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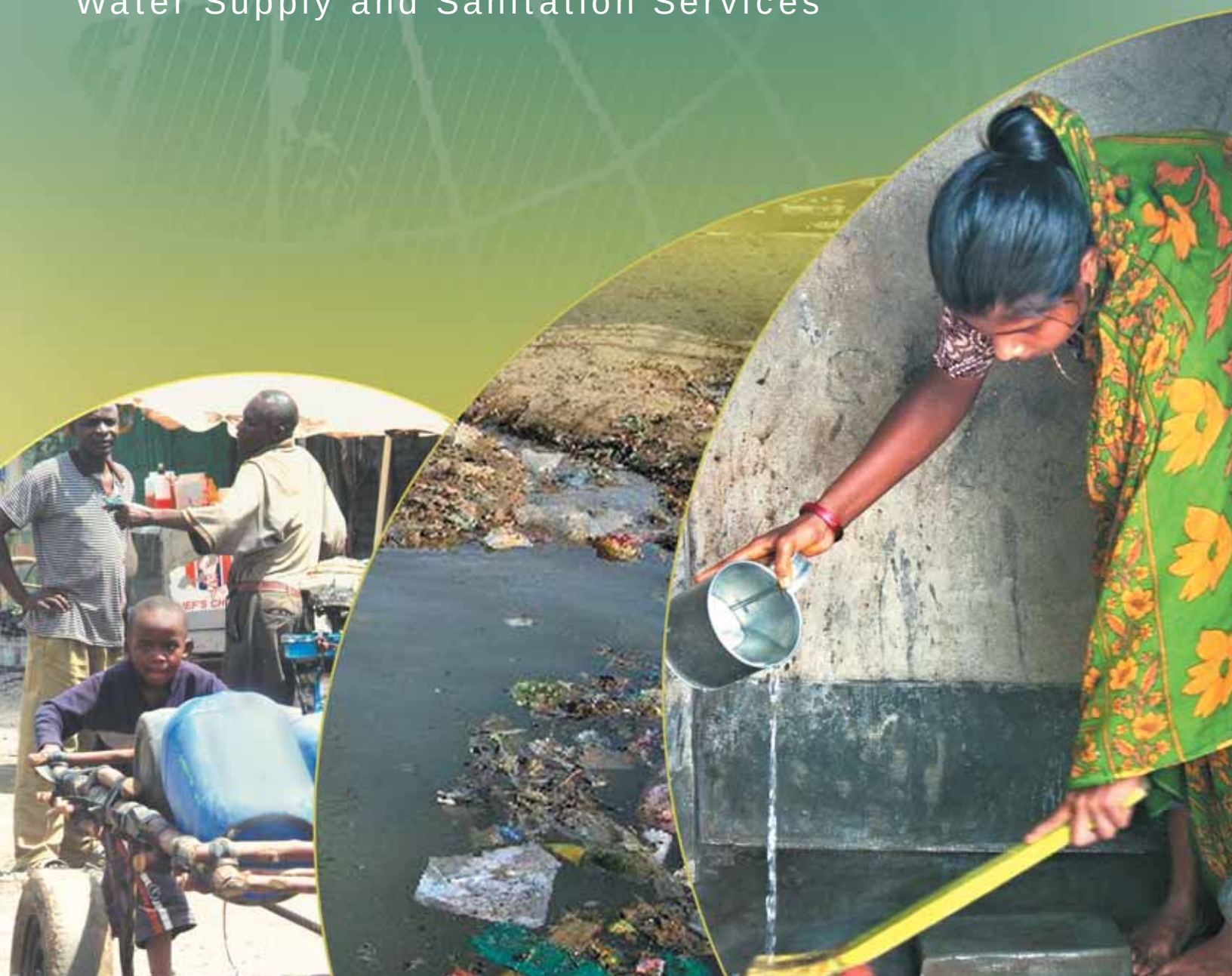
August 2009

Guidance Notes

Guidance Notes on Services for the Urban Poor

A Practical Guide for Improving Water Supply and Sanitation Services



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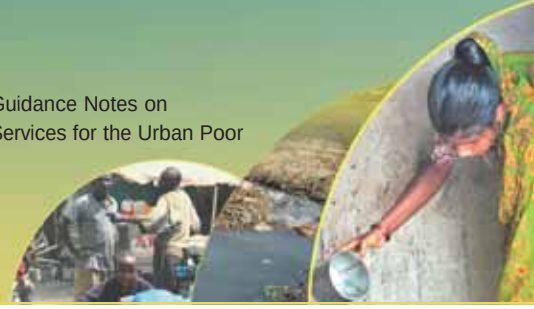
Guidance Notes on Services for the Urban Poor

A Practical Guide for Improving Water Supply and Sanitation Services

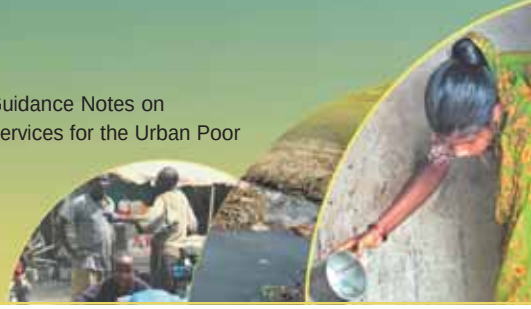
In 2006–07, the Water and Sanitation Program (WSP) initiated research to identify barriers to service delivery for the urban poor. The findings of the research were presented in the Guidance Notes on *Improving Water Supply and Sanitation Services to the Urban Poor in India*. The Urban Global Practice Team of WSP decided to expand the work to a global context. The Guidance Notes provide a systematic analysis of the barriers to service delivery for the urban poor and recommend practical solutions and strategies to overcome these barriers. The Guidance Notes are based on an in-depth research of various initiatives from Africa, East and South Asia, and Latin America. An accompanying volume, *Global Experiences on Expanding Services to the Urban Poor*, is a documentation of 'Global Case Studies' and 'Consultations with Urban Poor Communities'.

Contents



List of Acronyms

BWSSB	Bangalore Water Supply and Sewerage Board
CAESB	Water and Sanitation Company of Brasilia
CBO	Community-Based Organization
CRC	Citizen's Report Card
GPOBA	Global Partnership on Output-Based Aid
IDA	International Development Association
KIWASCO	Kisumu Water and Sewerage Company
LWSC	Lusaka Water and Sewerage Company
MBK	Maji Bora Kibera (Better Water Supply for Kibera)
MDGs	Millennium Development Goals
NGO	Nongovernmental Organization
NWSC	National Water and Sewerage Corporation of Uganda
O&M	Operation and Maintenance
OBA	Output-Based Aid
OPP	Orangi Pilot Project
PERPAMSI	Professional Organization of Water Enterprises of Indonesia
SANAA	National Autonomous Water and Sewerage Service of Honduras
SLBE	Small Local Business Enterprise
SONES	National Water Company of Senegal
SPSP	Small Private Service Provider
SSIP	Small Scale Independent Provider
WBI	World Bank Institute
WSS	Water Supply and Sanitation or Sewerage
WUP	Water Utility Partnership for Capacity Building in Africa



Executive Summary

To meet the Millennium Development Goals (MDGs) for water supply and sanitation, project planners and service providers and the poor themselves in developing countries will have to overcome a number of barriers that impede the improvement of services for the poor. These Guidance Notes identify a number of institutional, legal, financial, and technical barriers to providing adequate services to the urban poor and propose practical solutions based on the experience of a number of relevant cases. These Notes are aimed primarily at project planners, service providers, and community leaders but provide some suggestions for policymakers. A summary of policy issues is included in the last section.

The Current Situation

In 2006, nearly 1 billion people were still using water from unimproved sources such as shallow wells, rivers, streams, ponds and drainage ditches—with their attendant health and safety risks. Even those who have access to improved water supply infrastructure do not necessarily get adequate services. Large numbers of those who lack access to improved water supply infrastructure live in urban slums. The situation for sanitation is even worse than for water supply as sanitation has historically received substantially less attention, funding, and priority than water supply in virtually every country. In 2002, 2.5 billion people—47 percent of the population of the developing world—lacked toilets and other forms of improved sanitation. They defecate in plastic bags, buckets, open pits, agricultural fields or public areas in their communities. In 2005, slightly more than one-third of city dwellers—almost 1 billion people—lived in slums, in conditions characterized by overcrowding, high levels of unemployment or underemployment, lack of land tenure, poor water, sanitation and health services, and widespread insecurity, including violence against women. Improving services in the slums around large cities is essential. It is also now widely recognized that, to slow the growth of slums in large cities, more attention must be focused on improving services for the poor in towns and small cities.

Give the Poor a Voice; Build Support for Improvements; Eliminate Administrative and Legal Barriers

- The voice of the poor is often not heard, and misperceptions about the poor persist.

Getting the poor engaged is essential. Project designers and service providers often assume they know what type of services the poor want and are willing to pay for. Their assumptions are not always correct and often result in costly and unsustainable supply-driven public programs to provide services. Giving the poor the opportunity to participate in planning and design can make the difference between success and failure. This can happen only if adequate time and resources are allowed for meaningful consultation during the preparatory phases of projects.

The poor are often unaware of official policies and their attitudes and behavior may impede their access to services. Educational programs that provide information develop skills as well as promote constructive attitudes and behaviors are an essential component of any effort to improve services and give the poor a voice. A number of well-documented cases demonstrate the willingness and ability of the poor to create and/or manage their own services. Community-based organizations (CBOs) and federations of CBOs can help the poor take action on their own behalf.

- Water vendors, organized crime, public officials, and utility staff may have a vested interest in preventing better services for the poor.

Vested interests will naturally oppose any changes to the status quo that threaten their sources of revenue or political support. Sometimes confrontations can be avoided by giving informal service providers and other vested interests new roles or incentives that bring them into the formal system. Public awareness campaigns may help to build political support.

- Land ownership and tenure issues often create barriers to the provision of services to the poor.

Legal reform is needed to enable the poor to gain secure tenure, adequate housing, and services but in the meantime, innovative strategies to get around land tenure requirements can sometimes be found at the local level. One such approach is to allow

alternative documentation. For example, as part of its program to promote connections in slums, the Bangalore Water Supply and Sewerage Board agreed to permit residents to present lease documents and other 'proof of occupancy' documents such as ration cards, identity cards, election cards or electricity bills instead of land titles and tax receipts.

- The poor may be unaware of administrative and legal requirements, or find it difficult to understand them and comply.

Simplified, client-friendly procedures for connection, billing, and collection help the poor to gain and retain access to services. Creating a dedicated unit within the utility and/or engaging nongovernmental organizations (NGOs) to communicate with poor communities and facilitate access to services has also been effective.

Strengthen and Regulate Service Providers

- Public service providers sometimes lack the autonomy, financial and human resources, and incentives to provide services to the urban poor.
- Municipalities and utilities are not held accountable for the provision of satisfactory water supply and sanitation services.
- The services provided by small private service providers (SPSPs) are not recognized, encouraged or regulated.

The poor performance of water supply and sanitation (WSS) services is often due to an inappropriate institutional framework, lack of regulatory mechanisms, an absence of appropriate attitudes and skills, and a lack of explicit directives and incentives to serve the poor. Many governments have taken steps to restructure the sector by separating and clarifying the roles of policymakers, regulators, and service providers and adopting accountability mechanisms. In a number of countries, the largest service providers have been converted into autonomous public or private companies. In a few, more attention is being devoted to improving the performance and sustainability of services in the smaller towns. Such restructuring entails far more than a change in legal status—substantial internal restructuring, including management reforms and performance incentives for staff, is required to create a sustainable service provider. Training must focus on improving service quality, access and sustainability—rather than on engineering solutions.

Effective accountability and performance monitoring systems need to be put in place and propoor regulatory approaches should be adopted to ensure the availability, affordability, and sustainability of services for the poor. In most places, formal utilities will be unable to satisfy the demand of 100 percent of urban households for the foreseeable future, especially in poor neighborhoods. Taking advantage of the services of SPSPs can be an essential component of strategies to expand and improve services to the urban poor.

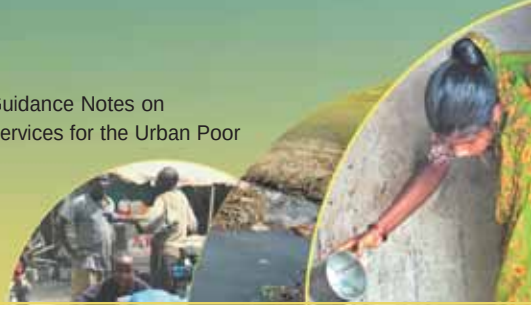
Working with SPSPs may require finding innovative ways of linking them with formal utilities, providing small amounts of investment finance, introducing appropriate regulatory mechanisms, and adopting strategies for eliminating illegal and abusive SPSP activities (if they exist) without driving SPSPs out of business.

Adopt Appropriate Investment Finance, Cost-Recovery, and Subsidy Policies

- Tariffs do not cover the full cost of efficient services.
- Poor households find it difficult to pay upfront connection fees.
- Poor households find it difficult to pay monthly bills.
- Increasing block tariffs penalizes households that share a single connection.
- Small-scale service providers lack adequate finance to extend networks into peri-urban informal settlements and small towns.

Targets for cost recovery that are realistic and charging methods that take the constraints faced by the poor into account can lead to financial viability as well as improved access for the poor. Cost recovery can be improved by reducing costs through increased efficiency, improving commercial performance, and charging an average tariff that reflects all costs. If a large tariff increase (in real terms) is required, even after taking into account the effects of efficiency improvements and increased connections, the increase should be phased over a period of time and accompanied by perceivable improvements in service.

Prices affect consumption behavior, so tariff structure and cross subsidies must be designed carefully to minimize economic distortions or changes in consumption patterns that would undermine the financial performance of the utility. Expanding services to the poor may result in a higher average cost because of physical conditions, higher collection costs, and lower average consumption from connections in poor households. This creates



a dilemma that needs to be acknowledged and dealt with realistically. Practices that reduce the cost of serving poor neighborhoods, such as community management of billing and collection, may be needed. While individual household connections for water and sewerage are often the preferred options, when many households are served through a single water connection, water consumption per connection may be higher than the utility's average and make up for some of the higher costs in poor communities. Likewise, block toilets increase economies of scale. In general, subsidies should be targeted at the poor and should be limited and temporary. Subsidizing investments and/or connections in poor neighborhoods is preferable to subsidizing monthly consumption because the former is both targeted and limited in scope, and is generally sufficient to ensure that the poor will be connected and stay connected. If the very poor have difficulty accumulating cash to pay monthly fees, it may be possible to increase the frequency of collection by organizing daily or weekly collection by community representatives. Rising block tariffs are generally intended to provide a low lifeline tariff for basic essential household consumption and to discourage excessive use by those who consume more than a basic volume of water. However, such tariffs may penalize the poor when several households use one connection. Administrative or regulatory actions may be required to eliminate these distortions.

Legitimizing and providing finance to SPSPs can be an effective way to promote the expansion of acceptable services to unserved neighborhoods.

Overcome Physical and Technical Barriers

- The overexploitation and degradation of water resources affect the poor disproportionately.
- Physical and technical challenges and the high investment cost of conventional technologies make extending formal piped water supply and sewerage networks into informal and unplanned settlements more difficult.

Inadequate attention to managing water resources is leading to the overexploitation and degradation of water resources and exacerbates the already difficult service and environmental conditions in poor urban neighborhoods. As water becomes scarcer and its quality degrades, the poor must go farther and pay more to satisfy their basic needs. Most countries have adopted the Dublin Principles regarding the need for integrated water resources management to protect the environment, and the economic pricing of water to ensure efficient use of water resources, but further action is needed to implement these principles. Most governments are still operating in the reactive mode—responding to near-disasters. Public authorities and utilities should adopt comprehensive forward-looking strategies for reducing water losses and encouraging the adoption of water saving technologies and low-cost sanitation at the household and community level.

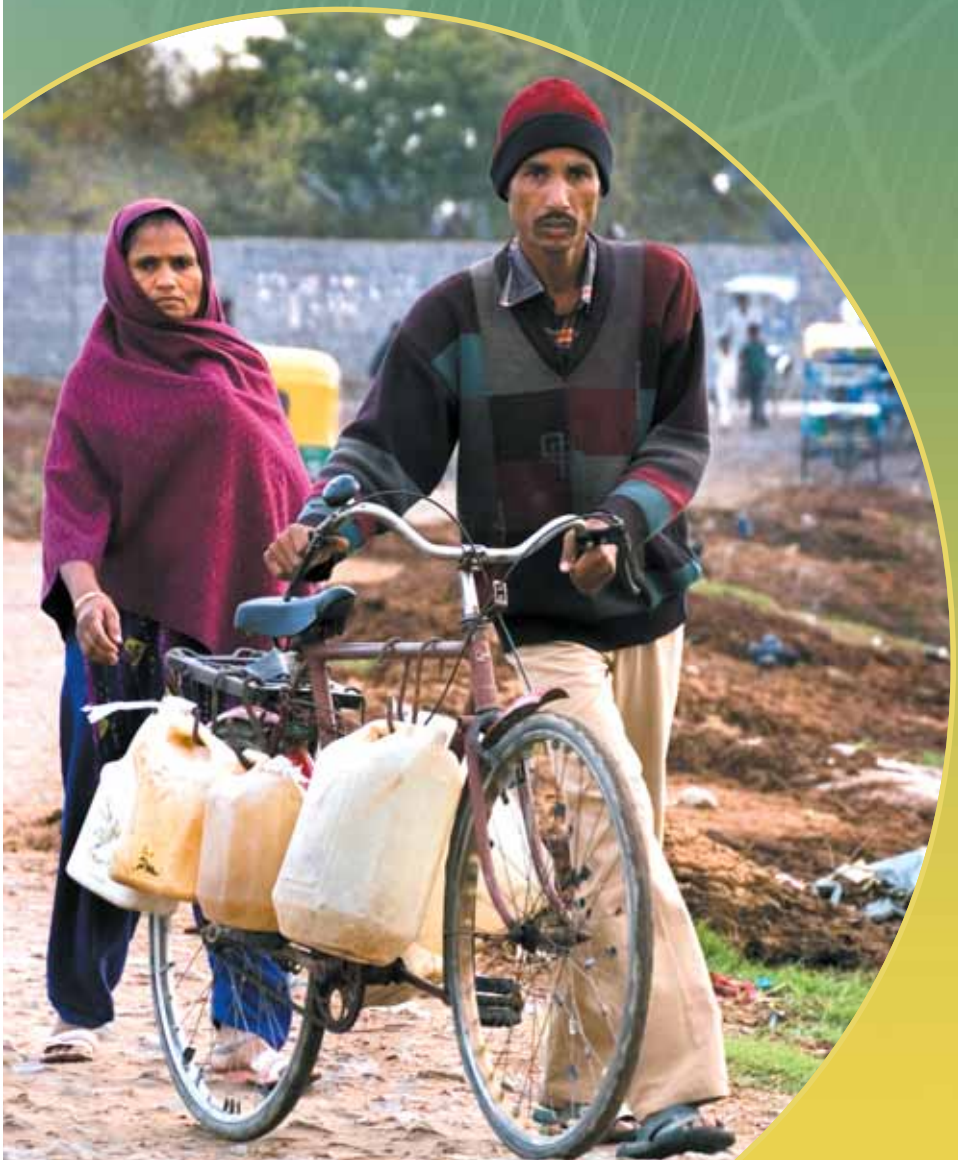
A number of low-cost and physically adaptive alternative technologies have been developed for poor and marginal communities. A few examples are pour-flush latrines, condominial sewerage systems, low-cost sewage treatment technology adapted to local conditions, rainwater collection systems, bulk water and sewerage connections at the boundary of poor communities, street or block metering arrangements whereby individual households are billed for water on the basis of average consumption. These have already been successfully used in many places. Modular planning, by which system components are initially designed with only limited excess capacity, has been advocated as a method to reduce initial investment costs in water supply and sanitation infrastructure. The underlying principle is to construct only when the investment leads to increased revenues in an acceptable timeframe. Subject to certain considerations, such as economies of scale, components are designed so that they can be expanded or upgraded as needed.

