply and Sanitation Decade; and van Wijk-Sijbesma, 1985, *Participation of Women in Water Supply and Sanitation, Roles and Realities*, The Hague, The Netherlands, International Reference Centre for Community Water Supply and Sanitation, Technical Paper 22.

[57] Siri Melchior, 3.

[58] For a further discussion of benefits and constraints to women's involvement, see Hilary Syme, 1992, *Women, Water and Sanitation: A Guide to the Main Issues and Existing Resources*, Canada: Canadian International Development Agency, 11–14.

There can be a variety of constraints to gender sensitive programming. There is often a lack of knowledge about women's and men's roles in the sector. Projects may be designed in an inflexible manner, using a 'blueprint' approach.[59] Gender planning may be marginalized, separated from mainstream planning. Hardware and software aspects of projects may be poorly integrated. There may be an inadequate number of female staff, thus, limiting village women's involvement in areas where they will not meet with male staff. The time, duration, and location of training may not take women's needs into account.

Sector Experience with Gender Issues

There has been a rich collection of experience with women, water and sanitation over the last decade and many lessons have been learned[60]. At this point in time we tend to speak more of gender issues in the sector rather than WID issues. It has been recognized that water and sanitation are issues for men, women and children. To have effective sanitation programs, men also must support and adopt improved hygiene practices. Project contributions of time, labor and money should be shared fairly and not expected of women alone. Training should also be equitably divided. In this way both men and women can benefit and human resources will not be wasted.

Women's and men's involvement should begin during the first stage of the project process. If not included at this point, it is more likely that they will be excluded at later stages as well. It is also more effective to involve them in decisionmaking about technology and other choices rather than attempting later to have them utilize systems not suited to their needs. Where projects did not involve women, the result has sometimes been a lack of access of poor women to improved facilities. It has also been found that hygiene education makes little or no difference in situations where inappropriate technologies have been installed.

Quality as well as quantity is important when planning for and assessing participation. Women's inclusion on management committees may not alone provide for their effective participation: the way committee members are chosen, whether they receive needed training, and what their actual committee roles consist of are also important. It has been found that training does not guarantee employment and fair pay. Strategies for developing approaches for women's participation include field development and testing of procedures combined with action research and on-going M&E. Culturally appropriate methods are also needed.

Many projects are designed assuming that men are responsible for the 'public sphere' and women for the 'private sphere'. Yet experience shows that often such a strict distinction should not be made between the two. Women may have major say over management of water in the home, but they may also manage communal facilities and press community leaders for improvements. Men's support may be needed for improved household latrine systems. Men's and women's roles in these areas may change as well. Women may become more involved in community management of systems, for example. If women's public roles are not recognized by a project, it can result in women being left out of traditional areas of responsibility.

---

[59] For more information about this approach as well as a more flexible alternative, see Deepa Narayan-Parker, 1989, *PEGESUS*, USA: PROWWESS/UNDP.

[60] For a more detailed discussion of lessons learned, see Christine van Wijk-Sijbesma and Eveline Bolt, 1991 and 1992, *Women, Water and Sanitation: Annual Abstract Journal*, Issues one and two, The Hague, The Netherlands, IRC and PROWWESS/UNDP-World Bank Water and Sanitation Program. Much of the following four paragraphs has been extracted from these documents.

Experience with women in maintenance roles indicates that while some costs may be higher (due to their need for more training and their restricted mobility which reduces the number of pumps they maintain), their effectiveness in regular and preventive maintenance is better than men's, and costs of repair campaigns are lower. Negative impacts resulting from women's involvement must also be considered. Women's participation may have benefits but it also may have costs. Women's and men's existing workload and scheduling needs must be taken into account. Improved water systems may reduce women's time in water collection but create new demands for work related to maintenance, management, and financing.

A recent study of over 100 rural water supply projects indicated that women's participation, along with other variables, is highly associated with project effectiveness.[61] It also revealed that in spite of the rhetoric about women's involvement prevalent in many project documents, only 17% of the projects surveyed scored high on women's participation; thus, although much has been written and many models have been formulated, the 'burning issue' now is how to operationalize and institutionalize what has been learned. As Christine van Wijk-Sijbesma says, "There is a need to integrate the involvement of women in a systems approach to water supply and sanitation, including regular monitoring and feedback on both the process and the effect of their involvement in relation to the type of technology and the socioeconomic and cultural circumstances."[62] Through this appropriate project implementation mechanisms can be developed, tested and refined. In addition, strong support is needed at the policy level to ensure the mainstreaming of gender-sensitive programming. Otherwise, conceptual frameworks, models, tools, and so on will remain marginalized; and no matter how useful they are there will not be significant change in the sector.

Gender Project Framework and Future Concerns

The tools and resources contained in the Sourcebook were created to assist project staff with gender-sensitive programming. The following Gender Project Framework facilitates the use of the tools by focusing on three key actions or tasks. These summarize the key objectives of the tools. The first is to **disaggregate**. Staff should gather data for men and women, analyze men's roles and women's roles, and investigate a project's impact on women and on men. Whatever analysis is done, it should be done separately for men and women. Staff can then see whether results are the same or different for women and men.