Policy Issues

The guidelines recommend practical strategies for overcoming obstacles to improving water supply and sanitation services for the urban poor. But in many cases, overcoming the obstacles will require more than the strategies. It will require changes in policies or legislation—for example, to increase transparency, promote better services for the poor, reform land tenure rules, require better cost-recovery, and allow adaptive standards and technologies. Even when policy reform is not essential, the proposed strategies could benefit from a more supportive policy or legal environment. In many cases, while current policies themselves may be adequate, their implementation is weak, or they may not be understood and appreciated by the key actors. In those cases, strategies to improve the implementation of policies may be needed.

Section 1

Introduction



The Guidance Notes focus on practical actions—many of which can be implemented, at least partially, within existing policy frameworks.

Purpose of these Guidance Notes

As policymakers and service providers in developing countries take action to improve water and sanitation services for the urban poor, they can take advantage of experiences from several other countries. There are relevant examples, from all the developing regions, of initiatives that have led to improvements for both the poor population and the service providers.[1] Taking advantage of these lessons, and adapting them as appropriate, can be an important component of strategies to meet the Millennium Development Goals (MDGs) for water supply and sanitation.

These Guidance Notes are aimed primarily at project planners, service providers, and community leaders but provide some suggestions for policymakers as well. They identify barriers to providing adequate services to the urban poor and propose practical solutions based on the experience of a number of relevant cases that have been reviewed for this purpose.

These Guidance Notes focus on practical actions—many of which can be implemented, at least partially, within existing policy frameworks. Promoting policy reform *per se* is not the primary objective, though more appropriate policy frameworks would improve the enabling environment, and are essential for long-term sustainability of services for the poor and especially for addressing many of the financial barriers discussed in Section 6. For this reason, desirable policy initiatives are listed at the end of each section and a final section summarizes them.

[1] This note mentions primarily initiatives funded by the World Bank and its partners, such as the Water and Sanitation Program. There are undoubtedly many other good examples that merit examination and adaptation.

Overview of the Current Situation

The lack of water supply and sanitation services for the urban poor represents a daunting challenge and multiple strategically targeted initiatives will be required to meet the MDGs. During 2000 to 2006, the proportion of the population with access to an improved drinking water source in developing regions rose from 74 percent to 84 percent. However, nearly 1 billion people were still using water from unimproved sources such as shallow wells, rivers, streams, ponds and drainage ditches—with their attendant health and safety risks.[2] Large numbers of those who lack access to improved water supply infrastructure live in urban areas.

- In 2005, 8 million of Indonesia's 9.6 million poor urban households did not have access to piped water.[3,4]

Even those who have access to improved water supply infrastructure do not necessarily get adequate services. Water from standpipes and kiosks, key sources of access for the poor, is not always available 24 hours a day. As a result women, especially, spend hours fetching water and must frequently adjust their work schedules and sleeping patterns, sometimes staying up late at night. Intermittent service, which results in unreliable availability and inadequate volumes of often contaminated water, affects the rich and poor alike. As a result, large numbers of households store water in household reservoirs and supplement piped water with water from tanker operators and water vendors.

[2] United Nations. *The Millennium Development Goals Report 2008*. p. 42.
[3] Indonesia. 2006. *Enabling Water Utilities to Serve the Urban Poor.* The World Bank, East Asia and Pacific Region.
[4] Not all piped water is safe for human consumption. Conversely, not all water abstracted from natural sources is unsafe. However, particularly in urban areas, access to piped water is often used as a rough indicator of access to safe water.

Small private service providers (SPSPs) play an important role in filling service gaps. They include tanker operators, private kiosk operators, household resellers, door-to-door vendors, and operators of small boreholes and private piped networks. Many provide good quality service under competitive conditions, but the price of water provided by SPSPs is usually much higher than that of the main water utility. Due to their informal and unregulated nature, alternative suppliers sometimes impose significant social costs: uncontrolled abstraction of water by alternative suppliers may undermine the effective management and protection of water resources, and theft of water from the utilities undermines their financial viability. Other resources may also be misappropriated by SPSPs.

- In Chennai, India, more than 13,000 tankers mine the surrounding farmland for water, using government-subsidized power intended for agricultural use.

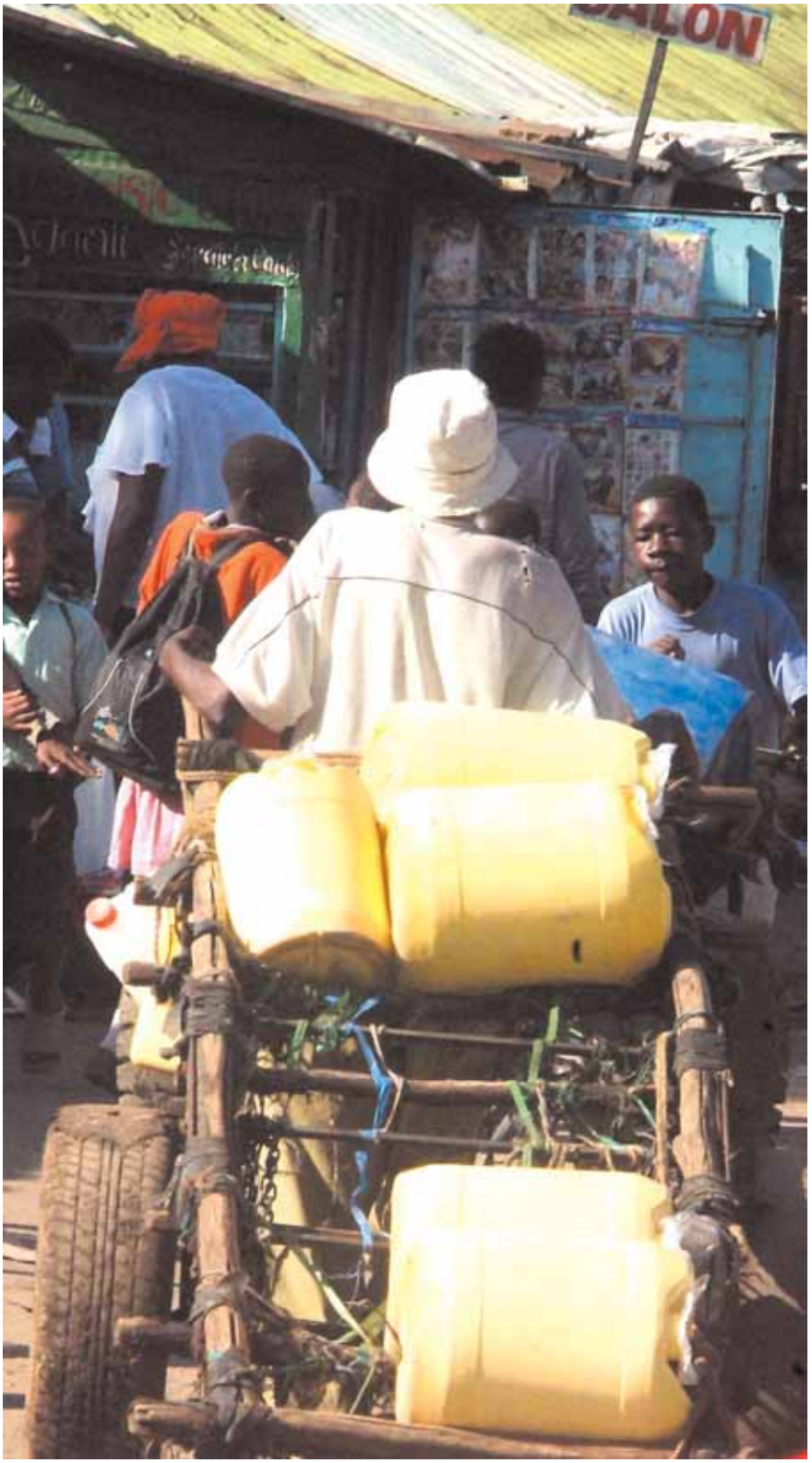
The situation for sanitation is even worse than for water supply as sanitation has historically received substantially less attention, funding, and priority than water supply in virtually every country. In 2006, 2.5 billion people—47 percent of the population of the developing world—lacked access to improved sanitation. They defecate in plastic bags, buckets, open pits, agricultural fields, and public

areas in their communities.[5,6] The lack of proper sanitation in crowded slums contributes to serious health and environmental risks for the entire population, but the poor are particularly vulnerable to infection from contaminated water and other disease vectors.

- In Rio de Janeiro, Brazil, recent outbreaks of the mosquito-borne disease dengue fever (spread by mosquitos which thrive in even small amounts of standing water) have primarily affected residents of the city's large slums, and children aged 5 to 12 are the most susceptible.[7]

The U.N.'s Millennium Development Goals Report 2005 reported that urban population was projected to exceed rural population in developing regions by 2007 and was growing at more than 3 percent per year, three times faster than the population of rural areas.[8] In 2005, slightly more than one-third of city dwellers—almost 1 billion people—lived in slums, in conditions characterized by overcrowding, high levels of unemployment or underemployment, lack of land tenure, poor water, sanitation and health services, and widespread insecurity, including violence against women.[9]

- In Africa, which is urbanizing faster than any other region, more than 60 percent of the urban population



[5] United Nations. 2008. op. cit., pp. 40-43; and U.N. Millennium Project, Task Force on Water and Sanitation. 2005. 'Health, Dignity, and Development: What will it Take?' *Earthscan*, the United States and the United Kingdom, p. 79.
[6] The MDG Reports do not define 'improved sanitation'. The U.N.'s promotional document, 'Tackling a Global Crisis: International Year of Sanitation 2008' defines sanitation, at a minimum, as 'the safe management of human excreta, usually by means of a toilet that confines feces until they are composted and safe, or enables them to be flushed away into a sewer'. Its fuller definition includes environmental cleanliness, handwashing, garbage removal, and wastewater disposal.
[7] April 3, 2008. 'Brazil's Military Mobilizes against Dengue', *The Washington Post*. Section A, p. 8.
[8] United Nations. *The Millennium Development Goals Report, 2005.* p. 34.
[9] United Nations. 2008. op. cit., p. 43.

lives in housing with at least one of the four defining characteristics of slums.[10]

The picture is complicated by the fact that the demand for sanitation (defined as willingness and ability to pay) is usually lower than the cost of provision. Many observers have suggested that sanitation is not a high priority for poor households, in part because they may not understand the consequences of bad hygiene. It is true that health is not usually the most important factor in demand for improved sanitation. Other factors, such as convenience, privacy, dignity, safety, and community status are more important. In many cases, households with limited resources have to choose from many competing needs—and convenience, privacy, and the safety of women are not their highest priorities. This is related to another constraint on demand for sanitation: gender inequality. The limited political and personal power of women in many developing countries means that sanitation's strongest advocates have little influence over the decisionmaking and priority-setting processes. Given the constraints on demand, services must be carefully designed: mismatches between demand for improved sanitation and the type of services provided often results in unused or underused sanitation infrastructure.[11]

Attempts to improve sanitation services in slums have tended to be sporadic and have often been undertaken as good works, or to improve the public image of the service provider or public officials, rather than as part of a strategy to provide sustainable services. As a result, when slum areas receive services, they are typically of low-quality and create a net drain on utility resources. There are increasing calls from the poor and organizations that represent their interests to address this problem in a more sustainable manner. While partial subsidies may be necessary and can be justified, it is increasingly evident that people are willing to pay for sanitation if planning takes their preferences and constraints into account.

A number of governments have shown that it is possible to improve water supply and sanitation services for slum-dwellers through practical strategies that target key barriers. It is also now widely recognized that focusing more attention on improving services for the poor in towns and small cities is essential to slow migration to the slums around large cities.

Obstacles to Improving Services for the Urban Poor

Why do poor people not get access to services? Consultations with a broad range of stakeholders in developing regions revealed a general consensus on the most common obstacles to improving services to the poor. These obstacles have been grouped under six proposed action areas:

1. Give the Poor a Voice

- The voice of the poor too often is not heard, and misperceptions about the poor persist.

2. Neutralize Vested Interests

- Water vendors, organized crime, public officials, and utility staff may have a vested interest in preventing better services for the poor.

3. Eliminate Administrative and Legal Barriers

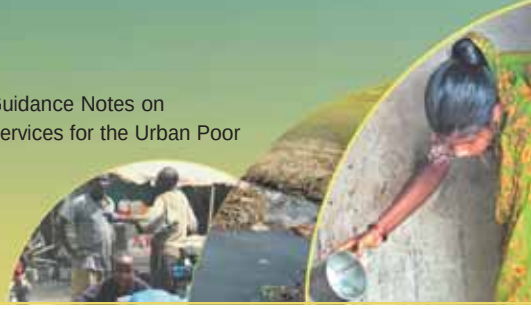
- Land ownership and tenure issues often create barriers to the provision of services to the poor.
- The poor may be unaware of administrative and legal requirements, or find it difficult to understand and comply with them.

4. Strengthen Capacity, Autonomy, and Accountability of Service Providers and Provide Incentives to Serve the Poor

- Public service providers sometimes lack the autonomy, financial and human resources, and incentives to provide services to the urban poor.
- Municipalities and utilities are not held accountable for the provision of

[10] The four defining characteristics of urban slums are (a) lack of improved sanitation; (b) lack of improved water supply; (c) lack of durable housing; and (d) lack of sufficient living area. (United Nations. 2008. op. cit., p. 43.)

[11] U.N. Millennium Project, Task Force on Water and Sanitation. 2005. 'Health, Dignity, and Development: What will it Take?' *Earthscan*, the United States and the United Kingdom, pp. 81-82.



satisfactory water supply and sanitation services.

- The services provided by SPSPs are not recognized, encouraged, and regulated.

5. Adopt Appropriate Financial Policies

- Tariffs do not cover the full cost of efficient services.
- Poor households find it difficult to pay upfront connection fees.
- Poor households find it difficult to pay monthly bills.
- Increasing block tariffs penalizes households that share a single connection.
- Small-scale service providers lack adequate finance to extend networks into peri-urban informal settlements and small towns.

6. Overcome Physical and Technical Barriers

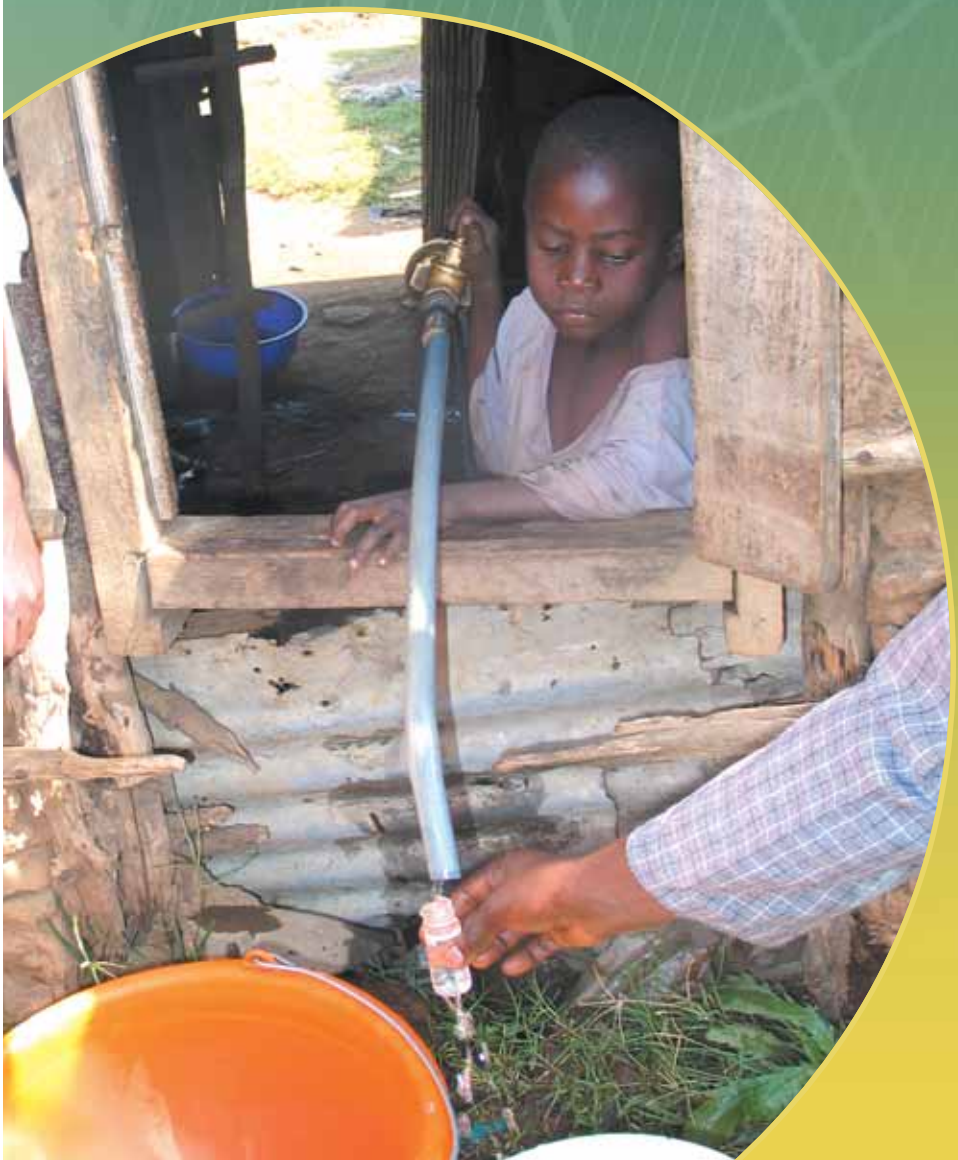
- The overexploitation and degradation of water resources affect the poor disproportionately.
- Physical and technical challenges and the high investment cost of conventional technologies make extending formal piped water supply and sewerage networks into informal and unplanned settlements more difficult.