The second task is to **interrelate**. Analyzing women and men separately is only a first step. It is also important to know the ways in which men and women work together in sector activities such as construction and maintenance, in project and household decisionmaking, in financial arrangements, and so on. The interrelationships between the men and women of a community and other organizational levels should also be explicitly examined (for example, how are gender issues affected by the types of relationships and interactions between community organizations and local and national NGOs or government agencies?).

Finally, there is the need to **activate** what has been learned during the first two steps. This occurs at micro, mezo and macro levels. At the micro, or project level, project mechanisms need to be in place to ensure that what has been learned from gender analysis is operationalized and institutionalized as a fundamental part of project design and implementation. This may involve

---

[61] Deepa Narayan, 1993, *Popular Participation in Rural Water Supply Projects*, USA: UNDP-World Bank Water and Sanitation Program.

[62] van Wijk-Sijbesma, 1985, 4.

project design features which ensure women's access to training and credit, or that plan for men and women to share the burden of project construction work.

At the macro, or national and international levels, governments and international development agencies need to provide strong, supportive policies that mandate the institutionalization of gender-sensitive programming. To date this has been one of the weakest areas. Yet without this, attempts to promote gender issues will not have more than a minimal impact. The meso level, covering state or district activities and agencies, encompasses both micro and macro issues and is the place where the two interact most closely. District governments, for example, may follow national policies while also monitoring village-level projects. The tools in the Sourcebook are meant to help development practitioners disaggregate, interrelate, and activate so that women and men in poor communities are involved in projects which more accurately reflect their community context, needs and priorities. These projects are more likely to be effective and sustainable.

There are also more specific tasks required in the near future. More quantitative data are needed concerning the issue of women's time gains from improved water and sanitation facilities.[63] What are the contexts in which time gains can be expected, and how can project designers use this information when planning projects? More systematic data could be collected on what time gains are used for, (economic, social, family or other purposes) and why.[64] It cannot be assumed that time gains will be used for income-generating activities. Sometimes women do not have the skills or market access for these activities. More training materials are needed for managerial tasks and for techniques for overcoming constraints to women's participation. Many training materials focus on working in participatory ways with communities in general, omitting the ways in which women might be involved and how constraints to their involvement might be overcome.[65] More emphasis can be put on measuring the health and social impacts of inadequate water and sanitation facilities through measuring calorie wastage and skeletal damage in women who haul water long distances, and counting the number of children who miss school to collect water.[66]

Conclusion

Gender issues, as opposed to women in development, is an emerging field. Methods of designing and implementing gender-sensitive projects, as opposed to WID components, still need to be further elaborated, tested, and refined. In most cases the frameworks and models mentioned earlier and the tools presented later in the Sourcebook have not been adequately evaluated and, if necessary, reformulated. Gender analysis models and tools, focus, as they should, on gender variables. Other tools are needed to assess other socioeconomic variables such as class, caste and religion. It must be remembered that focusing on gender is not meant to be a focus on women, but on both women and men and the ways they interact to make decisions, share tasks and complement each other in a variety of roles. As women have been forgotten so often in the past (and many times continue to be in the present), they frequently need to have their concerns specifically stated and

[63] See van Wijk-Sijbesma and Bolt, 1991, 5.

[64] One example of this type of data collection is discussed in Geoffrey Read and Ayse Kudat, "Why a Women in Development Component Should be Part of a Rural Water Project and What Such a Component Should Comprise: The Case of Sindh, Pakistan," Infrastructure Notes, The World Bank, W & S No. WS-8 (February 1992).

[65] Ibid.

[66] Conversation with Mayling Simpson-Hebert, WHO, April 1993.

highlighted to be recognized; however, this should not translate into new, undue burdens on women, especially ones that men might share with them. And unless men are aware of and support women's involvement in projects, in many cultural contexts women's participation will be curtailed. Water and sanitation is a sector which fundamentally affects the lives of community women, men and children. Therefore, all need to be appropriately involved in determining sector activities. In this process, sector experiences can have much to offer to the field of gender issues.

.

GENDER ISSUES WITHIN THE WATER AND SANITATION SECTOR[67]

Overview

Gender issues were included in the UNCED Agenda 21 document[68]. They also were among the guiding principles set forth at the 1992 Dublin International Conference on Water and the Environment.[69] The topic of gender in fact informs and enriches the other three principles, which cover: water as an economic good, management at the lowest appropriate level, and water as a finite and vulnerable resource. Following the principles includes determining what people (consumers) want and are willing to contribute toward, and involves facilitating their participation in project decisionmaking concerning types and levels of service and O&M. Men and women often have different roles and motivations concerning sector activities, and recognizing these distinctions when determining what communities want and when designing O&M can increase chances for project sustainability.