What can be done to remove these barriers? Practical strategies are proposed in the following six sections of this document. These are illustrated by case examples of initiatives to deal with the obstacles.[12] Each section ends with suggestions for getting started: (a) a list of relevant actions and strategies that the key players (policymakers and project planners; governance bodies and service providers; and community leaders, spokespersons who represent the poor and other advocates for the poor) can implement; and (b) a list of additional cases. The final section lists the policy reforms that would help to enhance and consolidate the success of these efforts. Resources, including publications and organizations, are listed at the end of the paper.

[12] Detailed case studies are presented in the accompanying volume.

Section 2

Give the Poor a Voice



Giving the poor the opportunity to participate in planning and design can make the difference between success and failure of an initiative.

Obstacle

The voice of the poor, too often, is not heard and misperceptions about the poor persist.

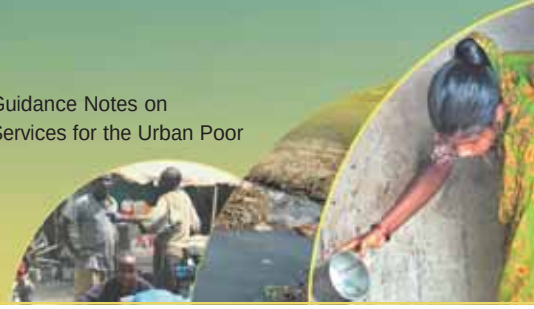
Getting the poor more engaged is essential. Project designers and service providers often assume they know what type of services the poor want and are willing to pay for. It is often assumed that the poor cannot pay for services, which should be provided free of charge. Such assumptions are not always correct and often result in costly and unsustainable supply-driven public programs to provide services. In contrast to common perceptions, evidence shows that it is feasible for many of the poor to become legitimate customers who pay their bills. To promote that objective, it is essential that their opinions be heard.

Promote Meaningful Participation in Planning and Design

Giving the poor the opportunity to participate in planning and design can make the difference between success and failure, so adequate time and resources should be allowed for meaningful consultation during the preparatory phases of projects. Project designers need to be aware that consultation takes time and resources. In their haste to qualify for funding or achieve quick results, government officials and utility managers may bypass the time-consuming and potentially messy participatory process unless it is required as a condition of funding.[13] Project designs sometimes include a requirement that a certain percentage of residents make an initial contribution to capital costs or sign a 'commitment to connect' to services as a sign of their interest in the project, but there is a distinct difference between pressuring residents to sign up for a project vs. enabling a community to take some initiative and contribute project design.

Meaningful consultation involves eliciting ideas from the beneficiaries prior to the design of a project or program. It helps to ensure that the project design is responsive to demand and that beneficiaries understand and accept their roles and responsibilities. Rallies, essays by school children, drawing and painting competitions, radio talk shows, articles in newspapers, and information posted on a web site are good ways to publicize a project and build awareness but they do not necessarily constitute meaningful consultation *per se*. Likewise, surveys may provide useful data for assessing demand and attitudes, but do not constitute active collaboration or create community cohesion. A model of a bottom-up approach that promoted meaningful participation in Brazil is described in Box 1. Another example of effective consultation in the context of a slum sanitation project in Mumbai, India, is described in Box 2.

[13] See, for example: Baindur, Vinay. September 5, 2005. 'For the People, by Diktat.' *India Together* op-ed. http://www.indiatogether.org/2005/sep/gov-nurm.htm



Box 1: Brazil, PROSANEAR Project: People Were Asked What They Wanted

Prior to planning water supply and sanitation projects, PROSANEAR (a Portuguese acronym for the Water and Sanitation Program for Low-Income Urban Population) teams went into communities to ask what kind of water project the people wanted, if any, and what kind they would be willing to support with their money and labor. Residents were allowed to talk about the full range of problems they faced, but once the discussion turned to the importance of water supply and sanitation, they were generally eager to hear how PROSANEAR could help them. Neighborhoods were allowed to choose from a range of simple, innovative systems that made water and sanitation affordable and environmentally appropriate for poor crowded settlements. There were no blueprints. In many places, groups of households were batched together in a creative condominial sewerage system approach that not only made the networks more efficient and affordable but also forged new bonds among neighbors. PROSANEAR sought to make a permanent impact by mobilizing local clubs, as well as women's, sports, and religious groups to educate people about the importance of sanitation and to teach them how to operate and maintain their new systems. The results were powerful, and they went far beyond the better health and greater convenience enjoyed by 1 million people newly connected to water taps and toilets. For example, getting formal postal addresses and water bills in their names meant they had graduated from squatter status to resident—a new status in society.

Source: World Bank. 2006. *Community Participation and Low-Cost Technology: Bringing Water Supply and Sanitation to Brazil's Urban Poor.* Water and Sanitation Feature Story #10. See also Case Study 3, accompanying volume.

Box 2: Stakeholder Participation in the Slum Sanitation Program in Mumbai, India

The Slum Sanitation Program initiated by BrihanMumbai Municipal Corporation in 1995 with World Bank support was based on a demand-driven and participatory approach, in which the municipality would provide the initial capital to build community toilet blocks, while community-based organizations (CBOs) or small local business enterprises (SLBEs) would take full charge of O&M.

NGOs were engaged to mobilize communities, facilitate relationships with the local government, and train the communities in essential skills and attitudes. They initially carried out a general information campaign and assessed the willingness and readiness of the communities to participate in the sanitation scheme. Once communities mobilized and demonstrated an interest, CBOs/SLBEs were created (if not already existing and active). These organizations were then registered to obtain the legal status, which would allow them to manage the community sanitation block (that is, obtain water, sewerage and electricity connections, sign a memorandum of understanding with the municipal corporation, open and maintain a bank account to deposit the maintenance fund and earnings, pay utility bills, and so on). It was only after the CBO or small enterprise had collected at least 50 percent of the expected maintenance fund from prospective users and had developed a technically sound and community-endorsed plan for the toilet block, that the municipal corporation issued the building permit and the actual construction of the community toilet block began.

Participation in the formal process of planning the services, creating a viable business entity, having it registered, opening a bank account, and working with the municipal corporation provided invaluable experience, created confidence, and inspired further entrepreneurial and community activities on the part of participants. In one case, a small enterprise that operates the toilets has also established a pre-school in the new community center that was built adjacent to the toilet block.

Source: Nitti, Rosanna, and Shyamal Sarkar. 2003. *Reaching the Poor through Sustainable Partnerships: The Slum Sanitation Program in Mumbai, India.* World Bank, Urban Notes No. 7. See also Case Study 2, accompanying volume.

Publish Stories of the Poor

The stories of the poor themselves give statistics a human side and can be used to improve the impact of research reports and policy papers. Sector actors should capture and disseminate, with the media's support, stories that translate service delivery inefficiencies and deficits into their impacts on daily life at the human or household level. Poignant examples of the contrast between those households without easy access to safe drinking water and sanitation services and those with access can help to create an environment for making politically difficult or unpopular decisions viable, especially when combined with a strategic communication campaign to promote the expansion of services and more flexible approaches to serving the urban poor. A few representative examples of the daily impacts of poor service provision were recently collected in India:[14]

- In a community where the corporation does not provide water, most residents pay off the plumber and get a water connection to a common point near their homes. The rest get their water from the tanker mafia.
- In one area, there are 28 toilets that were funded by the World Bank, the state and the local authority, and eight World Bank-funded toilets for children. These toilets are inadequate for the 25,000 people, but at least they have reduced open defecation to some extent.
- One woman said it took her half-an-hour to fill two buckets of water from the handpump. Each day, her family requires up to 10–15 buckets. In the morning, she fetches water for the morning chores and immediate needs. After returning from work, she fetches water for the rest of the day.
- Women dislike defecating in the open in broad daylight. They go in groups during the night.
- Because of the lack of water, the residents do not bathe every day, which causes health problems—skin rashes, boils, and so on. They wash clothes once in a fortnight.

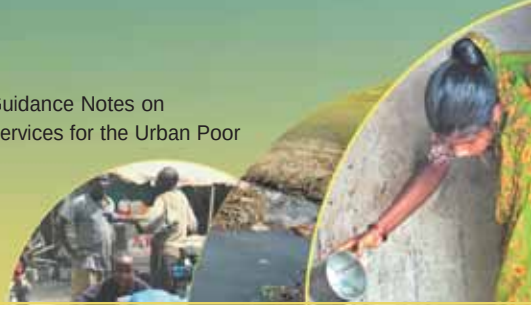
[14] These and other examples were collected during field work conducted between December 2006–January 2007 in Mumbai and Vadodara, India.

Inform and Educate Poor Communities

The poor are often unaware of official policies, and their attitudes and behavior may impede their access to services. Like many users, they may have misperceptions about the need to pay for public services. They may not be fully aware of the health impacts of poor sanitation practices. Many are illiterate and unaware of their rights. Educational programs that give the poor the information and skills they need to participate as well-informed citizens are an essential component of any effort to promote their participation in planning and management of services. Programs to promote constructive attitudes and behaviors that will enhance their chances of getting good services and making effective use of them (for example, regular payment of bills and good hygiene) are also essential. Education that builds such skills and attitudes not only has positive effects on access to water and sanitation services, it can also help develop basic financial management skills with broader applications and development impacts.

Empower the Poor to Act within and beyond Their Own Communities

Community-based organizations (CBOs) and federations of CBOs can help the poor take action on their own behalf. All of the strategies described above involve some form of outreach to the poor. These are essential to ensure that the formal structures and decisionmaking activities actively seek to serve the poor better. But it is equally important and effective for the poor to take action for themselves. By doing so, they gain self-respect and important skills as well as better services. They also dispel commonly held notions that the poor are helpless or lack initiative. Self-help activities can be initiated by a dynamic individual within the community and/or a nongovernmental organization (NGO) that is committed to the interests of the community. However, when an outside organization initiates action, it is essential that the community actively expresses its demand and willingness to pay for services and that the leadership be assumed quickly by someone in the community. There is no blueprint for creating such organizations because the social dynamics in each community are often unique and only a savvy



resident is likely to appreciate them fully. In fact, initial success often hinges on a single individual's commitment and leadership skills.

A number of well-documented cases demonstrate the willingness and ability of the poor to create and/or manage their own services. The Orangi Pilot Project (OPP) in Karachi, Pakistan, was one of the first to demonstrate that the poor want good quality services and are willing and able to pay for them. In Zambia, taking advantage of lessons learned under an earlier program to promote management of water supply services by slum communities, the international NGO, CARE, developed the Water Trust Model, which has been successfully introduced in six low-income settlements in Lusaka.

Box 3: Community-Based Management of Services: The Orangi Pilot Project in Karachi, Pakistan

Orangi is the largest *katchi abadi* (informal settlement) in Karachi, Pakistan, and has a population of 1.2 million. The Orangi Pilot Project (OPP) was established there in 1980 by Dr. Akhtar Hameed Khan, the renowned Pakistani social scientist. The OPP provided social and technical guidance to enable low income families to construct and maintain an underground sewerage system with their own funds and under their own management. The project has shown that poor people can finance and build sewers in their communities. Working together internally as well as with the government to achieve their objectives has given community members dignity as well as confidence in themselves. To date, the people of Orangi have laid down 1.3 million feet of sewer line and invested about PKR 57.2 million (US$2.2 million). About 900,000 people in 94,122 houses have benefitted. The average cost of the system is very low—about PKR 1,000 (US$31) per household. The residents of Orangi maintain the system themselves at no cost to the government. The OPP Research and Training Institute is currently assisting initiatives in a number of other areas in Pakistan and other countries. Training in the OPP model has been provided to groups from Nepal, Cambodia, Vietnam, Sri Lanka, Thailand, the Philippines, Central Asia, Zimbabwe, and South Africa.

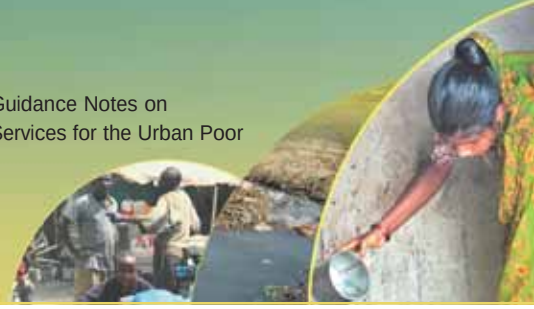
Source: Case Study 5, accompanying volume.

Box 4: Community-Based Management of Services: The Water Trust Model in Lusaka, Zambia

Lusaka, Zambia, has 33 peri-urban areas where about 1 million of the 3 million inhabitants of the city live. Water trusts are community-based water supply service providers in peri-urban areas of Lusaka. They currently serve 600,000 people in 13 peri-urban areas. Starting in early 2002, the trusts were set up with the assistance of the international NGO, CARE, in partnership with the Lusaka City Council and Lusaka Water and Sewerage Company (LWSC). The CARE project funded infrastructure and community capacity building. Since LWSC is responsible for providing services throughout the city and is the only licensed service provider by the regulator, the water trusts operate under LWSC's license, though the relationship has not as yet been formalized. The city council is a signatory to the trust accounts, facilitates the recruitment and appointment of board members and management staff, audits the books, and provides legal advice. Each water trust is governed by a board of trustees that provides policy direction, develops service strategies, and employs a scheme manager. The manager hires and supervises staff such as water vendors/tap attendants, plumbers, and cashiers. Each water vendor/tap attendant signs a contract for the operation and maintenance of a water point and receives a percentage of monthly sales. Residents may buy water on a daily basis or make a monthly prepayment. In some schemes, household connections are also an option. Tariffs and connection charges are regulated by the National Water and Sewerage Commission which is also supposed to regulate service quality—though the trusts are not in fact subject to effective scrutiny. An evaluation of the trust schemes, implemented by CARE in 2004, found that service levels in water trust areas were higher than in areas served by LWSC and that 76 percent of respondents were satisfied with the level of service. The trusts' model has also resulted in a substantial improvement in cost recovery for water supply service.

Source: Lidonde, Rose. March 2008. *Community-Managed Schemes—The Water Trust Model—Facilitating Access to Water and Sanitation Services for the Urban Poor in Lusaka, Zambia.* Water and Sanitation Program–Africa Region.

An important feature of both OPP and the Water Trust Model is their effective interface with the formal service providers (see Boxes 3 and 4). While local community user groups are useful for solving local problems, federations and networks enable poor communities to act beyond their boundaries to influence policies or access sources of development assistance. In Tiruchirapalli, India, a network of self-help groups is enabling poor residents to get funding and assume responsibility for local sanitation (see Case Study 7, accompanying volume).



Getting Started: Actions and Resources

This section suggests the following actions for sector actors:

Policymakers and Project Planners

- Avoid top-down planning.
- Require meaningful participation by project beneficiaries in which they help determine project design and demonstrate ownership of proposed solutions.
- Allow adequate time for consultation and participation by beneficiaries.
- Hire qualified NGOs to facilitate mobilization of poor communities.
- Publish information for the general public about the living conditions and accomplishments of the urban poor, and strategies to improve access to services.
- Make information available in formats that are accessible to the poor.
- Plan for an effective interface between community-managed services and the formal service provider.

Governance Bodies and Service Providers

- Create a specialized unit within the utility to communicate with poor communities and facilitate access to services.
- Develop a client-oriented culture within the utility.
- Train staff in effective client relations skills, particularly for serving the poor.
- Develop a supportive framework for interfacing with community-managed services.

Spokespersons for the Poor, and Civil Society Organizations

- Act as intermediaries between service providers and poor communities.
- Deliver educational and awareness programs aimed at enabling the poor to act on their own behalf.
- Identify and work with dynamic individuals in the community to provide leadership for self-help initiatives.
- Encourage participation in political processes.
- Promote networks among community organizations with common interests.

Table 1: Relevant Case Studies in Accompanying Volume

Case Study	Topic
Brazil (Case Study 3)	Community participation in project planning
Karachi, Pakistan (Case Study 5)	Self-help organizations, self provision of services
Temeke District, Dar es Salaam, Tanzania (Case Study 14)	Federation of water user associations
Tiruchirapalli, India (Case Study 7)	Community managed toilets
Manila, the Philippines (Case Study 4)	Federation of water associations
Mumbai, India (Case Study 2)	Community and local enterprise operation of toilets
Hyderabad, India (Case Study 8)	Public meetings, grievance resolution system
Lusaka, Zambia (Case Study 18)	Community managed water supply services with support of the formal utility

Section 3

Build Support for Improving Services

Institutional arrangements and legal reforms that incorporate informal service providers into the formal solution reduce opposition and improve transparency.

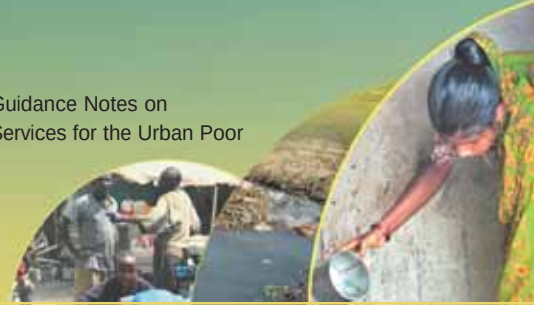
Obstacle

Water vendors, organized crime, public officials, and utility staff may have a vested interest in preventing better services for the poor.

When the poor cannot get piped water supply services legally they are forced to provide for themselves in some way—legal or illegal. In cities with a high percentage of unserved population, such as Dhaka, Manila, and Karachi, the amount of money that passes hands informally in the water sector to provide water to the unserved population is reportedly greater than the revenue of the formal service provider. Existing vendors and other vested interests will naturally oppose any changes to the status quo that threaten their sources of revenue or political support. Sometimes confrontations can be avoided by giving informal and alternative service providers new roles or incentives that bring them into the formal system. Ultimately, improving transparency reduces opportunities for illicit activities.

Incorporate Informal Service Providers into the Solution

Institutional arrangements and legal reforms that incorporate informal service providers into the formal solution reduce opposition and improve transparency. Such arrangements benefit both sides: the informal providers gain security and legitimacy, and the utility or alternative service organization can take advantage of the knowledge and skills informal providers



Box 5: Water Kiosk Operators Unite in Kenya

In the informal settlement of Kibera in Nairobi, Kenya, more than half-a-million poor people get water from more than 650 informal local water kiosks. The kiosk operators lay pipes, as much as 1,500 meters, to connect their storage tanks to the local utility network. Although the utility recommends that water be sold for Ksh 1 per jerrycan (about US$0.10), the prevailing price is usually Ksh 2 (the equivalent of US$1.30 per m^3, or eight times the utility's domestic tariff), primarily because of the costs associated with establishing and running water kiosks: capital investment, bribes paid to utility staff to obtain and retain a connection, and the high tariffs associated with higher consumption blocks. During water shortages, the prices are even higher, soaring to Ksh 5 or even Ksh 10 per jerrycan.

The utility historically had little incentive to address the problems in Kibera, because revenue collection in the settlement was negligible; there were many illegal connections; and the water delivered to Kibera was estimated to be less than 10 percent of the city's total consumption. Instead, the utility simply used water rationing to limit its losses. Until recently, the utility considered kiosk operators to be part of the problem and driving them out of business was seen as an effective measure to reduce unaccounted-for water.