As is well known, women and men often have different sector roles. Women are in many cases the collectors of water and manage it at the household level. Thus they may have stronger incentives (more intense preferences) then men concerning new, more convenient systems. They may benefit the most, as the time they spend collecting water may be substantially reduced. As a result they may be more willing to contribute toward building and maintaining new systems. Recognizing and incorporating these gender distinctions can, therefore, help to determine preferences more precisely, to take maximum advantage of local incentives, and to arrange for facilities and O&M which more closely mirror the community context. This can help ensure that facilities will be the ones users want and will maintain.

Differential Incentives

Women may be willing to work harder to obtain and maintain new, improved services, because they will be the ones to benefit most. They will, thus, have more of an incentive to work toward increased service provision. In Kenya, for example, a local NGO, KWAHO, assisted 14 women's groups in Kiberia, an informal settlement in Nairobi. The women had organized themselves to build new public water kiosks. KWAHO facilitated the interaction between the women and the local government, persuading the Nairobi City Council to connect the kiosks to the city water mains.[70] In Rajapurva, an old slum in Kanpur, India, residents (mostly women) formed a welfare committee with the help of a local NGO (Shramik Bharati).

---

[67] From, *Introduction,* from Wakeman, Wendy, Susan Davis, Christine van Wijk, and Alka Nathani. Forthcoming. *Sourcebook for Gender Issues at the Policy Level in the Water and Sanitation Sector* UNDP/World Bank Water and Sanitation Program (Washington D.C.: The World Bank).

[68] For particular references, see Agenda 21, An Easy Reference to the Specific Recommendations on Women, UNIFEM, 1994.

[69] These principles are also discussed in: *Water Resources Management: A World Bank Policy Paper*. 1993. (Washington D.C.: The World Bank).

[70] Example cited in "Water and Sanitation Associations: Review and Best Practice," draft paper, the World Bank, Transport, Water and Urban Department, 1995, p. 62. The example was taken from a report by Kunguru, J. and M. Mwiraria. 1991. "NGO Support to Informal Settlements: A Case Study of Kiberia, Nairobi." Case Study Series Report. UNDP-World Bank Water and Sanitation Program.

They mobilized their share of funds, 10 % of the capital costs, to take advantage of a government scheme for the construction of community toilets. They now are maintaining the toilets. [71]

A report on the Orangi Pilot Project in Pakistan mentions how it was discovered that wives were often more concerned than husbands about disease and sanitation, as the burden of caring for the sick often fell to them. Project staff saw many examples of women forcing their reluctant husbands to pay their contribution to the project's low cost sanitation component.[72]

Gender issues at the policy level in the water and sanitation sector need to flow from these principles enunciated at Dublin. Actions taken should be part of a sensible, overall sector policy. Gender variables, along with other social issues such as ethnicity, religion, and class, can provide the sociological underpinnings which help fit a demand-based, participatory approach to a particular geographical setting. It is the task of sector agencies to find efficient and effective ways to do this, to have aspects of sector policies which address this, and to find simple ways to operationalize it.

Basic Principles

As noted above, one of the Dublin principles states that water should be managed as an economic as well as a social good. Within this concept, it is important to note gender differentials. When analyzing water as a social good, it can be instructive to assess benefits separately for women and men. Women and girls often suffer the most when water supply is poor, and conversely benefit the most when supply is improved. When water is of better quality, and is available in greater quantity and closer to homes, there are many advantages for females. Instead of long trips carrying heavy containers, girls and women have shorter trips. This can have a positive impact on their health and on their time. Women may have more time for leisure, and girls may be able to spend more time in school.[73] If there is a decrease in water-related diseases, women will spend less time caring for sick family members. Women may also use their increase in time for income-generating activities. Recognizing these differences in benefits can help ensure that benefits are fully measured, and that projects are designed to take full advantage of them (through, for example, linkages with school enrollment programs and with credit programs for women).

When analyzing water as an economic good, a gender analysis can once again be informative. Viewing water as an economic good means using a demand-based, participatory approach which assesses what users want and are willing to contribute toward. As women and girls are often primary users of water facilities, determining what kind of services they prefer can be crucial. Their preferences regarding sanitation facilities need to be known as well. For example, in parts of India where female seclusion is practiced, women preferred water taps which were nearby. When taps were located far away, women continued to use nearby, polluted water sources rather than walk farther away from their homes. Again in India, compost pits located outside villages remained unused and women continued to deposit refuse near their homes, because it was not acceptable for women to be seen carrying loads of refuse to the outskirts of the village. This

[71] From draft (unpublished) India "Caselet" entitled: "Social Mobilization in Kanpur slums - a case of Shramik Bharati", principal author K.S. Ramasubban, UNDP-World Bank Water and Sanitation Program, 1995.

[72] Khan, Akhter Hameed. Orangi Pilot Projects Programs. Orangi Pilot Project - Research & Training Institute. 1992. p. 22.

[73] The economic benefits of increasing girls' access to education have been well documented. See for example, Elizabeth King, 1993, *Women's Education in Developing Countries*, (Washington D.C.: The World Bank); and Lawrence H. Summers, 1992, *Investing in All the People*, Policy Research Paper 905, (Washington D.C.: The World Bank).

occurred even though villagers were fined for depositing refuse around their homes.[74] Using a demand-based, participatory approach would have avoided these problems. By determining women's preferences relating to water and sanitation, facilities could have been installed that would be more likely to be used and maintained.

Women, as primary users and beneficiaries of improved water systems, may be more likely to contribute to facilities which have been designed based on their preferences. If projects are designed to respond to women's preferences and to provide women access to project activities, women may help ensure project sustainability by contributing their money and labor for construction and for O&M. If a system breaks down, women, not men, will most likely be the ones who have to travel farther to get water. They, thus, have more incentive to keep a system functioning, and so involving women in O&M activities can be instrumental. In parts of Ghana, water is seen as a women's responsibility, and, therefore, in some families women were expected to pay for pump tariffs. In this instance, knowing women's willingness-to-pay was crucial.[75]

Another principle involves management and decisionmaking at the lowest appropriate level. Here again, incorporating both men and women into projects can be beneficial. Involving users in management and decisionmaking helps ensure that systems are those which meet consumer demand and, thus, will more likely be used and maintained. As women are often the most direct users of water facilities, involving them in management and decisionmaking helps ensure that systems are ones that meet their needs and that they will, thus, help sustain. As women use systems on a frequent basis, they are in a good position to provide accurate, up-to-date reporting on the functioning of a given system. They will also most likely be involved in carrying out decisions on the use of a particular facility.

Managing Hygiene at the Lowest Appropriate Level

In the Orangi Pilot Project in Pakistan[76] it was noticed that mothers saw most clearly the connection between filth and disease, although they did not always know specific causes and methods of prevention. They, however, were the ones responsible for caring for sick family members and for ensuring household cleanliness. They are the ones who manage hygiene at the household level. The project, thus, wanted to reach them with messages on proper hygiene and sanitation. Because it is customary for women to stay inside their homes, sessions could not be held at clinics. So the project introduced mobile training teams, composed of a lady health visitor and a social organizer. An activist family or 'contact lady' was chosen for each 10 - 20 lanes in the area. Meetings were held at these homes. The contact lady activists became trusted advisors and conveners for their neighbors, providing a means for the health extension teams to hold discussions with neighborhood women to spread learning about good sanitation practices.

A third principle states that fresh water is a finite and vulnerable resource, essential for sustaining life, development and the environment. Both men and women have responsibilities relating to water use. Women are usually in charge of water used within the household, whereas men (and often women as well) may use water for irrigation purposes. These varying roles need to be recognized, and both women and men need to be involved in discussions for protecting water resources. The interactions between various uses should be recognized as well. Overuse of

[74] Both of these examples were taken from Kudat, Ayse and Jean C. Weidemann. 1991. "Gender in Urban Water and Sanitation Sector in Asia." Unpublished paper.

[75] CIDA, 1992, "Women, Water and Sanitation, A Guide to the Main Issues and Existing Resources," Canadian International Development Agency, Water and Sanitation Sector, prepared by Hilary Syme.

[76] Khan, op. cit., pg. 9–23.

mechanized pumps for irrigation and industrial uses are draining aquifers in many areas, and the effect this may have on open wells and hand pumps that supply water for household use is not adequately investigated.[77]

Project Cycle

These policy messages help determine the design of the various stages of the project cycle. Within these messages and cycles, aspects of gender issues are relevant. During the planning stage, demand for services is being determined. It is important to assess demand among both male and female community members. When planning type of facility and its location, women's preferences need to be included. In fact, with water facilities their preferences may be key, as they will be the potential users of a system. There are various ways their preferences can be determined (aggregated): including incorporating them into willingness-to-pay surveys, rapid appraisals, community meetings (which may need separate meetings for women in some areas), and so on. With sanitation facilities, locations and superstructure designs need to be chosen that will be acceptable for both women and men.

Making strategic use of community subgroups

PROSANEAR is a pilot project testing institutional and technical methods of providing water and sanitation services to low income, urban communities in Brazil. All operations must involve communities in the design and construction of facilities, based on user demand. To transmit information about the project and to monitor project activities, preexisting community groups are used. These consist of natural subgroups in the community, such as neighborhood women's groups, church groups, youth groups, and parents' associations from the local school system. These groups, thus, form a communication and discussion channel which can help elicit preferences and involvement from various sections of the community during the entire project cycle.[78]

Men and women can both play important roles during project implementation and M&E. Both can be involved in decisionmaking, through membership on water user committees. In some areas, in addition to water user committees, women-only tap stand committees have been formed. These are responsible for maintaining the tap stand on a daily basis. This is the case, for example, in a pilot activity in Nepal.[79] Most villagers interviewed (men and women) felt that this was good: as women use the tapstand every day, they should be the ones to keep it clean. They also are the ones who will know when something has gone wrong, and they can then report it to the water user committee. Having women on the water user committee helps ensure that when decisions are made, those who use the systems most directly and most often will be involved. This helps guarantee that decisions will be ones that are practical, that will meet the needs/the demand of users. As new, improved systems may bring women more immediate benefits, they may have more incentive to provide labor for construction and to spend time on monitoring and on O&M chores. Facilitating women's involvement in these tasks can, thus, contribute to their satisfactory completion and, therefore, to project sustainability.