In May 2004, following an intervention by WSP–Africa, kiosk operators decided to form an association, which they called Maji Bora Kibera (MBK)—Swahili for 'better water services for Kibera'—drafted a constitution, formed an executive committee, and applied for official registration. Soon a joint taskforce was formed with members from the utility, MBK, and WSP–Africa. At the suggestion of the utility, MBK wrote a letter stating clearly the problems faced by water vendors and offering to cooperate with the regularization of their connections, pay bills regularly, stop paying bribes, report leakages, and expand services to unserved areas. The utility was asked to provide a regular supply of water, adopt better billing and collection practices, and provide engineering advice for network improvements. The letter was a watershed in vendor-utility relations. MBK and the utility continue to build their relationship. MBK is working on a number of initiatives to strengthen self-regulation and address remaining barriers to good services.

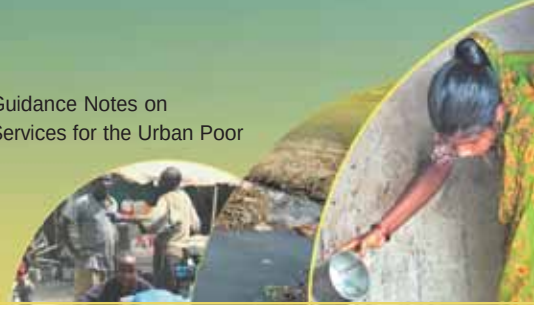
While there remains some concern that the association could be an obstacle to long-term change in Kibera (if the members were to protect their own interests at the expense of consumers), there is also a recognition that both the utility and vendors can gain from further collaboration.

Source: Brocklehurst, Clarissa. June 2005. *Rogues No More? Water Kiosk Operators Achieve Credibility in Kibera.* Water and Sanitation Program Field Note.

have accumulated. Regularization of informal service providers often helps utilities to reduce illegal connections and corrupt practices by staff, lower water prices, and improve the reliability of services—especially if adequate oversight or regulatory arrangements are introduced. Such solutions must be tailored to each situation but there are a number of cases that might provide models that are adaptable to other environments. In a few places, formal utilities have hired vendors who lost their markets when piped services were extended and improved.

In Paraguay, local private firms that won contracts to build and operate new water supply systems in previously unserved neighborhoods were encouraged to hire small-scale service providers (known as *aguateros*) to handle day-to-day operations.[15] The case of water kiosk operators who entered into formal service arrangements with the Nairobi Water Company in a slum in Nairobi, Kenya (Box 5), provides another potentially promising example.

[15] Triche, Thelma, Sixto Requeno, and Mukami Kariuki. December 2006. *Engaging Local Private Operators in Water Supply and Sanitation Services, Initial Lessons from Emerging Experience in Cambodia, Colombia, Paraguay, the Philippines, and Uganda.* Water Supply and Sanitation Working Note 12, World Bank, p. 16.



Create Political Support for Change

Public awareness campaigns and consultation may help to change attitudes or create new political constituencies for change. Targeting the poor, especially those who have settled illegally, can be an expensive and controversial undertaking that may undermine the governing party's political support from key conservative political constituencies and campaign financiers. Campaigns to change the attitudes of politically powerful groups, or ensure that their interests are taken into account, may help to neutralize opposition.

Getting Started: Actions and Resources

This section suggests the following actions for sector actors:

Policymakers and Project Planners

- Take the role of informal service providers and other vested interests, and the contributions they can make, into account while formulating policies and regulations and planning projects.
- Assess the business dynamics of existing informal operators to determine why their activities are so lucrative.
- Determine whether owners of rental dwellings have a vested interest in the status quo and determine what is necessary to gain their support.
- Incorporate existing vested interests into solutions, where feasible, as a means of increasing transparency, neutralizing opposition, and reducing costs.
- Use neutral intermediaries who are trusted by both parties (such as respected local or international NGOs, WSP, or professional mediators) to promote dialog between formal and informal service providers.
- Implement public awareness and education programs that demonstrate the benefits of improving services for the poor to build political support among the middle class and the wealthy.

Governance Bodies and Service Providers

- Hire disenfranchised vendors to work in the utility when expansion eliminates their markets.
- Team up with informal service providers to improve services and cost recovery in marginal areas.

Spokespersons for the Poor, and Civil Society Organizations

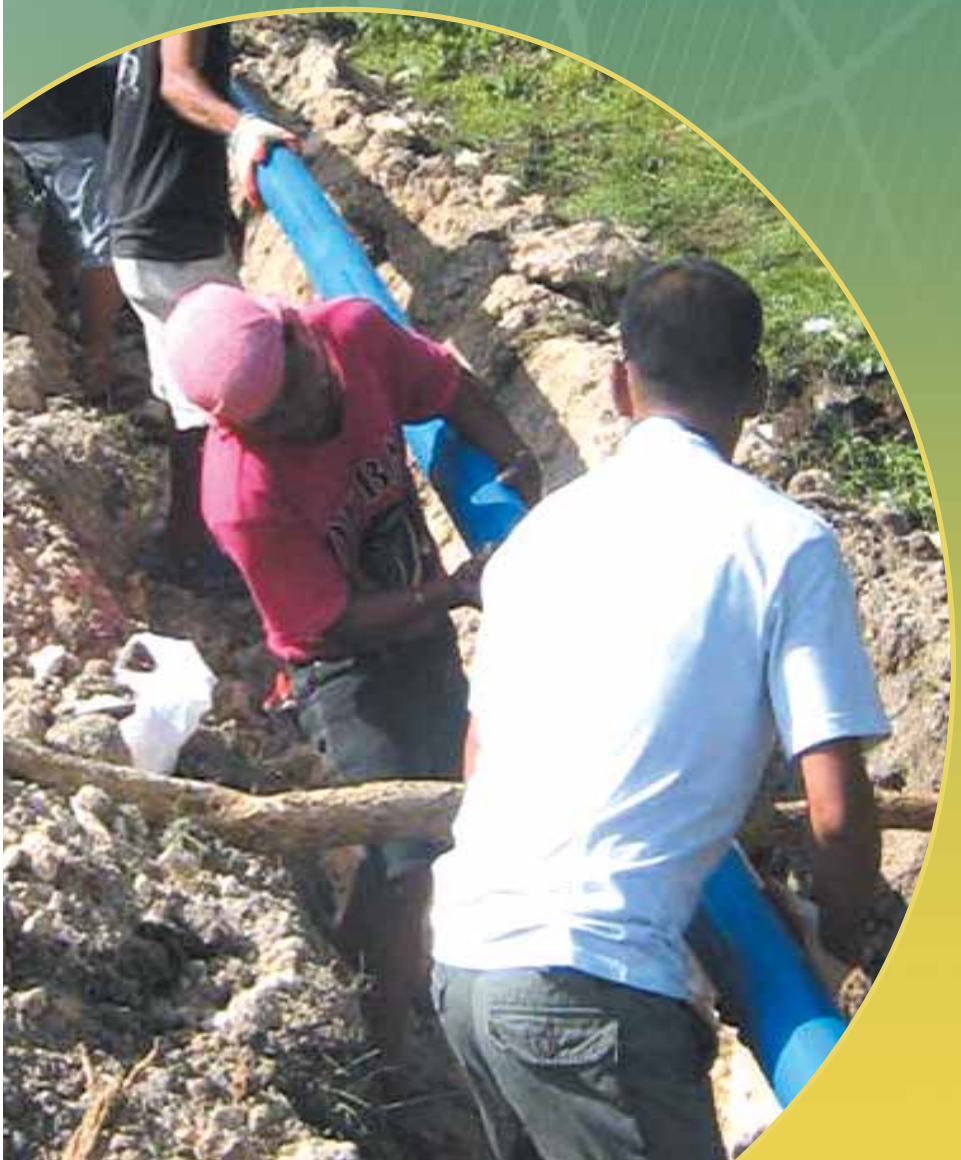
- Act as intermediaries between informal service providers and the formal sector.
- Help informal service providers to create institutional structures that will promote cooperation among them, and enable them to negotiate with formal structures.

Table 2: Relevant Case Studies in Accompanying Volume

Case Study	Topic
Ahmedabad, India (Case Study 1)	Politicians who undermine the scaling up of the program by providing funds outside the program
Dhaka, Bangladesh (Case Study 11)	Difficulty with *mastaans*, musclemen or influential persons who control slum areas
Temeke District, Dar es Salaam, Tanzania (Case Study 14)	Resistance of water vendors to water services improvement program

Section 4

Eliminate Administrative and Legal Barriers



Most legislation on land tenure is outdated, irrelevant to current realities, and cannot be enforced. Complex procedures also constitute a barrier for the poor.

Obstacles

- *Land ownership and tenure issues often create barriers to the provision of services to the poor.*
- *The poor may be unaware of administrative and legal requirements, or find it difficult to understand and comply with them.*

Municipal policies often prevent utilities from providing connections to residents who do not have legal tenure. Most legislation on land tenure is outdated, irrelevant to current realities, and cannot be enforced. Complex procedures not only constitute a barrier for the poor, they create opportunities for bribes to be extracted from existing or prospective users, and such bribes represent a heavier burden for the poor than for the nonpoor.

Delink Service Provision from Land Tenure

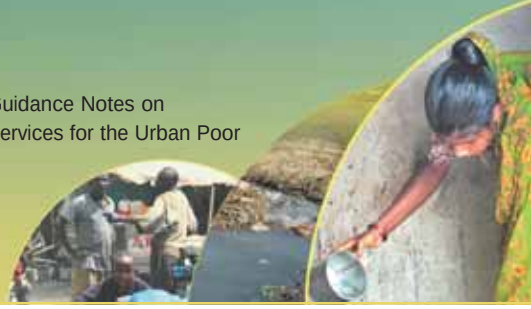
Legal reform is needed to enable the poor to gain secure land tenure, adequate housing and services but, in the meantime, innovative strategies to get around land tenure requirements can sometimes be found at the local level. One such approach is to allow alternative documentation. The Bangalore Water Supply and Sewerage Board (BWSSB), India, had a long standing requirement that only slum residents presenting both land title documents and recent property tax receipts could qualify for individual water and sanitation connections. But, as part of its program to promote connections in slums, it agreed to permit residents to present lease documents and other 'proof of occupancy' documents such as ration cards, identity cards, election cards or electricity bills instead. (See Case Study 10, accompanying volume.) Ahmedabad Municipal Corporation allows connections and other improvements to proceed once residents obtain a 'no objection certificate' from the owner of the land. NGOs working with the municipal corporation have helped the communities to obtain certificates. (See Case Study 1, accompanying volume.)

In African countries (for example, Tanzania, Ethiopia, and Ghana) where tenure is traditional and security of tenure is not equated with a title deed, utilities have installed connections in unplanned settlements without documentation and no legal problems have developed.[16] When lack of legal documentation is an obstacle, another approach to get around it is to make a single bulk water or sewerage connection at the border of the community and allow communities or small-scale service providers to operate services. Several of the previously cited cases (the Orangi Pilot Project in Pakistan, Tiruchirapalli in India, and Kibera in Nairobi, Kenya) used this model. Box 6 describes an interesting example in Tegucigalpa, Honduras.

Institutionalize Simplified Procedures and Provide Assistance

Formal institutions can be very intimidating for the poor unless special arrangements are made to promote and facilitate access. Connecting a large unserved population is a major long-term undertaking that will require ongoing support and assistance even after poor residents are connected. As part of this long-term effort, utilities and municipal service providers need to adjust their systems to attend to this

[16] *Better Water and Sanitation for the Urban Poor, Good Practice from Sub-Saharan Africa.* Water Utility Partnership for Capacity Building (WUP) Africa, July 2003, p. 33.



Box 6: Community Managed Services in Tegucigalpa, Honduras

About 380,000 people live in poor peri-urban areas of Tegucigalpa. One-third of these peri-urban residents do not have direct access to the water supply network and most do not have access to sewerage. Many of the peri-urban settlements cannot be connected because of the topography (hillsides with steep slopes and unstable terrain), others because of their illegal status, and some because of the lack of adequate resources to extend the network. The population of these areas obtains water from a number of sources, including tankers, rainwater catchments, and community wells.

With the assistance of several international development agencies and NGOs, the National Autonomous Water and Sewerage Service (SANAA) is introducing alternative water and sanitation systems in these areas. These systems receive bulk water from SANAA or its tankers but are managed internally by the community. Three water supply models are used. The preferred model involves a metered connection to SANAA's network that feeds a community storage tank, to which the secondary network within the community is connected. Where connection to the network is not feasible, the community storage tank is supplied by tankers. The third option is a rainwater catchment and filtering system.

A revolving fund is used to finance construction and the beneficiary community repays the fund at zero interest over 5 to 10 years. Communities that wish to benefit from this program must establish a water administration board with four officers selected by the community. The water boards operate and maintain the systems, collect fees from the users to cover their own costs as well as the bulk water charges and the capital cost. They organize committees and/or engage staff to maintain the system, operate community water taps, collect fees, and prevent theft. Committees are also established to educate the community about water use and hygiene.

Source: Rivera, Kenneth. *Field Research in Seven Latin American Cities, Improving Water Supply, Sanitation, and Health Services for Low-Income Urban Communities in Latin America, Tegucigalpa Case.* Building Partnerships for Development, draft of May 2006. (See also Case Study 15, accompanying volume.)

Box 7: The Social Development Unit in Bangalore Water Supply and Sewerage Board, India

The Bangalore Water Supply and Sewerage Board (BWSSB) has a Social Development Unit, which focuses on connecting households in slums to piped water and sewerage. This unit is headed by a proactive senior development specialist who interacts directly and effectively with key community groups, NGOs, and influential individuals to implement connection programs. The unit also uses NGOs as intermediaries between the utility and the community. To promote connections, the unit has introduced a reduced connection fee and simplified connection procedures. It also accepts 'proof of occupancy' in lieu of the requirement for land tenure.

Residents of slums are encouraged to connect to the BWSSB water supply system and are actively discouraged from resorting to illegal means. Connection charges vary on the basis of house size: Rs. 550 (the equivalent of about US$13) for houses of less than 150 square feet, Rs. 800 (about US$19) for houses of 150–600 square feet, and the full rate of Rs. 1,800 (about US$42) for houses over 600 square feet. Slum dwellers are allowed to pay the connection charges in two installments.

Source: Water and Sanitation Program–South Asia. January 2007. *Bangalore Water Service Delivery, Ingenious Model Shows the Way.* Case Study. (See also Case Study 10, accompanying volume.)

new, potentially large, customer base. Simplified procedures for connection, billing, and collection and maintenance services are part of the institutional process of recognizing the differences between customers in planned areas of the city and customers in unplanned areas of the city. A permanent body that can help to institutionalize effective approaches throughout the utility will make it less likely that changes in management or political leadership will undermine or reverse this initiative for expanding services in a sustainable manner.

Hyderabad Metropolitan Water Supply and Sewerage Board, in India, created a Single Window Cell to receive, process, and coordinate water and sewerage connection applications. The Single Window Cell distributes a two-page brochure that clearly explains the application procedures. A dedicated team of staff and contract laborers installs all approved new connections for which payment has been received. These reforms have reduced the time required to process connections from six months to three and have significantly increased the number of applications processed. (See Case Study 8, accompanying volume.)

Another potentially effective model is a dedicated unit within the utility that communicates with poor communities, promotes appropriate services and liaises with other stakeholders. The Social Development Unit in the Bangalore Water Supply and Sewerage Board, India, described in Box 7 is a good example. After an initial pilot phase tested the approach to working with slums to improve services, the Social Development Unit was created and charged with scaling up the program. NGOs were engaged to assist in implementing the program. One component of the NGOs' role was to assist slum residents to complete application forms. (See Case Study 10, accompanying volume.)

Successful programs have involved not only changes in organizational culture and staff attitudes but also the establishment of client-friendly mechanisms that facilitate communications with customers. The Citizen's Report Card, a tool for assessing customer satisfaction that was originally used in Bengaluru, India, has been introduced in several other countries. (See discussion and Box 13 in Section 5.)

Getting Started: Actions and Resources

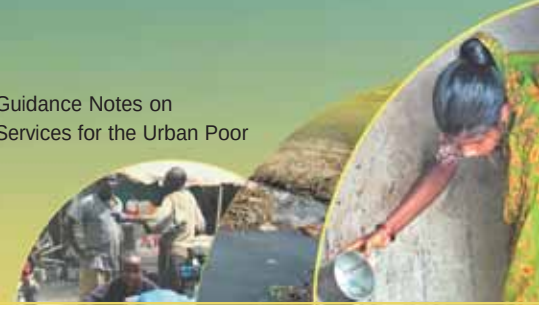
This section suggests the following actions for sector actors:

Policymakers and Project Planners

- Initiate land tenure reforms.
- Amend municipal laws and regulations that make it difficult or impossible for the poor to get services.
- Authorize alternative documentation requirements for connections.

Governance Bodies and Service Providers

- Adopt alternative documentation requirements, such as proof of residence or non-objection of the owner of the land, to allow those who lack land tenure to qualify for service connections.
- Explore alternative service models such as installing bulk water or sewerage connections at the border of poor communities from/to which a CBO or small-scale



private operator can take responsibility for the operation and maintenance of network services within the community.

- Simplify procedures and forms, and translate forms and instructions into local languages.
- Create dedicated user-friendly units to promote services to the poor.
- Design access mechanisms (for connections, complaints, and so on) that are appropriate for the poor, and appoint qualified professionals or engage NGOs to assist the poor with procedures and forms.