---

[77] Unpublished note by the International Food Policy Research Institute, Washington, D.C., as discussed in Serageldin, Ismail: *Toward Sustainable Management of Water Resources*. 1995. (Washington D.C.: The World Bank) p. 27.

[78] For more information on PROSANEAR, see "PROSANEAR: One Route to Agenda 21," based on the First International PROSANEAR Seminar held in Rio de Janeiro in December 1994, produced by the PROSANEAR Monitoring and Technical Assistance Group.

[79] The JAKPAS project is funded by a Japanese Grant facility, managed by the UNDP-World Bank Water and Sanitation Program, and executed by the World Bank.

Making Full Use of Differential Incentives

As noted above, women often benefit more directly than men from improved water facilities, and so may have more of an incentive to work for project success. This was recognized by villagers in rural Nepal.[80] The water user committee (WUC) had decided that each household should contribute an equal amount of cash for the new water system. Yet they had problems collecting the full amount required. Not enough money was raised, and so they returned what they had collected to the concerned households. Rather than give up, however, the water user committee requested some of the village women to go house to house, to convince villagers about the project and collect the money. The WUC thought the women, the ones who would benefit directly from the project, would be able to convince other women, and they in turn could convince their husbands. This procedure was successful, and a sufficient amount of money was raised. Families who could not contribute their share of money contributed labor instead.

Some water and sanitation projects have successfully incorporate aspects of gender issues into their activities, in ways that flow from established sector principles and policies. More projects need to do this, in a systematic way, that takes into consideration the existing burdens on women's and men's time. More needs to be learned about doing this efficiently and effectively, throughout the project cycle, in projects both large and small, so as to enhance prospects for project sustainability.

[80] From field notes from visiting the JAKPAS project, mentioned above.

DEMAND BASED APPROACH: MAKING LARGE RURAL WATER SUPPLY AND SANITATION PROJECTS WORK[81]

Despite the growing level of investment in water and sanitation over the past decade, an increasing number of people lack access to adequate water and sanitation services in rural and peri-urban areas. Although experience demonstrates that no fixed formula works, the direction that should be taken to improve service delivery has become more clear. A set of principles has emerged that provides the framework for delivering improved services on a sustainable basis.

Based on these principles, the UNDP-World Bank Water and Sanitation Program has adopted an approach to project design and implementation that encourages governments and implementing agencies to apply more consistent rules and policies than in the past. In the field, the Program assists with the design and implementation of projects that incorporate these rules, and is starting to build a systematic learning component into the projects. This learning component aims to continually improve the delivery of rural water and sanitation services within projects. It also provides a basis for systematic learning across projects.

Although the Program has consistently maintained its mission to improve services for the poor, its approach has evolved substantially because its first became involved with rural water supply and sanitation (RWSS) projects more than 15 years ago. In the early years, it focused on low-cost technology development, with an emphasis on hand pumps and latrines. It subsequently addressed the role of the beneficiaries, and promoted participatory methodologies, including specific tools to incorporate gender issues. In many ways, this early work concentrated on increasing user-responsiveness and responsibility for basically supply-driven services, consistent with general practice at the time. The program provided support to governments and supply organizations that were acting as service providers instead of service promoters. The current Program approach increasingly emphasizes demand-responsiveness.

The Traditional Approach

Experience has clearly demonstrated that rules which favor highly centralized decisionmaking about service allocations and the level and intensity of local demands have not produced either efficient or sustainable services. Many large investments were based exclusively on technical merits and did not fully respond to what the targeted communities wanted. Examples of such traditional rules that have not worked well include:

- The selection of communities to be served by planners on the basis of external determination of "need" for service, rather than economic "demand" for service
- The selection of levels of service to be provided (and by implication, technologies to be employed) based on "affordability," rather than on "willingness to pay"
- The provision of the prescribed service level on a grant basis without procedures to negotiate with these selected communities on cost-sharing arrangements, which may differ from a uniform allocation of such responsibilities
- The extensive involvement of government personnel, rather than local decisionmakers, in decisions regarding the location, construction, O&M of community facilities

[81] From, UNDP-World Bank Water and Sanitation Program. 1996. *Demand-based Approach: Making Large-Scale Rural Water Supply Projects Work*, Annual Report July 1994–June 1995, pp. 8–13. (Washington D.C.: The World Bank).

There are now numerous examples of projects which have successfully modified some of these traditional institutional rules with positive effects.

The Current Approach

The Program's approach to RWSS is based primarily on two of the principles that were developed by the Nordic donor community and endorsed at the 1992 International Conference on Water and Environment in Dublin. These principles emerged at the end of the International Drinking Water Supply and Sanitation Decade when the sector began to agree that projects must focus to a greater extent on demand and sustainability. They are:

- Water is an economic as well as a social good and should be managed as such.
- Water should be managed at the lowest appropriate level, with users involved in the planning and implementation of projects.

These principles have broad implications for water resources management and development in general. Managing water as an economic good requires careful attention to issues related to the allocation of water among users and to the principles that should guide allocation, for example, between urban and rural areas or between the water supply and irrigation sectors. It is essential that the principles are considered in decisions about the use of public and private funds as well when investing in rural development.

Managing water as an economic good also implies that projects must be designed to provide incentives for the efficient and effective user of facilities. There must be a balance between the economic value of water to users, the cost of providing services to users, and the prices charged for these services. Typically, in RWSS projects these elements are not in balance. The government usually determines the cost of providing services through the technical options it offers and it also sets the prices charged to users. But this price does not necessarily correspond to value that users attach to the service or to the cost of providing services.

In practice, policymakers must establish project rules that create incentives for stakeholders to achieve more efficient allocations and use of facilities. These rules must help to create more consistent relationships between the value, price, and cost of services The overall aim is:

> *To achieve water uses; and investments in which the value that people (the users) attach to a given service is greater than the cost, and consequently is a service for which they are willing to pay*.

In order to manage water at the lowest appropriate level, criteria must be developed to determine what that level is for different activities. The most robust criterion appears to be that major management decisions should be made at a level that encompasses, but does not go beyond, the range of demands being addressed. In other words, a decision should not be made at a higher level, if it can be made effectively at a lower level.

In RWSS projects, demands for community water supply and sanitation services are localized demands. Therefore, managerial decisions about levels of service, locations of facilities, and cost-sharing should be made locally as well. The main role of higher-level government agencies should be establish institutional rules, regulations, and processes that encourage such local decisions.

Translating Principles into Action

Translating these principles into action requires that project planners establish rules and procedures that encourage efficient and effective choices, permit valid inferences about the level and intensity of local demands, and reduce transaction costs. An increasing number of projects financed by the World Bank and other external support agencies(ESAs) are applying these principles as a means to create incentives that encourage demand-responsive services. Four broad and interrelated rules have been identified.

- *Eligibility criteria*: Eligibility rules for participation should be broad enough so that eligibility does not, by itself, guarantee that every eligible community will receive service during a particular time period. Services should follow, not precede, community initiative in seeking the improvement.
- *Technical options and service levels:* Communities should be actively involved in selecting service levels. A range of technical options and service levels should be offered to communities, and their related cost implications made clear.
- *Cost-sharing arrangements:* The basic principles of cost-sharing should be specified and community responsibility for costs (capital and O&M costs) made clear from the outset. These principles should aim at negotiated cost-sharing arrangements in which the local community chooses the levels of service for which it is willing to pay.
  Responsibility for investment support: Particular emphasis should be placed on responsibility for the sustainability of investments. Rules should be set regarding asset ownership, O&M, and the recovery of system costs.

Projects must design operational procedures that offer alternatives for community support. The local community should be able to choose who assists them with proposal preparation, construction of facilities, and O&M. The role of intermediation is recognized to disseminate rules and information to guide community decisionmaking. Administrative procedures must encourage efficiency in service delivery. The cost-sharing arrangements should also be made clear prior to the decision by the community.

A project's long-tern success depends on adherence to a clear set of rules and procedures that create proper incentives. For example, rules about levels of service and financial policies should be such that communities contribute enough to the project to have a stake in getting the service they want, knowing full well the cost implications of sustaining this service. Although the rules provide a framework for all activities, the project should be designed so that lessons from earlier project phases can be fed back into subsequent phases of the project. This adaptive project design requires continuous review and modification throughout planning and implementation and is critical to the improved performance of the project and investment sustainability.

Moreover, project rules must provide incentives for appropriate behavior. The main project stakeholders must be actively involved in developing the rules and be committed to their enforcement. The best set of rules is the simplest: transparent and not subject to interpretation. The fewer the rules, the better as long as they are internally coherent and promote desired behavior. Rules must be widely disseminated, understood by all, and consistently applied by stakeholders. It is essential that sector policy supports the rules on a national level.

Applying the Rules

In the late 1980s the Program assisted with the implementation of a series of RWSS pilot projects, in countries such as Ghana, Indonesia, Kenya, and Pakistan. These projects were designed to test financial, institutional, social, and technical interventions at the community level. In recent years, the

program has worked with governments, beneficiaries, NGOs, the World Bank, and other ESAs to incorporate lessons into the design of large investments. The Program currently supports RWSS initiatives in 20 countries and large World Bank-funded projects in 15 of these countries (see table, page 140).

The program also promotes the analysis and exchange of experiences among countries as part of its efforts to learn what works in RWSS projects. In 1994, a workshop was held in Sri Lanka with participants from ten World Bank-supported projects in seven Asian countries. The workshop was the first time such a group had convened to review the results of a range of RWSS projects. It was also one of the first international meetings to analyze the operational implications of designing and implementing large demand-responsive projects. Workshop participants from India organized a follow-up conference in Cochin to continue the exchange of experiences and approaches within India. The results of these workshops contribute significantly to the design of the Program's learning agenda.