Spokespersons for the Poor, and Civil Society Organizations

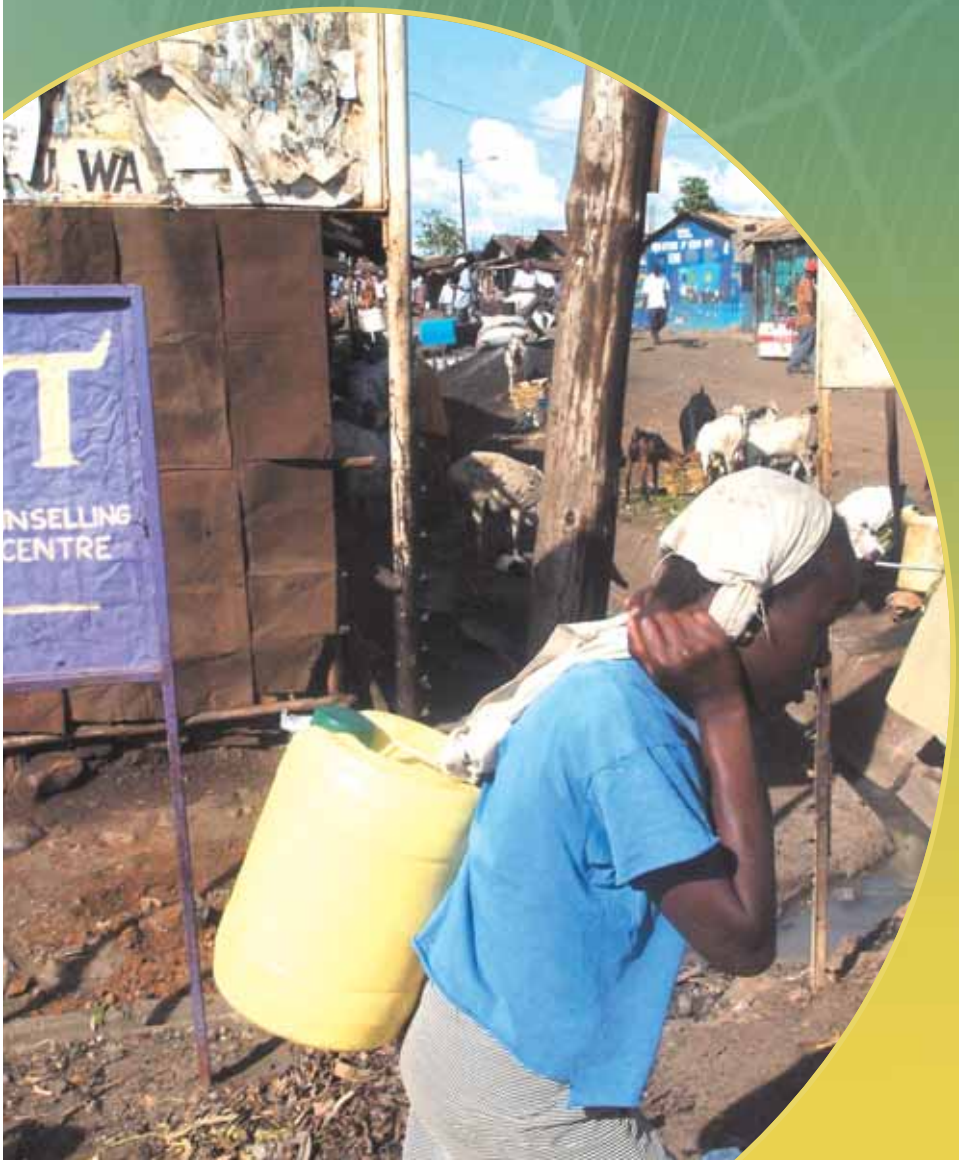
- Assist poor residents to obtain documentation required for connections.
- Support communities to negotiate with the utility for the establishment of a bulk connection and to create CBOs or engage small-scale private operators to operate services.
- Develop programs to assist the poor with procedures and forms.

Table 3: Relevant Case Studies in Accompanying Volume

Case Study	Topic
Ahmedabad, India (Case Study 1)	Alternative documentation
Bengaluru, India (Case Study 10)	Alternative documentation; dedicated unit in utility to promote services to the poor
Hyderabad, India (Case Study 8)	Dedicated unit in utility to promote connections
Karachi, Pakistan (Case Study 5)	Bulk connection at border of community
Tegucigalpa, Honduras (Case Study 15)	Bulk connection at border of community
Tiruchirapalli, India (Case Study 7)	Bulk connection at border of community

Section 5

Strengthen Capacity, Autonomy, and Accountability of Service Providers and Provide Incentives to Serve the Poor



If financial viability and sustainability are undermined, many urban utilities fail to provide satisfactory services to a large part of the population—particularly the poor.

Obstacles

- *Public service providers sometimes lack the autonomy and financial and human resources, and incentives required, to provide services to the urban poor.*
- *Municipalities and utilities are not held accountable for the provision of satisfactory water supply and sanitation services.*
- *The services provided by small private service providers (SPSPs) are not recognized, encouraged, and regulated.*

The poor performance of water supply and sanitation (WSS) services is often due to an inappropriate institutional framework, lack of regulatory mechanisms, inadequate financial resources, an absence of appropriate attitudes and skills, and a lack of explicit directives and incentives to serve the poor. Until recently, the emphasis in the sector was typically on creating infrastructure, rather than promoting strong institutions, financial viability, efficiency, service quality, customer relations and specifically targeting the poor. Reflecting this, and despite recent sector reforms, many training programs still focus primarily on technical and engineering skills; only rarely do they address commercial, managerial, and strategic aspects of WSS services, let alone strategies for serving the poor. In the absence of efficient autonomous service providers, the distinction between the utility and the municipal administration is blurred and managers of the services do not control the resources required to provide the services and cannot be held accountable. In such cases, targets for service quality are not typically established and monitored. Tariffs rarely cover costs and, therefore, financial viability and sustainability are undermined. As a result, many urban utilities fail to provide satisfactory services to a large part of the population—particularly the poor.

Many governments have taken steps to restructure the sector and, in a number of countries, the largest service providers have been converted into autonomous public or private companies, for example, in Brazil, Cambodia, Colombia, Ecuador, Mozambique, Senegal, Uganda, and Yemen—to name only a few. In a few, more attention is being devoted to improving the performance and sustainability of services in the smaller towns. Such restructuring entails far more than a change in legal status—substantial internal restructuring, including management reforms and performance incentives for staff, is required to create a sustainable service provider. In many, effective regulatory systems have likewise been, or are being, put in place and, perhaps more importantly, strategies and targets for serving the poor are being adopted. Propoor regulatory approaches are being adopted to ensure the availability, affordability, and sustainability of services for the poor. SPSPs are active throughout the developing world, filling in part of the large gap between demand and the formal utilities' ability to provide services. Since, in most places, the formal utilities will be unable to satisfy the demand of 100 percent of urban households for the foreseeable future, taking advantage of the services of SPSPs should be an essential component of strategies to expand and improve services to the urban poor.

Working with SPSPs will require innovative ways of linking them with formal utilities, the introduction of appropriate regulatory mechanisms, and strategies for eliminating illegal and abusive activities without driving SPSPs out of business.

This section will focus primarily on institutional, regulatory, and capacity issues. Mechanisms to address cost recovery are discussed in more detail in Section 6 because a strategy to improve cost recovery must also address the financial constraints and affordability issues that are specific to providing services to the poor.

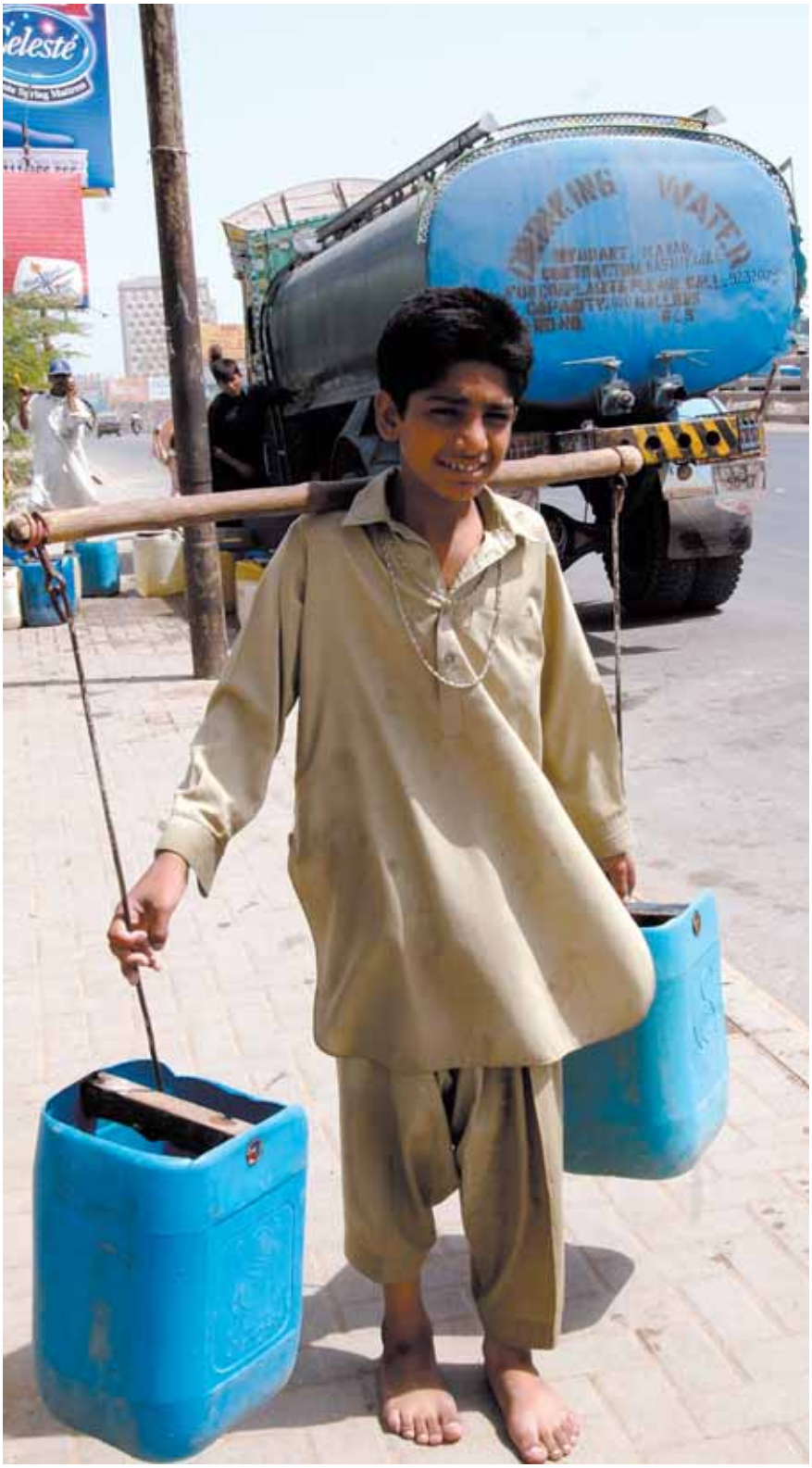
Separate and Clarify the Responsibilities of the Actors

The roles and responsibilities of policymakers, service providers, governance bodies, and regulators need to be clearly defined and separated to ensure the autonomy and accountability of service providers. Whereas in small towns with simple systems and limited human resources, it is not always realistic or meaningful to completely separate these roles, it is more important in large urban areas, and particularly in large countries with many large urban centers. In the latter context, clearly distinguishing among the following actors and their roles is recommended:

- Policymakers set overall service coverage and quality objectives, social policies, and cost-recovery policies. They should set guidelines, establish programs, and create institutions to promote and regulate

the achievement of service objectives, financial viability, and efficiency. The respective roles and responsibilities of policymakers at the state and municipal levels need to be clear and complementary.

- Governance bodies (for example, boards of directors) represent asset owners. They provide strategic direction, mobilize investment finance, approve annual budgets, and appoint the management team in a manner that is consistent with established policies. Governance decisions should be based on long-term strategic and financial criteria rather than short-term political interests.
- Service providers plan and supervise the development of infrastructure, and manage and operate services on the basis of technical and financial criteria to achieve the objectives set by policymakers and their governance bodies. To do this, they need adequate autonomy (for example, control overstaffing, financial resources, procurement) and protection from political interference. Their financial accounts should be ring-fenced to promote financial viability and accountability.
- Utility regulators (or economic regulators) compensate for the lack of competition in monopoly services by ensuring that tariffs are reasonable, that is, commensurate with the cost and quality of services, and enforcing service standards. A good regulatory system is predictable, credible, and transparent. The roles of state and municipal governments regarding regulation should be clear and



any conflicts or overlapping responsibilities should be eliminated.

- Other specialized regulators usually enforce technical, labor, health, and environmental standards. Here, too, the respective roles of state and municipal governments should be clear.
- When two or more service providers carry out complementary functions—for example, when one entity is responsible for asset management and another for operations, or when a large utility provides bulk treated water and SPSPs manage distribution and commercial activities—their respective responsibilities need to be clearly delineated.

Institutional reforms should be tailored to fit the country and local context. There is a great deal of literature and an accumulated body of experience on institutional reform of water supply and sanitation services, covering topics such as the creation of autonomous public companies, governance, contracting private operators, and creating regulatory frameworks. However, while the basic principles—separation of roles, managerial autonomy and accountability, and financial viability—are universally

Box 8: Engaging Local Private Operators for Water Supply and Sanitation Services

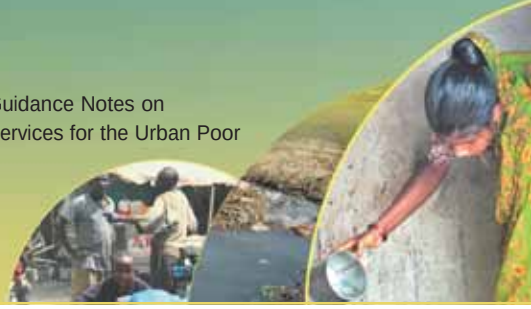
Contracts with private operators, if well-designed and appropriately monitored, can be an effective way to introduce autonomy and accountability. Until recently, tenders for private operators of water supply and sewerage services were aimed at large international firms, but in a number of countries tenders are increasingly aimed at local private operators, particularly in small towns with 10,000 to 50,000 residents. A recent study examined the experiences of Colombia, Paraguay, and Uganda where local firms have been engaged to operate water supply services in large urban or peri-urban areas with poor populations.

In Colombia and Paraguay, local private operators have been engaged to construct or rehabilitate the infrastructure and operate the services for 15 to 20 years. In Uganda, local private operators were contracted to operate and manage, under low-risk, three- to five-year contracts. In Colombia, most of the operators are companies with experience in providing other urban services, such as solid waste management. In Paraguay, large construction companies have sought the contracts but they usually engage an experienced small local private operator (*aguatero*) to manage operations once construction is complete. In both countries, it is estimated that private operators contribute about 20 percent of capital costs. The remainder is financed by grants from the national or local governments, using their own funds or the proceeds of World Bank loans. In Uganda, the infrastructure was built under separate contracts with funding from donors, and the operators can take advantage of output-based aid grants to expand connections.

In Colombia, the municipal government contracts the private operator. In Paraguay and Uganda, they are contracted by community-based user associations. In all three countries, the national governments provide support to the local entities during the preparation and procurement process, but the local entities assume full responsibility for day-to-day supervision of the operators. The contracts include very specific service targets that the operators are required to achieve.

The contracts were in their early stages at the time they were reviewed in 2005, but initial results were mostly positive. Previously unserved neighborhoods and small towns were getting connections. In Paraguay, the cost of government investment subsidies had been cut in half. One of the lessons learned in Paraguay and Uganda was that, initially, user associations need intensive training and support to ensure proper monitoring and a healthy relationship with the operator. In addition, user associations that receive a small percentage of the tariff revenues are most likely to be proactive and provide effective oversight.

Source: Triche, Thelma, Sixto Requena, and Mukami Kariuki. December 2006. *Engaging Local Private Operators in Water Supply and Sanitation Services, Initial Lessons from Experience in Cambodia, Colombia, Paraguay, the Philippines, and Uganda.* World Bank, Water Supply and Sanitation Working Notes, No. 12.



Box 9: Successful Performance and Incentive Contracts in a Public Company: Uganda's National Water and Sewerage Corporation

The National Water and Sewerage Corporation (NWSC) is an autonomous state company that provides water and sewerage services in the larger towns and cities of Uganda. Until 1998, in the absence of an effective accountability framework, the NWSC had made a number of poorly conceived investments. The company was very inefficient and financially unsustainable: its fixed assets were underutilized; unaccounted-for water was at 51 percent; it was grossly overstaffed; and it was unable to service its debt. In 1998, a new general manager began to introduce performance incentive programs and a client-oriented culture with a strong emphasis on service quality. Substantial improvements resulted, but by 2000 it was clear that achieving financial sustainability would take several more years of effort. In 2000, the Government of Uganda and the NWSC agreed to a three-year performance contract under which the latter's debt service obligations were suspended in return for continued performance improvements.

The performance contract specified the actions that the NWSC must take and the targets it was expected to meet with regard to a number of key operational and financial indicators. A Performance Contract Review Committee was established to monitor and report on the NWSC's performance. In 2003, the Review Committee found that the NWSC had performed very well with regard to qualitative targets such as updating the asset registers, introducing incentive contracts with its area managers, and outsourcing noncore activities. It had met or come close to meeting quantitative targets for collection efficiency, connections, metering, and staff per 1,000 connections, but had fallen short with regard to financial performance, and remained unable to service debt. Nevertheless, the performance contract and the internal management initiatives that had been introduced had established a solid foundation for further improvements.

The government and the NWSC entered into a second performance contract for 2003–06, which introduced more meaningful financial indicators based on ratios rather than absolute results. In 2003, the NWSC also began to introduce an innovative strategy for improving its area managers' accountability and autonomy. In January 2004, following an internal competitive bidding process in which all area managers were allowed to participate, two-year Internally Delegated Management Contracts were awarded for all NWSC service areas.

By 2004, as a result of consistent improvements in operations and cash management, the NWSC's revenues exceeded operating costs (including depreciation) for the first time and the company was on the road to financial sustainability. Compared with performance in 1998, by 2006, coverage in the NWSC's service areas increased from 48 percent to 68 percent. Total connections increased from 50,826 to 125,000. Unaccounted-for water was 31 percent (35 percent in Kampala and 16 percent in other service areas). Annual turnover increased from about US$11 million to US$30 million, and operating profit after depreciation improved from a loss of US$0.4 million to a surplus of US$2.2 million.

The government and the NWSC agreed to a third performance contract for 2006–09. This contract emphasizes the extension of services to the urban poor with the goal of achieving full coverage by 2015.

Sources: Mugisha, Silva. April 2006. *Performance Assessment and Monitoring of Water Infrastructure: An Empirical Case Study of Benchmarking in Uganda*; Triche, Thelma, and Steve Ostrover. March 2005. *Assessment of the Long-Term Financial Sustainability of the NWSC*. Report 1 of the Review and Update of the Implementation Strategy for Reform and Divestiture of the NWSC, submitted to the Ministry of Finance, Planning and Economic Development. See also Case Study 9, accompanying volume, and the NWSC's website: www.nwsc.co.ug

Box 10: Regulation by Contract: The Senegal Lease Contract

In 1995, the Government of Senegal launched wide-reaching reforms in the urban water sector. The state-run water company was dissolved; a new asset-holding company, SONES (Société Nationale des Eaux du Sénégal), was created, and a private operator was engaged to run the systems. These reforms resulted in significantly better services and financial health for the sector. The contractual framework included a concession contract and a sector development contract between the government and SONES, and a contract with the private operator. This last, a 10-year *affermage* (usually referred to as a 'lease contract' in English—though this is not really an accurate translation), was innovative in that it provided financial incentives for the private operator to achieve ambitious performance targets for leakage reductions and improvements in billing and collection efficiency.

The regulatory framework was built into the contract and was coherent (that is, it linked service levels to tariffs), credible, and transparent. SONES's monitoring capacity was strengthened through a practical training workshop early in the contract period, and an objective outside *conciliateur* was engaged when needed to verify performance and resolve conflicts. (Figure 1, on Page 44, illustrates these arrangements.) The operator's remuneration was based on its performance and, although it was independent of the tariff, the government committed to gradually increasing tariffs to the full cost recovery level (including debt service) and had a strong incentive to respect this commitment because it was essential to ensure the financial health of the sector and expand services. Tariffs for water supply were increased about 3 percent (in real terms) per year over the period 1996–2002.

Several factors contributed to the success of the reform: the use of an appropriate form of contract that was tailored to local conditions; strong political will and good leadership within the government; a well-designed process; and flexibility and innovation when it was needed. Design and preparation included the development of a financial model that could be used to set and revise performance targets, project revenue requirements, and calculate the associated tariff increases. Good relationships among the parties and an effective dispute resolution process meant that the private operator and the state asset-holding company were able to reach an agreement on how the former was reimbursed for lost earnings when the latter experienced a delay in the completion of investments. The reform has had positive outcomes for the poor, in part due to the nature of the operator's incentives, and in part due to the government's policy of subsidizing connections in low-income neighborhoods. However, in 2004, some issues still remained due to the tariff inequities that result when multiple households use a single connection, and the fact that nonpoor households were benefiting from the subsidized block of the tariff, especially if they consumed no more than 10 cubic meters of water per month.

Source: Brocklehurst, Clarissa, and Jan G. Janssens. January 2004. *Innovative Contracts, Sound Relationships: Urban Water Sector Reform in Senegal.* World Bank. Water Supply and Sanitation Sector Board, Discussion Paper No. 1.

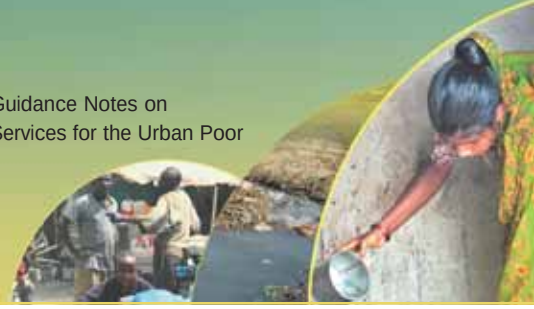
desirable and applicable, there are no universal blueprints or ideal institutional models to achieve them. Care should be taken to tailor institutional reforms to each country and urban context.

The existence and potential role of SPSPs should be recognized and taken into account. Outsourcing the management of services to private operators or putting public operators under performance contracts have been shown to be effective ways of separating operations from policymaking and regulation, as well as promoting financial and managerial autonomy.

The examples presented here (Boxes 8, 9, and 10) and in the case studies and other listed resources, are intended to promote an understanding of some of the conditions that promote success and to stimulate the exploration of these and other models.

Strengthen Capacity

The content of training programs must be broadened to target a wider range of actors and, in contrast to the historical emphasis on engineering and technical skills, focus attention on improvements in service quality, access, and sustainability. Programs to strengthen the capacity and professional development of sector



professionals and service providers should include a variety of complementary components and approaches.

- **Broaden to focus on service quality, efficiency, and serving the poor:** The content of training programs for WSS staff and managers needs to be broadened to include training in corporatization, private sector participation, tariff setting, financial and commercial management, benchmarking, customer and community relations, communications, and outreach to the poor.
- **Move beyond conventional forms of training:** Training programs need to be scaled up and new types of training mechanisms need to be introduced to meet the growing needs of the sector and to motivate and enable staff to serve the poor effectively. Intensive training programs, mentoring, on-the-job training, continuing education courses in formal institutions, short seminars, online courses, and study tours to locations where the poor are getting adequate services are among the many innovative approaches that can be used to meet these needs.
- **Create incentives and buy-in:** Without incentives and prospects for promotion, training is not likely to bring about any changes in services for the poor. Internal communications and awareness programs and incentives for staff to support reforms and improve services for the poor are essential. The creation of career paths that include specialization in services for the poor is also important to create professional pride and commitment.

Box 11: Professional Association of Indonesian WSS Service Providers

Municipal WSS services in Indonesia are provided by some 300 semi-autonomous municipal water utilities. After the financial crisis that hit the country in 1998, most water utilities struggled financially; the quality of the services provided deteriorated under the combined pressure of population growth, aging infrastructure, inefficiencies, and low revenue. Corporatization of the water utilities, improved performance and increased accountability, and provision of timely and accurate information to decisionmakers are part of the challenges to be met. Water utilities are members of a Professional Organization of Water Enterprises (PERPAMSI), headquartered in Jakarta with 28 provincial centers. The mission of PERPAMSI is to assist its members improve the management of their water supplies, assets and finances, to provide training and to certify professional staff. In addition, PERPAMSI provides training in public awareness, negotiations with local governments, and customer outreach. A strong PERPAMSI is considered a strategic element for improving WSS services throughout the country. Through a training arrangement, the World Bank Institute (WBI) assists PERPAMSI in the three areas of (a) public communications and information services; (b) performance benchmarking; and (c) utility staff training programs. The program includes training of PERPAMSI's trainers in its 28 provincial centers; trainers will in turn train staff in the member utilities. WBI also supports PERPAMSI in building stronger ties with universities and training institutions to strengthen their own capacity and engage them in the delivery of appropriate training services.

Source: World Bank. January 2006. *India Water Supply and Sanitation: Bridging the Gap between Infrastructure and Service.* Background Paper, Urban Water Supply and Sanitation, p. 41.

- **Target nontechnical audiences:** In addition, training and awareness programs need to be aimed at policymakers, regulators, consumers and consumer associations, consultants, NGOs, and private sector firms that support the WSS sector.
- **Take advantage of existing materials:** A large body of training materials has been created by the World Bank Institute and by WSS training institutes in other countries. The potentially relevant materials need to be identified and adapted to the local context.
- **Professionalize:** A professional association of WSS service providers similar to that created in Indonesia (Box 11) would help create a professional identity and a sector-specific constituency, provide training and certification programs, and offer valuable opportunities for networking. Promoting the development of local private service providers should be an essential component of the strategy.

- **Outsource:** It is often practical and cost-effective to increase capacity by contracting outside entities to provide specialized services. The contracting of NGOs to liaise with slum communities by the Social Development Unit in Bengaluru, India, is an example of effective outsourcing (see Box 7).

Recognize and Work with Alternative Providers

Alternative service providers, such as small private service providers (SPSPs) and community groups, can complement the capacity of the conventional utility by providing services in areas where large utilities are unable to operate. A number of recent publications have examined the characteristics of SPSPs and innovative ways of engaging them to better serve the poor.[17] Several innovative projects have incorporated SPSPs into service delivery models for serving the poor. The Nyalenda Water Supply Project in Kisumu, Kenya (see Box 12), provides some useful lessons in this regard.

Introduce Accountability and Performance Monitoring Systems

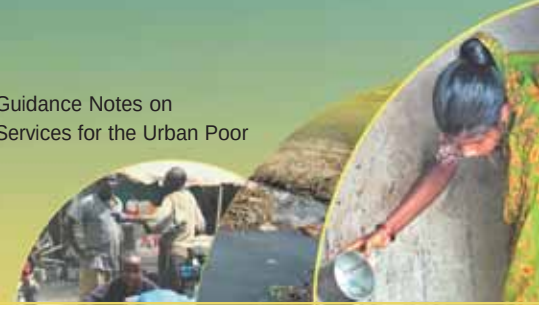
There are a number of regulatory instruments and institutional models that can be used to promote accountability. Experience shows that the choice of a regulatory model should be appropriate for the local context and the size of the market, and it should be consistent with the legal framework and institutional arrangements for the provision of WSS services. Independent regulators (with a high level of discretion) are often presented as the 'best practice' but they are not suitable to all environments. They require broad-based confidence (of the policymakers, the public, and the utilities) in their objectivity and fairness, and are best suited for regulating fully autonomous utilities with very large markets. In other contexts, alternatives such as a performance contract monitored by an oversight agency, or a community-based monitoring system, may work better.

Regardless of the regulatory model, it should incorporate propoor regulatory principles and mechanisms. Propoor regulation:

- Provides a framework for competition so that a wide range of services are available.
- Creates incentives (or obligations) for the dominant operators to extend services to poor neighborhoods.
- Allows a flexible approach to service quality so that service providers can experiment with alternative technologies and delivery models while respecting basic service quality requirements.
- Establishes tariffs that encourage higher access to services without jeopardizing financial viability.
- Establishes a framework to deal with the different circumstances and needs of all customers.

In some countries, the larger cities may have the potential capacity to create or

[17] See, for example: McGranahan, Gordon, Cyrus Njiru, Mike Albu, Mike Smith, and Dana Mitlin. 2006. *How Small Water Enterprises can Contribute to the Millennium Development Goals, Evidence from Dar es Salaam, Nairobi, Khartoum, and Accra.* Water, Engineering and Development Center, Loughborough University. See also the list of resources at the end of this report.



engage service providers and monitor them effectively. In others, particularly in the poorer countries, municipalities still require support from central governments for creating effective operating and oversight arrangements. In all cases, both politicians and municipal staff typically need training in concepts and skills, particularly in regard to distinguishing the *governance* of a public service provider by the public owners, on one hand, and *economic regulation* of either a public or a private operator on the other. If the economic regulation of services is a function of central, regional or state governments, it is easier to distinguish it from ownership governance by municipal or other local authorities. If local authorities share regulatory responsibility with central, regional or state governments, their respective roles need to be clearly distinguished and complementary.

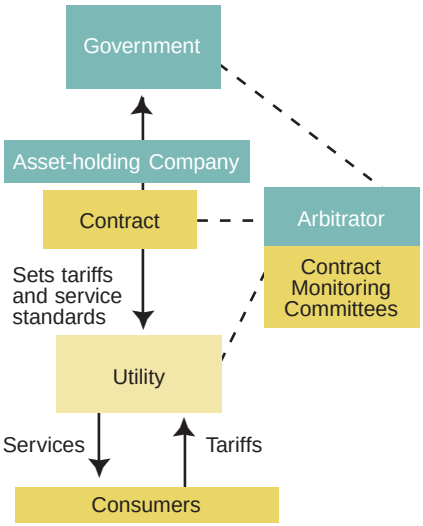
Regulation by Contract

A well-designed and credibly enforced contract, whether a performance contract with a public operator or a contract with a private operator, can provide an excellent regulatory framework without an independent regulator. The specificity of their provisions provides security and predictability for all actors in places that lack a regulatory track record or broad public support for independent regulation. Such contracts should specify the responsibilities and obligations of the operator, the contracting party and consumers; general service conditions; fees and tariffs to be charged by the operator; payments, if any, to be made to the contracting party and/or to the operator; and standards (or targets) for improving service quality, coverage

(including specific targets for poor communities), technical efficiency, timeframes for outputs and, especially in the case of a public service provider, commercial and financial performance. The operator should also be required to establish a system for responding to customer complaints and mechanisms for facilitating access for the poor. Incentives for meeting targets, such as linking payment to performance, should be incorporated. The operator should report its performance in formats that are understandable to local governments and consumers. A good performance contract (combined with a dynamic utility manager) made a big difference in turning around the performance of Uganda's National Water and Sewerage Corporation (see Box 9).

Regulation by contract requires a competent oversight entity that can monitor performance, enforce the contract and follow up on unresolved complaints. However, an independent regulator (with a high level of discretion) is not desirable when regulation by contract is used. The experience with the concession contracts in Manila demonstrates why: the discretion of the regulator

Figure 1: Regulatory Organizations Supporting the Contract in Senegal



Source: Ehrhardt, David, Eric Groom, Jonathan Halpern, and Seini O'Connor. 2007. *Economic Regulation of Urban Water and Sanitation Services: Some Practical Lessons.* World Bank.

contradicted the specificity of the contractual provisions, creating uncertainty and confusion.[18] A good example of regulation by contract with a private operator is the lease contract in Senegal, which is described in Box 10 and illustrated in Figure 1.

It is not normally appropriate for a contracting or regulating authority to verify every report or make frequent inspections, but some method of verifying the operator's reports, such as an annual independent performance audit, is desirable. In Thailand, for example, the performance agreement in place between the Ministry of Finance and the Metropolitan Waterworks Authority that provides water supply services to Bangkok is audited annually by a private firm, the Thai Rating and Information Service. Finally, procedures need to be established for dealing with poor performance by the operator and the resolution of disputes.

[18] Ehrhardt, David, Eric Groom, Jonathan Halpern, and Seini O'Connor. 2007. *Economic Regulation of Urban Water and Sanitation Services: Some Practical Lessons.* World Bank, 2007.

Other Regulatory Mechanisms

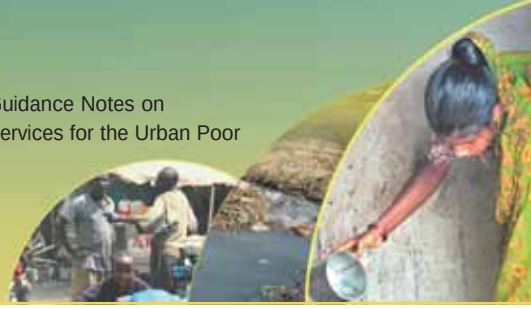
There are several relatively simple and inexpensive regulatory mechanisms, such as regular feedback from users and publication of performance indicators, that are very effective for monitoring performance and stimulating improvements. The Citizen's Report Card (CRC) first used in Bengaluru, India, in 1994 is a good example. CRC surveys systematically gather and disseminate public feedback on public services that are not subject to competition and thus may lack incentives to be responsive to customers' needs. CRCs can be used as a combined advocacy and

Box 12: A Partnership Helps Reach the Poor in Kisumu, Kenya

In Kisumu, Kenya, a pilot project funded by the French Development Agency with the participation of the Water and Sanitation Program (WSP) has pioneered public-private partnerships between small private operators and the local water utility, KIWASCO, to extend and improve services in Nyalenda, a low-income community in Kisumu. WSP helped to prepare the project by assessing local conditions and identifying options for improving services. It then facilitated a dialog between KIWASCO and the participating communities that led to the choice of the partnership model. Under this model, the utility sells bulk water to private agents who are contracted to operate and manage the network in poor communities. Each private operator manages billing, collection, and minor maintenance; it also provides services such as private connections, shared standpipes, and commercial kiosks that are tailored to the needs of the local customers.

Results of phase 1 of the pilot project were encouraging: 2,700 people benefited; old 'spaghetti lines' rampant with leaks and illegal connections were eliminated; the cost of water consumed by the residents decreased and is now regulated; revenue collection increased three-fold; the likelihood of corrupt practices was reduced; the tracking and reduction of unaccounted-for water was improved; and KIWASCO and the private operators are working collaboratively to solve problems such as vandalism and illegal connections. The model has the potential for scaling up. Phase II which began in 2007 targets 50,000 people. In addition, a local NGO has begun to apply the model in another low-income settlement in Kisumu.

Source: Water and Sanitation Program. *A Partnership Helps Reach the Poor in Kisumu*. Case Study 17, accompanying volume.



benchmarking tool. Through this medium, citizens can collectively exert pressure for change. Successful application requires (a) an understanding of the sociopolitical context; (b) technical competence to execute and analyze a survey; (c) a campaign to publicize the results and bring about change; and (d) follow-up steps to institutionalize the mechanism and link it to public decisionmaking. The second Bengaluru CRC in 1999 resulted in several positive responses such as the creation of the Bengaluru Agenda Task Force by the state government to monitor feedback from CRCs, the initiation of training programs on customer responsiveness by the Water Board, and the introduction of regular consumer satisfaction surveys by the Karnataka (India) Electricity Board.[19] CRCs have been introduced in several other countries. Recent experience in Kenya is described in Box 13.

[19] Waglé, Swarnim, Janmejay Singh, and Parmesh Shah. February, 2004. *Citizen Report Card Surveys—A Note on the Concept and Methodology.* Social Development Notes, Participation and Civic Engagement, Note No. 91, World Bank.

Box 13: Kenya's Experience with Citizen's Report Cards

Citizen's Report Cards (CRCs) were used to collect feedback on water, sanitation, and solid waste services from the citizens of Kenya's three largest cities—Nairobi, Mombasa, and Kisumu—in September and October 2006. The Ministry of Water and Irrigation provided the umbrella under which the CRC initiative was developed. In each city, civil society organizations, resident representatives, and service providers formed a consortium that managed the process at the local level. The relevant national entities and donors deliberated the outcomes and policy implications at the national level. The Water and Sanitation Program–Africa brokered the process and provided technical assistance.

The methodology incorporated both qualitative (focus group discussions) and quantitative (survey) tools. An important objective was to investigate differences in the access to, and the satisfaction with, services of poor and nonpoor households. Among other findings, the exercise revealed that poor households were more likely than nonpoor to use kiosks. Less than 50 percent of kiosk users are satisfied with the service; kiosk users shift to more expensive or unsafe sources of water during periods of scarcity; and, for 70 percent of households that rely on sources outside the home, the primary water collector is a woman. The overwhelming majority of consumers treat their water, demonstrating marked uncertainty about the safety of the water from the network. Consumers are considerably less satisfied with sewerage and solid waste services than with water supply service. People are generally confused about where their toilet waste goes, but it is clear that some toilets are being emptied into storm sewers, soak pits, and cesspits. Consumers overwhelmingly prefer face-to-face interaction with water company staff over other channels of communication.

The CRC exercise assisted the government of Kenya to identify urgent priorities for national policy consideration, especially regarding services for the urban poor. The stakeholders plan to issue the second CRC on water and sanitation services in 2008 to measure progress and identify further steps needed to improve services.