The Program's experience with RWSS has shown that project planners are applying the rules as a means to encourage demand-driven investments. Below describes the result of a survey on how the rules are being applied in recent projects with Program involvement.

Eligibility Criteria for Participation

Demand-driven projects must ensure that communities are not being selected based only on need, but that communities take the initiative to improve there services. The idea is that project planners should not prepare lists of communities that should be served, but rather set eligibility rules on how communities can become eligible for services. The eligibility rules should allow more communities to be eligible than can be served, and then prioritize communities based on expressed demand.

All of the surveyed projects have eligibility criteria requiring communities that request services to contribute to the cost and assume responsibility for long-term O&M; however, there is still substantial between eligibility criteria based on need and criteria based on demand. Need-based criteria include health and poverty indicators, infant mortality, water scarcity, water quality, and distance to source, other examples of eligibility criteria are back-stopping by local government, development potential of the community, and participation in other project components. These criteria can be used by government's to choose the geographical region that will be served first, as long as communities that are selected have shown evidence of their demand.

Once eligibility has been established, prioritization criteria will determine which communities get served first among those that have clearly expressed a demand. For example, a large RWSS project in Bolivia established the following prioritization criteria: first come, first served; communities who agree to pay a higher percentage of costs; and areas where the municipal government cosponsors investments and there is a critical mass of communities. This critical mass will help achieve economies of scale and lower costs.

Technical Options and Service Levels

Technology options and levels of service are integral elements of the new approach. They directly relate to the choices communities make about the services they want and for which they are willing to pay. Although most project designs now offer a range of technical options to communities for water supply provision, many projects still do not fully allow communities to choose their preferred technical option or have promotional campaigns favoring certain options. Examples of this situation can be found in projects in Mali ,India, and the Philippines. This underscores the importance of

training intermediaries and project staff in demand-based approaches and developing methodologies for negotiating service levels with communities. Service levels are closely linked to the project's financial policy and are usually defined by the amount of water that will be provided and the proximity to the house. A demand-based approach requires that communities choose their preferred service level based on there willingness to pay; however, many projects influence this decision by offering higher levels of subsidy for the technical options that they want to promote. This situation most frequently occurs for piped water systems (pumped or gravity), and rarely for boreholes fitted with hand pumps. In piped systems, projects often provide high subsidies for public standpipes, but require beneficiaries to fund house connections, as is the case in Ecuador. In sanitation, less than one third of the projects offer higher levels of service than latrines, although most projects allow beneficiaries to chose between a VIP and pour-flush latrine. Preliminary indications are that communities often want, and are willing to pay for higher levels of service.

Many projects have adopted technical standards into their design. In projects in Ghana, Philippines, and Ecuador, technical standards coincide with those established by government, but in Bolivia they have been adopted as national standards as a result of the project. Other projects have developed standards independently as in Indonesia and Nepal. In projects where new standards have been prepared they have replaced the "over-designed, urban-biased" standards of the past, and closely approximate rural reality (for example, water consumption rates of 20-50 liters per capita per day). They also promote the use of low-cost technology. When adequately designed, standards have a positive impact on quality, design, and investment costs; however, standards can also have a negative impact by limiting technological innovation and, therefore, cost reductions.

Cost Sharing Arrangements

Most surveyed projects require beneficiary contributions to capital costs, even for a minimal level of service. Contributions may be in cash, kind, or both. Two alternative approaches have been used in defining cost sharing arrangements: (1) a subsidy defined as a percent of the investment cost, and (2) an established subsidy ceiling.

Subsidy as percentage of investment cost: Approximately half of the surveyed projects require communities to make a percent contribution to project cost, but have no established investment ceiling. This is the case in projects in Mali, Eritrea, Ethiopia, Philippines, and Sri Lanka. Contributions are typically quite low, ranging from 8 percent to 20 percent of investment costs, and often provided in kind. Because the contribution is relatively small, this policy provides little incentive for the user to push for lower investment costs.

The question remains whether such a relatively small contribution does in fact demonstrate an economic demand for the services. Communities have found it difficult to fully understand this policy, as percentages mean little unless converted to real terms. It is not clear if the community financial contribution is sufficiently high to influence decisions. This policy also raises equity issues, as communities may receive a different level of subsidy depending on the cost of the technologies chosen.

Ceiling imposed on subsidized amount: All projects that apply a ceiling to the amount of government subsidy require communities to contribute a percentage of the investment cost up to the ceiling, and cover full costs above the ceiling. Ceilings are determined in two ways: as a defined minimum level of service or in real terms as a cash value.

Defined as level of service: Governments will subsidize a percentage of the investment cost up to a "minimum" level of service. Above this level, communities must pay full costs.