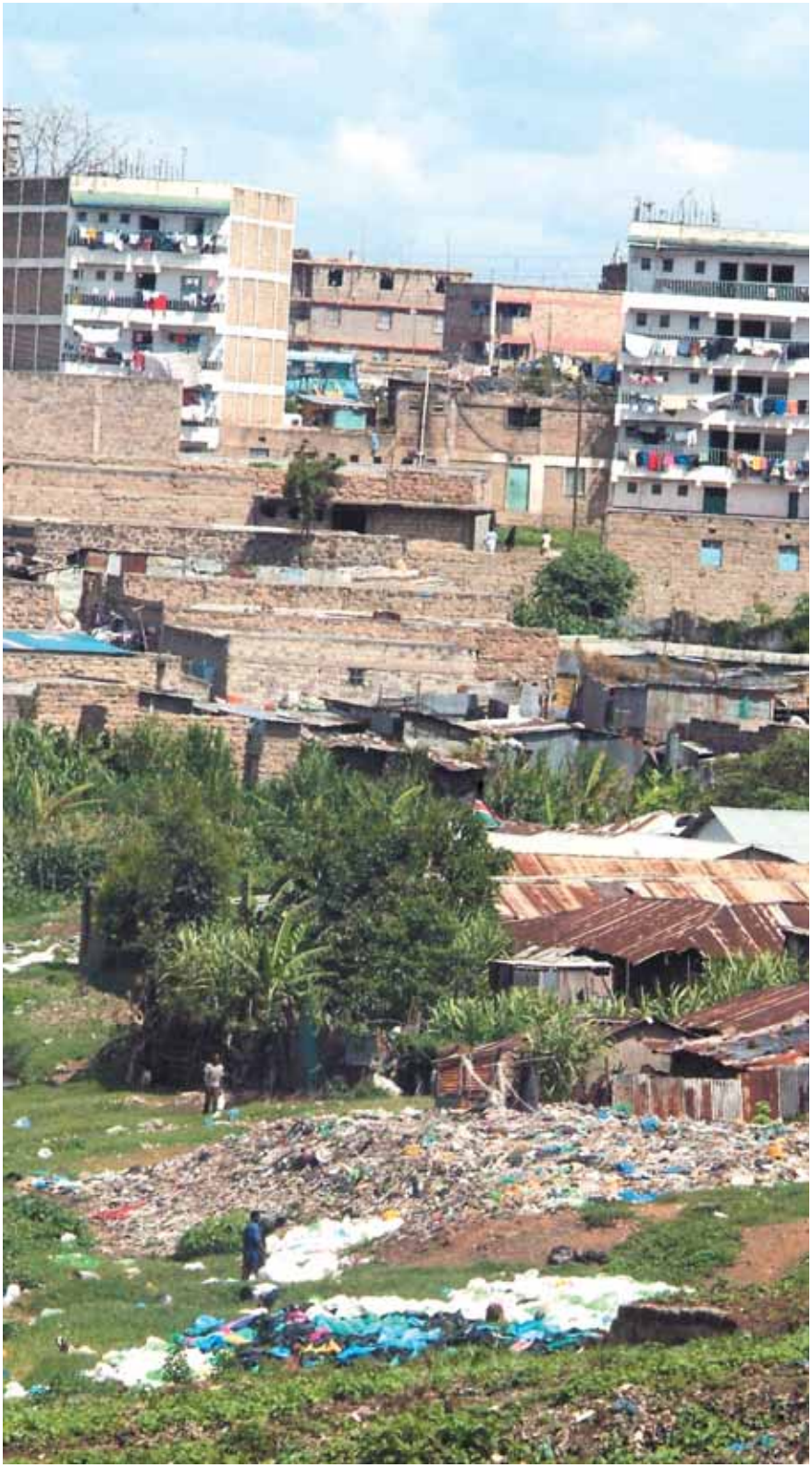
Source: Water and Sanitation Program. May 2007. *Citizen's Report Card on Urban Water, Sanitation and Solid Waste Services in Kenya, Summary of Results from Nairobi, Kisumu, and Mombasa.*

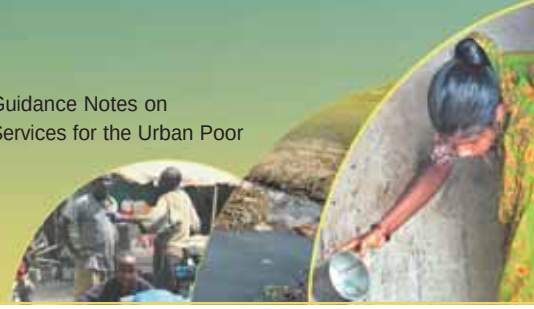
Getting Started: Actions and Resources

This section suggests the following actions for sector actors:

Policymakers and Project Planners

- Clearly distinguish and define the roles of key sector actors (policymakers, governance bodies, service providers, and regulators), separate or combine functions as appropriate to promote transparency and efficiency.
- Give service providers adequate autonomy to make management (input) decisions, combine service development and promotion activities with operations, and hold service providers accountable for results through transparent mechanisms.
- Examine the potential benefits and challenges of private participation including local small private service providers (SPSPs) in urban WSS services, and adapt strategies and contractual forms developed elsewhere to fit the local context.
- Examine the potential benefits and challenges of performance contracting with public operators, and adapt strategies and contracts developed elsewhere to the local context.
- Carry out comprehensive capacity needs assessments for key actors, and develop and implement strategies to broaden and scale up training and capacity-building programs with a new focus on ensuring effective access to service, improving service quality, and promoting financial sustainability.





- Take advantage of training materials developed by WBI and by service providers and institutions in other countries and adapt them to the local context.
- Design regulatory and accountability frameworks that fit into the existing legal framework and have the broad support of policymakers, the public, and the utilities, including SPSPs.
- Promote and support the start-up of a professional association of WSS Services Providers.

Governance Bodies and Service Providers

- Develop effective internal communication, performance monitoring, and improvement systems.
- Evaluate capacity needs and develop human resources, training, and outsourcing strategies to acquire the necessary skills and capacity.
- Create incentives for managers and staff to improve performance and ensure that all staff supports the reforms.
- Change the organizational culture to focus on service quality and customer relations.
- Have performance audited annually and publish audited results.
- Strengthen skills for negotiating with policymakers and oversight bodies.
- Develop models for engaging with SPSPs to provide services in areas where the utility cannot provide services or where SPSPs can do so more effectively.

Spokespersons for the Poor, and Civil Society Organizations

- Monitor and disseminate information on the service providers' performance in poor communities.
- Work with the regulator and/or the service provider to develop licensing and performance monitoring mechanisms that are appropriate for slums and poor communities, and give an accurate picture of the quality of services in those areas.

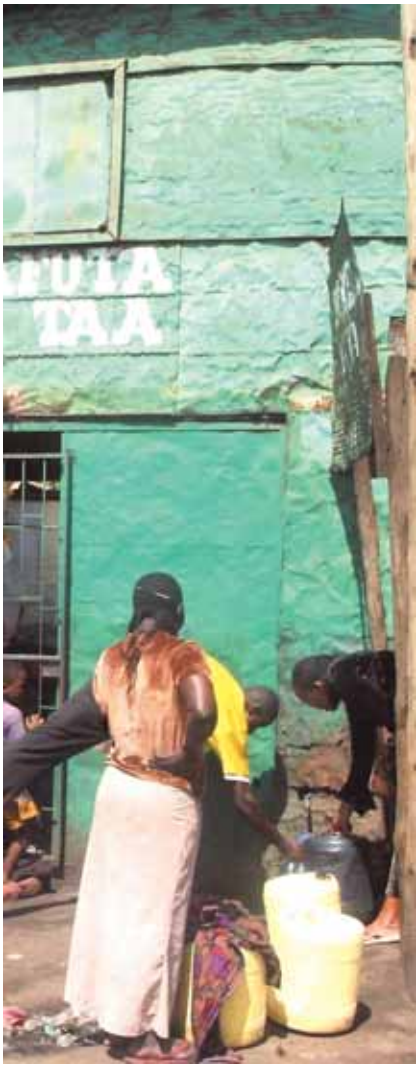
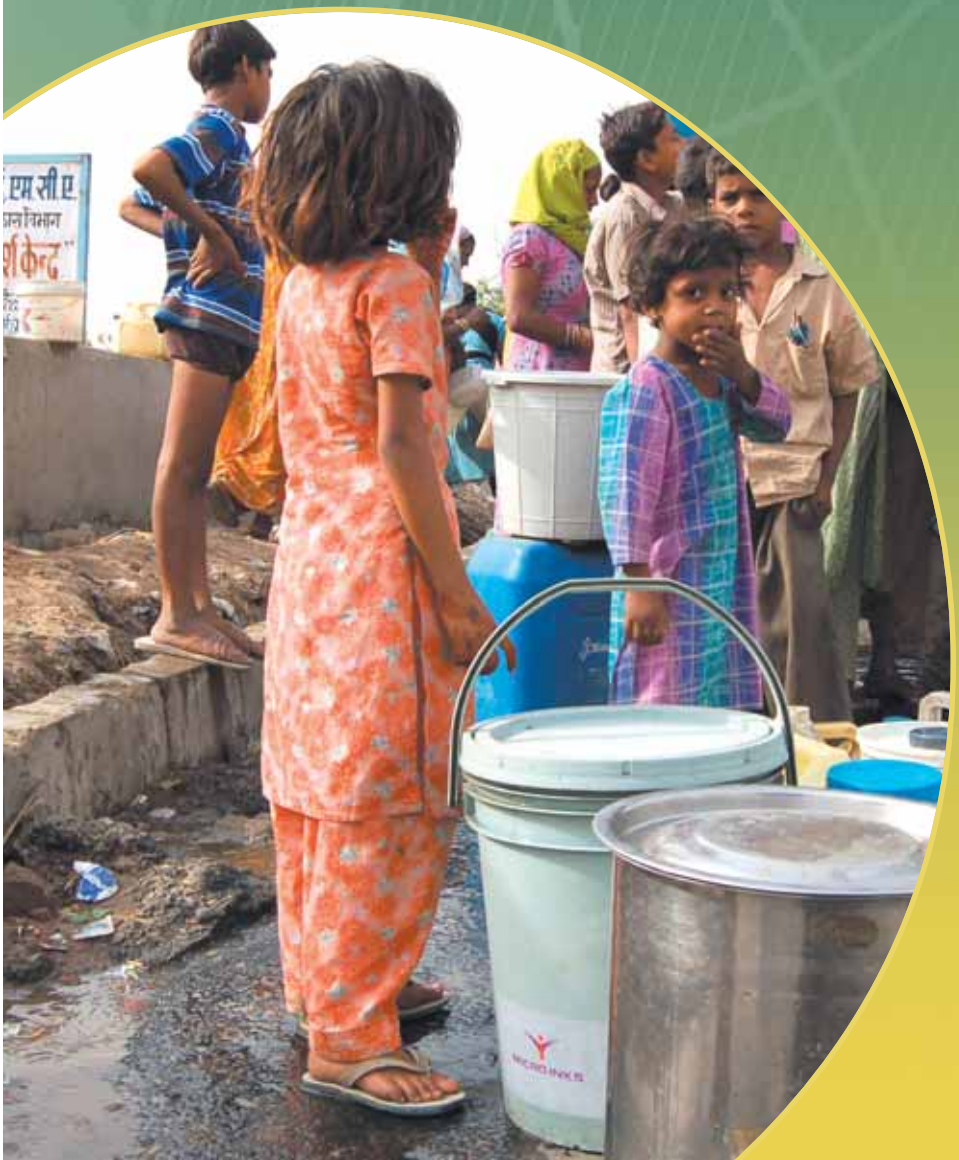


Table 4: Relevant Case Studies in Accompanying Volume

Case Study	Topic
Uganda (Case Study 9)	Performance contract with public operator
Kisumu, Kenya (Case Study 17)	Partnership between small private service providers (SPSPs) and the utility

Section 6

Adopt Appropriate Investment Finance, Cost Recovery, and Subsidy Policies



Regulators are understandably reluctant to raise tariffs and must be convinced that a tariff increase is justified before giving approval.

Obstacles

- *Tariffs do not cover the full cost of efficient services.*
- *Poor households find it difficult to pay upfront connection fees.*
- *Poor households find it difficult to pay monthly bills.*
- *Increasing block tariffs penalizes households that share a single connection.*
- *Small-scale service providers lack adequate finance to extend networks.*

Services that are not financially viable cannot be managed and operated efficiently and will not be sustainable. Financial autonomy is an essential component of managerial autonomy and accountability. Managers who do not have adequate resources and/or have little control over financial resources cannot make optimal decisions. Dependence on public subsidies makes the services vulnerable to political intervention and changes in political priorities.

Achieving financial viability may take several years and requires a multifaceted strategy that might include improvements in financial management; improvements in operational performance; redesign of tariff structures and connection charges; gradual tariff increases; and a campaign to increase connections. Targets for cost recovery that are realistic and charging methods that take the constraints faced by the poor into account can lead to financial viability as well as improved access for the poor. A few relevant strategic approaches are proposed below.

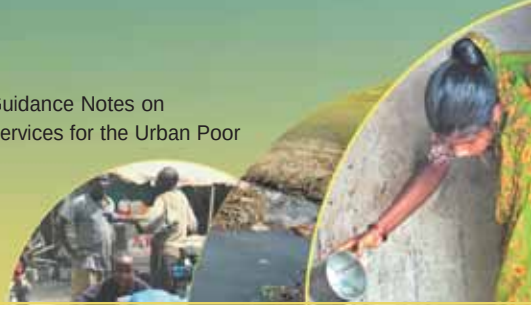
Adopt Realistic Cost Recovery Policies and Targeted Subsidies

Development of a realistic strategy to improve cost recovery and maintain financial viability while expanding services to the poor requires consideration of a number of factors. Cost recovery can be improved by (a) reducing costs by increasing efficiency and adopting modular planning and lower cost technologies; (b) improving commercial performance; (c) charging an average tariff that reflects all costs; (d) structuring tariffs to balance efficiency considerations with targeted subsidies that promote affordability; and (e) introducing strategies to improve the collection of tariffs, including billing and collection strategies that are tailored to conditions in poor neighborhoods.

Regulators are understandably reluctant to increase tariffs and must be convinced that a tariff increase is justified before giving approval. If politicians are playing the role of tariff regulator, the task is even more complex. Utility managers should learn how to prepare tariff proposals that justify proposed increases within the context of a medium-term plan, identify the risks associated with failing to recover costs, and provide evidence that consumers are willing and able to pay the proposed tariffs. They must also demonstrate that they are taking other steps to reduce costs and improve cost recovery. It may be possible to improve financial performance without increasing tariffs in real terms by improving the efficiency of technical and commercial operations and increasing connections. This will put the utility in a better position to attract additional finance for expansion. It will also provide resources to expand and improve services to the poor.

If a large tariff increase (in real terms) is required, even after taking into account the effects of efficiency improvements and increased connections, the increase should be phased in over time and accompanied by perceivable improvements in services. Real increases should be in addition to automatic increases to reflect inflation. Phasing a tariff increase over a few years may require a reliable operating subsidy and/or the temporary suspension of debt service during the interim. If this type of financial assistance is not available, a larger increase may be acceptable if customers support the reasons for the increase. A well-planned public awareness and educational campaign that precedes the increase is essential to build support.

The tariff structure may create economic distortions or undermine financial performance of the utility, particularly if the lowest tariff does not cover the full cost of operations and maintenance and/or if the tariff paid by the largest consumers is so much higher than the full cost of providing the services that large consumers have an incentive to reduce their consumption. Cross subsidies must be designed carefully to minimize these effects. In localities where there are not a sufficient number of higher income residents to subsidize the poorest through a reasonable surcharge, cross subsidies are generally not a viable option. Colombia and Chile have developed



two different but viable approaches to subsidies on the basis of household income. The need for cross subsidies is minimized because the poor are subsidized primarily by transfers from the central governments.[20]

Expanding infrastructure to provide 24-hour water supply service to the poor may result in a higher average cost because of physical conditions, higher collection costs, and lower average consumption from connections in poor households. It should not be assumed that individual household connections will result in higher levels of consumption—such assumptions have proven unfounded, especially when cheap alternative sources are available. This creates a dilemma that needs to be acknowledged and dealt with realistically. Practices that would reduce the cost of serving poor neighborhoods may be needed. Community management of billing and collection, and outsourcing the installation of connections have reduced costs in some locations. (Examples of these are mentioned below.) Service levels also affect financial viability. While individual household connections for water and sewerage are often the preferred options, when many households are served through a single water connection, water consumption per connection may be higher than the utility's average and make up for some of the higher costs. Likewise, block toilets increase economies of scale. Project designers should consider modular planning and lower cost technologies (see Section 7) that reduce investment costs. Project planning, financial projections, and the design of cross subsidies should reflect these factors. Tariff rules should seek to balance the need to ensure financial viability with the broader benefits of delivering services to the poor, and provide for offsetting any negative financial effects on the utility.

General operating subsidies and blanket investment subsidies usually benefit the rich more than the poor unless tariffs are structured to ensure that only the poor benefit from the subsidies. In general, subsidies should be targeted at the poor and should be limited and temporary. Subsidizing investments and/or connections in poor neighborhoods is preferable to subsidizing monthly consumption because the former is both targeted and limited in scope, and is generally sufficient to ensure that the poor will be connected and stay connected. Many studies show that the poor are willing and able to pay tariffs that cover the full cost of operation and maintenance (O&M) of water supply services. Charging such tariffs not only promotes the financial viability of the services; it helps the poor to become legitimate customers and gives them a stronger voice. If subsidies for consumption are to be maintained over an indefinite period of time, the source of funding should be reliable and should not undermine the financial viability of the utility.

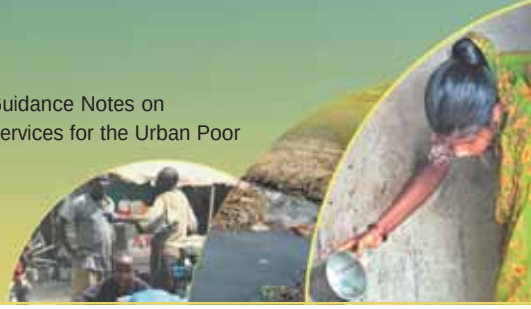
[20] Information on Chile and Colombia's subsidy programs may be obtained from the respective water supply and sanitation regulators, the Comisión de Regulación de Agua Potable y Saneamiento Básico in Colombia, and the Superintendência de Servicios Sanitarios in Chile.

Develop a Cost Recovery Strategy

A cost recovery strategy includes efforts to reduce costs, commercial performance, and the adoption of tariffs that cover the cost of an efficient service. Some of the key steps in developing a cost recovery strategy and a tariff proposal are:

- Evaluate demand of various categories of customers (including poor households) through willingness-to-pay studies, taking into account seasonal variability and the availability of alternative sources of water and sanitation that are free, or lower in cost, than the proposed services.
- Build a financial model that will be used to project costs (including depreciation and/or debt service) and revenues and to calculate the required average tariff to achieve the cost recovery objective for both water supply and sanitation, and appropriate tariffs for each tariff block, if relevant.
- Evaluate operational and commercial performance to determine whether costs can be reduced and/or revenues increased without a tariff increase, or to mitigate the required tariff increase. Propose a realistic program to improve operational and commercial efficiency, and project its impact on financial performance.
- Evaluate tariff structure to determine whether it promotes efficiency, unfairly penalizes any group of consumers, such as poor households who share a single water connection, or suppresses the demand of large customers below levels required to maintain financial viability. If relevant, propose a more efficient and/or fair tariff structure and project its impact on demand and revenues.
- Justify any proposed investments on the basis of expansion and improvement priorities, technical and financial feasibility, including realistic estimates of demand and cost effectiveness, and the availability of investment finance.
- Evaluate the ability of poor households to pay upfront capital contributions or connection charges and to accumulate adequate funds to pay monthly bills, and propose mechanisms to address these constraints.
- Identify and secure sources of subsidies that will be offered to promote expansions and connections in poor neighborhoods.
- Taking into account all of the above, calculate the required average tariffs for both water supply and sanitation and develop a strategy for increasing the average tariffs to achieve the cost recovery objectives, including the identification of sources of any temporary operating or capital subsidies.

This type of model building and analysis requires the services of a team that has expertise in financial analysis, economics, operational efficiency, engineering, investment planning, and sociology. The Government of Senegal used a process similar to that described above to develop its cost recovery strategy. (See Box 10.)



If Necessary, Subsidize Investments, not Consumption

A full or partial subsidy for investments may be justified in poor urban communities as long as the poor customers can pay tariffs that cover the costs of operations and maintenance (O&M). There are a number of cases that demonstrate that the poor are willing and able to pay at least part of the cost of investments in water supply, so investment subsidies need not cover the entire capital cost, nor should it be assumed that they are needed in all cases. There are real benefits associated with requiring users to contribute something, even if nominal, to the cost of investments, because it motivates them to get more actively engaged in the planning process.