Projects in Ecuador, India, and Nepal have established financial policies based on this concept. Although this policy forces communities to make a choice, it allows a high degree of subjectivity in defining the basic level of service and does not always produce the most efficient solutions.

In real terms: Government defines its contribution as a fixed amount of money, regardless of the level of service chosen. This is the policy in projects in Bolivia and Indonesia. If the subsidy ceiling is sufficiently low, communities must make financial choices about service levels. This policy, therefore, provides the best incentive for the communities to make choices and influence costs; however, setting the initial ceiling can be arduous and requires commitment to its enforcement by all project stakeholders.

A standard subsidy ceiling adopted at the country level as national policy has two benefits. First, without a ceiling on the subsidy provided by government, there is a risk of financing very costly projects with high investment costs per capita while the same resources could finance projects with lower investment costs and benefit a much larger number of people. Second, governments only subsidize a basic level of service, and communities must bear the additional costs of the project above this level.

Responsibility for Investment Sustainability

Although most projects require communities to assume responsibility for O&M, the majority of projects still do not transfer system ownership to the communities as a matter of government policy. Even when state governments retain legal ownership of the water system, communities remain responsible for system management. It is not clear if projects are moving toward community management because governments no longer want to assume responsibility for these services, or because of the belief that management should occur at the lowest appropriate level.

Given the distortions created by high levels of subsidy in the sector, it is important to determine if the demand expressed by communities through the selection of the desired level of service and a contribution to the capital costs is an indication of a long-term demand to sustain the facilities. For example, a project in Nepal requires the community, in addition to contributing to capital costs, to deposit one year of O&M costs in a bank account prior to initiation of the project; however, it remains to be seen whether communities do in fact assume their responsibilities for O&M. Communities should be given the choice to undertake management directly or obtain services from others. Skills training and technical backstopping should be provided.

Long-term sustainability requires that rules be set to address cost recovery and the financing of depreciation and replacement. Despite that, this is a critical element of the financial policy, no surveyed project defined responsibilities for full cost recovery, including the costs of system replacement; however, the project in Bolivia moves in that direction with rules requiring the government to determine the financial policy for full cost recovery within a year.

The Learning Agenda

There are major gains to be made in the quantity and quality of service provided to low income communities by moving toward demand -responsive delivery of service. Much remains to be learned about the rules and process which work best in different settings. For this reason, the learning agenda has become the focus of much of the Program’s recent efforts. This agenda focuses on how to create demand-responsive projects, and it measures results in terms of implementation costs and the effective use and sustainability of services.

The Program is continuing to address specific issues about the demand-based approach to RWSS projects. In the field, it aims to systematically monitor the project rules and procedures and modify them as required. At the global level, it is facilitating exchanges between countries and is synthesizing results. Some questions it is now addressing include:

- What project rules would create the right incentives? What level of payments and thresholds of financial contribution reflect economic demand? What technical options and what mix of services are the most appropriate? Are the rules conducive to providing sustainable services based on what consumers want and are willing to pay for?
- What information do communities need to make an appropriate decision on the levels of service and organizational arrangements for implementation and O&M?
- What types of incentives would reduce costs and lead to efficiency in service delivery, including the costs of intermediation?

The Program is continuously increasing its knowledge of what does and does not work in RWSS. It is reaching out to other partners in the sector to gain from their experiences and applying its knowledge to projects in urban and peri-urban areas as well. The ultimate test of the approach will be measurable improvements in water and sanitation services for the poor.

Program Involvement in World Bank-Funded Water Supply and Sanitation Projects

Country	Program staff based in country	Project Name	Project Cost (US$millions)	Estimated number of beneficiaries
Benin		Rural Water Supply and Sanitation Project	15	200,000
Bolivia	X	Basic Rural Sanitation Project (PROSABAR)	47	450,000
China		Second Rural Water Supply and Sanitation	189	9,000,000
Ecuador	X	Integrated Health Project (FASBASE)	12	150,000
Eritrea		Eritrea Community Development Fund	4	126,000
Ethiopia		Ethiopia Water Supply Development and Rehabilitation Project	49	--
		Social Rehabilitation and Development Fund	75	3,800,000
Ghana		Community Water & Sanitation Project	27	350,000
India	X	Karnataka Rural Water Supply and Environmental Sanitation Project	118	4,800,000
		Uttar Pradesh Rural Water Supply and Sanitation Project	70	3,500,000
Indonesia	X	Water Supply and Sanitation Project	123	2,000,000
Malawi		First Infrastructure Project	6	--

Mali		Mali Agricultural Sector Project (PASA)	7	150,000
Nepal	X	Rural Water Supply & Sanitation Project (JAKPAS)	3	44,000
Pakistan		Rural Water Supply & Sanitation Project	48	1,560,000
Philippines	X	First Water Supply, Sewerage, and Sanitation Project	133	3,000,000
Sri Lanka	X	Community Water Supply and Sanitation Project	32	2,500,000

APPENDIX 3: A SLIDE PRESENTATION ON GENDER ISSUES IN WATER AND SANITATION