Higher levels of subsidies may be required for sanitation but can usually be justified because of the public health and environmental benefits. It cannot be emphasized enough that if investments are subsidized, they should nevertheless be demand-driven, the result of meaningful participation of the community in the planning process. One way to structure investment subsidies is to provide them as 'output-based aid' (OBA). The OBA approach has been tested in a number of countries in Latin America, Africa, and Asia. The operator must prefinance the investment and receive the subsidy after the desired outputs are achieved. It is most often used to promote and reward investments that serve the poor. The subsidy is usually specified as an amount per connection and is paid on the basis of the number of poor households that are actually connected.[21] A number of countries have introduced transparent, targeted subsidies for investments that expand services to the poor. Examples of targeted subsidies are presented in Box 14.

Box 14: Targeting Investment Subsidies for the Poor

The governments of Colombia, Cambodia, Paraguay, the Philippines, and Uganda used the proceeds of World Bank Loans or IDA Credits to expand and improve water services for the poor while promoting the engagement of private operators. In most of the cases in Colombia, Cambodia, the Philippines, and Paraguay, private operators were selected on the basis of a competitive process in which they specified the investment subsidy they required. In some of these, the subsidy was specified as lump sum investment, in others as an output-based aid (OBA) subsidy per connection. In either case, the subsidy is paid after the investments are completed or customers are connected. These operators are required to operate the systems under contracts that resemble concessions or lease contracts for 10 to 25 years and are responsible for all maintenance and replacements during that period. The subsidy is not intended to cover the full cost of construction; the unsubsidized portion is recouped from users through connection fees and tariffs over the life of the contract.

In Colombia, tariff rules require that the average tariff include the full cost of replacement of assets even if the initial investments are subsidized and there is no debt service. However, the tariff structure is such that low-income households do not pay any charges for capital investments. Nonpoor consumers pay tariffs that cover the full replacement cost of infrastructure and those in the two highest income brackets pay, in addition, a surcharge to subsidize consumers in the two lowest income brackets. In this way, the higher income consumers do not benefit from the investment subsidies.

In Uganda, the government planned and bid-out the construction and operation of water supply systems for small towns separately from contracts with private managers. The investments were largely funded by government grants using donor credits or grants and tariffs are expected to cover only operation and maintenance costs. Since almost all residents of small towns are considered poor, all benefited more or less equally from the investment subsidy. However, the towns were required to mobilize a portion of the construction cost and relatively more affluent residents were generally required to contribute more than less affluent residents. Uganda is now planning a pilot project under which the private firms would both construct and operate the systems and would receive an OBA subsidy per connection.

Source: Triche, Thelma, Sixto Requena, and Mukami Kariuki, December 2006. *Engaging Local Private Operators in Water Supply and Sanitation Services, Initial Lessons from Experience in Cambodia, Colombia, Paraguay, the Philippines and Uganda.* World Bank, Water Supply and Sanitation Working Notes, No. 12.

[21] It is worth noting that OBA investment subsidies are sometimes referred to as 'connection subsidies' because they are paid on the basis of the number of connections installed. They are not necessarily used to reduce or eliminate connection charges *per se*. In many OBA projects, users must still pay a connection charge.

Restructure Charges and Payment Practices to Accommodate the Poor

Reduce the Connection Charges for Poor Households

Connection charges that create barriers for poor people may be reduced by improving efficiency (that is, lowering the cost of installing connections), subsidizing connection charges, and eliminating bribes. Upfront connection charges, and the bribes users must pay to middlemen who facilitate applications, can present barriers to access for the poor because accumulating the required sum is difficult for people who live from day-to-day. Plans that allow poor users to pay the connection charge in installments over a year or two are sometimes proposed but these may not be the optimal solution, because they may include high interest charges and can increase monthly bills by as much as 100 percent. High bills increase the risk of disconnection due to delinquency in payments and undermine the objective of keeping the poor connected.

Sometimes, connection charges have nothing to do with the actual cost of installing a connection *per se*. High connection charges may need to be evaluated to determine whether they are justified and to bring them in line with the actual cost of making a connection. Collection charges may be exorbitantly high due to the inefficiency of the utility. In that case, the appropriate strategy is to reduce costs by improving efficiency. In Bengaluru, India, the Social Development Unit was able to reduce its average cost of connections and introduce reduced connection charges for smaller houses by hiring a private plumber to install the connections (see Box 7).

However, when the charges reflect actual costs and efficiency is good, but the charge is still a barrier to connection for poor households, there is a growing recognition that reducing the connection charge by subsidizing connections is a viable and appropriate component of a strategy. A number of ways have been used to structure and fund connection subsidies. Utilities often find that the additional revenues generated by new connections and the reduction of the costs of operating standposts more than compensate for internally subsidizing connection charges. Allowing the charges to be paid in installments that are free of interest is another solution. In Andhra Pradesh, a grant from the state was used to reduce the charge (see Box 15). Faced with the problem of extending services into poorer neighborhoods and towns, the large urban water supply utilities in two African countries, Côte d'Ivoire and Uganda, reduced connection charges by adding a surcharge to the tariffs paid by all users. In some donor-financed projects, part or all of the cost of connections may be financed by the project.[22] In Buenos Aires, Argentina, poor households were charged lower connection fees in return for providing labor during the construction and installation process. Similarly, poor households in the peri-urban areas of Ciudad del Este in Paraguay earned connection vouchers when they worked on the construction of the water supply system.[23]

Removing bureaucratic barriers and improving the efficiency of the

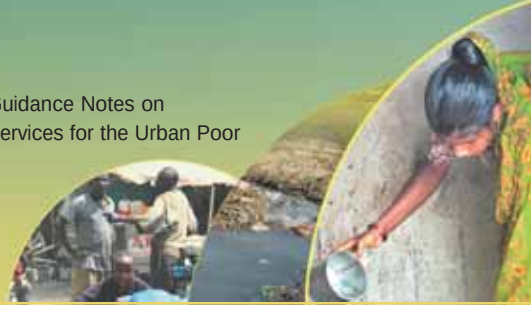
Box 15: Subsidized Connections in Andhra Pradesh, India

In the late 1990s, the residents of Vijayawada (population 1 million) in the Indian state of Andhra Pradesh, got their water from about 900 private hand-bored wells and a municipal system serving 36,000 house connections and 6,500 public standposts. Most of the standposts had lost any taps and ran continuously. At that time, the municipality's charge for a house connection was Rs. 4,000 (about US$93), and the monthly consumption fee was Rs. 40 (about US$1). The state government of Andhra Pradesh released funds under the National Slum Development Project to provide a 50 percent subsidy toward the connection costs. When the Vijayawada municipality announced this program, there was an overwhelming response from slum dwellers, and more than 5,000 came forward offering to pay the Rs. 2,000 (about US$46) as deposit. Using the cash inflow, the municipality was able to extend its distribution pipelines to several unserved areas.

Source: Arvind Kumar (Indian Administrative Service, Municipal Commissioner, Vijayawada Municipal Corporation). April 9, 1999.

[22] It is worth noting that OBA investment subsidies are sometimes referred to as 'connection subsidies' because they are paid on the basis of the number of connections installed. This is a misnomer because the subsidy is usually intended to cover the cost of the major system components, not individual connections *per se*. In many OBA projects, the users must still pay a connection charge.

[23] Triche, Thelma, Sixto Requena, and Mukami Kariuki. December 2006. *Engaging Local Private Operators in Water Supply and Sanitation Services, Initial Lessons from Experience in Cambodia, Colombia, Paraguay, the Philippines and Uganda.* World Bank, Water Supply and Sanitation Working Notes, No. 12. (Vol. II, Unpublished case studies are available from the World Bank Energy and Water Department.)



connection application process may also reduce the cost to users, especially to those who have been paying bribes to utility staff or middlemen to speed up the process. The creation of a dedicated unit within the utility and the engagement of NGOs to assist the poor with the application process have produced good results.

Introduce Frequent Collection of Water Charges

If the very poor have difficulty accumulating cash to pay monthly fees, it may be possible to increase the frequency of collection at the community level. Reducing the tariff below the full cost of O&M is not desirable or effective. More frequent collection of charges may be a viable solution. For example, in the Manggahan Floodway area of Manila, community representatives collect water fees from connected residents on a daily or weekly basis and pay the monthly bills to the utility on behalf of the residents. A 15 percent surcharge is added to the tariff to cover the cost of community administration. (See Case Study 4, accompanying volume.)

Eliminate Distorted Tariffs for Poor Households

There are several situations in which the poor may have to pay relatively high tariffs for basic consumption. Administrative or regulatory actions may be required to eliminate these distortions. Rising block tariffs are generally intended to provide a low lifeline tariff for a basic essential household consumption and to discourage excessive use by those who consume more than a basic volume of water. However, such tariffs may penalize the poor when several households use one connection. A system of verifying the number of poor persons or households using each connection and adjusting the applicable tariff accordingly can be introduced to solve this problem.

Assuming the basic essential consumption for a family of five is 10 cubic meters of water per month, if five families of five share a single connection, the lifeline tariff would be applied to a total consumption of 50 cubic meters from that connection. Such a system is best administered at the community level, perhaps by a community association, and the number of persons should be verified periodically to prevent abuse.

Water charges may also be distorted when poor people pay their water bills as part of their rent. Greater transparency can be achieved by requiring landlords to inform tenants of the amount of the water bill and to justify the amount included in rent.

Resale of water by vendors who have private connections (with or without lifeline rates) can result in excessive prices if there is little or no competition. Legitimizing the resale of water and/or allowing communities to appoint several authorized vendors would increase competition and drive prices down. If effective competition cannot be created, the regulator or the community may set a maximum tariff to be charged by vendors—taking into account the vendor's reasonable costs. In such cases, regulation and enforcement at the lowest level feasible is preferable.

Posting the allowed on-sale tariff as well as the tariff paid by the vendor for bulk water will help to prevent excessive prices and make the margin charged by the vendors transparent. Allowing authorized vendors to be eligible for the same tariff as individual households may also help to reduce the on-sale tariff.

Legitimize and Provide Finance for Small Private Service Providers

Legitimizing and providing finance to small private service providers (SPSPs) can be an effective way to promote the expansion of acceptable services to unserved neighborhoods. Many SPSPs have their own source of bulk water, which they distribute.[24] Others buy bulk water and operate small piped networks. Many times, they are constrained by lack of access to investment finance. Projects to promote SPSPs often use the OBA approach. A recent report reviews the early experience of several World Bank-supported projects that promoted the contracting of local private operators—many of which are SPSPs.[25] Similar initiatives are being funded by the Global Partnership on Output-Based Aid (GPOBA) and other donors. An interesting characteristic of SPSPs is that, because of the difficulty of obtaining investment finance, they use lower-cost technology or adopt a modular approach to building and expanding infrastructure. Funding programs should not undermine these approaches where they are appropriate.

[24] Those who own their source are sometimes called small-scale independent providers (SSIPs).

[25] Triche, Thelma, Sixto Requena, and Mukami Kariuki, op. cit.

Getting Started: Actions and Resources

The following actions are recommended:

Policymakers and Project Planners

- Make cost recovery and long-term financial sustainability a high priority.
- Issue cost recovery and subsidy guidelines to clarify concepts and promote standardization of methods among utilities. Standardization of methods will make it possible to compare performance and establish benchmarks across utilities facing similar conditions and will promote exchange of ideas.
- Establish efficiency and cost recovery targets as a condition of investment lending and grants.
- Approve tariff increases and changes in tariff structure that are aimed at improving cost recovery and long-term sustainability.
- Use OBA schemes to promote connections in poor communities, but scrutinize OBA proposals to ensure that the connections are sustainable, that is, that poor households are willing and able to pay monthly charges.
- Legitimize and support SPSPs to fill gaps in services to the poor communities.

Governance Bodies and Service Providers

- Develop realistic financial models to project costs and revenues, and calculate the required average tariff to achieve full cost recovery over time.
- Identify inefficiencies in operations and commercial functions and focus on improving those, which will result in greatest cost savings.
- Adopt lifeline rates that cover operation and maintenance costs.
- Simplify and redesign tariff blocks to eliminate subsidies for customers who are not poor and extend the lifeline rate to households who share connections.
- Determine whether the connection charge is a barrier to household connections for poor households. Evaluate the feasibility and impact of subsidizing connection charges without undermining the financial viability of the utility. Alternatively, adopt methods for collecting connection charges that eliminate the barrier without increasing monthly bills excessively.
- Work with poor communities to improve collection of bills through practices such as daily or weekly community collection.

Spokespersons for the Poor, and Civil Society Organizations

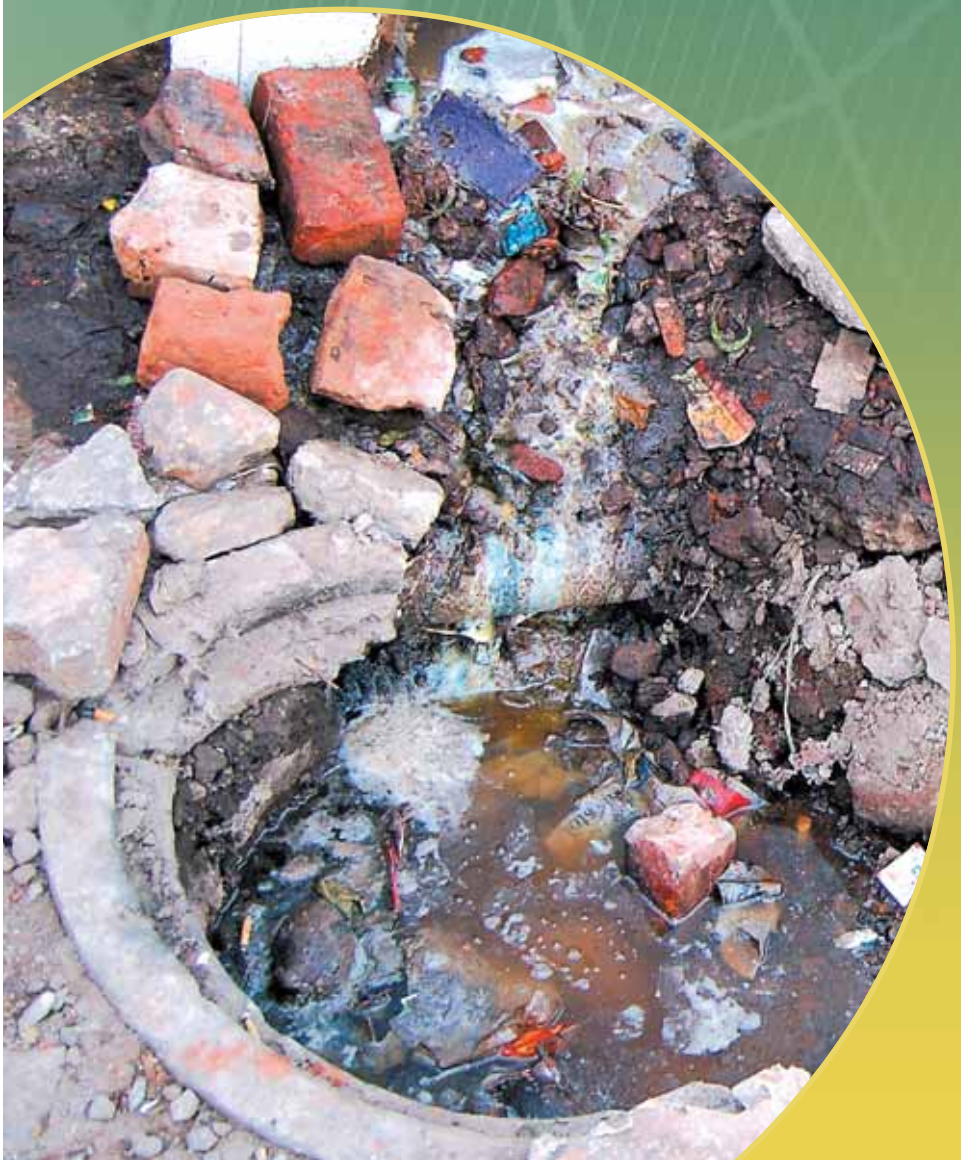
- Carry out willingness and ability-to-pay studies to determine the conditions under which poor households want and can pay for household connections.
- Support communities to organize connection campaigns, frequent collection of bills, and other activities that make household connections a feasible solution.
- Assist households that share a single connection to qualify for the lifeline rate.
- Organize communities without access to piped services to appoint and negotiate with vendors to ensure fair prices.

Table 5: Relevant Case Studies in Accompanying Volume

Case Study	Topic
Manila, the Philippines (Case Study 4)	Network of user associations that bill and collect water tariffs within the community
Uganda (Case Study 9)	Subsidized connection charges
Bengaluru, India (Case Study 10)	Reduction of the cost of installing connections through outsourcing

Section 7

Overcome Physical and Technical Barriers



In addition to innovative alternative and low-cost technologies, government and utilities should encourage the use of water-saving technologies and simple but safe sanitation.

Obstacles

- *The overexploitation and degradation of water resources affect the poor disproportionately.*
- *Physical and technical challenges and the high investment cost of conventional technologies make extending formal piped water supply and sewerage networks into informal and unplanned settlements more difficult.*

Inadequate attention to managing water resources is leading to the overexploitation and degradation of water resources almost everywhere and exacerbates the already difficult service and environmental conditions in poor urban neighborhoods. As water becomes scarcer and its quality degrades, the poor must go farther and pay more to satisfy their basic needs. Most countries have adopted the Dublin Principles regarding the need for integrated water resources management to protect the environment, and the economic pricing of water to ensure efficient use of water resources, but further action is needed to implement these principles. In particular, far more attention needs to be directed toward sanitation and the safe disposal of wastewater.

Conventional distribution networks, sewerage, and septic tanks with soakaways often cannot be used in slum areas. This may be due to geography or geology, or to the lack of roadways under which pipes can be laid. The cost of conventional technologies may also be prohibitive. Innovative alternative and low-cost technologies are needed to overcome these barriers. Governments sometimes adopt high standards for services that may not be realistic. Strategies and technologies that allow for raising standards incrementally are needed.

Protect Water Resources

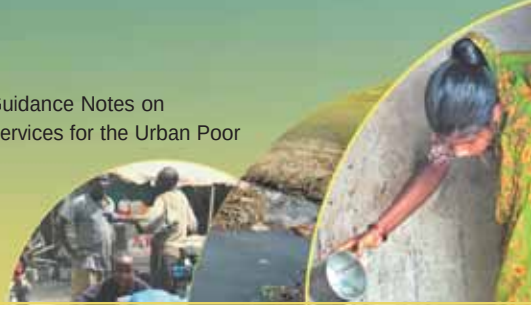
Government and utilities should encourage the use of water-saving technologies and simple but safe sanitation. Overexploitation of water resources, which is already a serious problem in many places, increases the cost of water supply services, making the expansion of services to the poor even more difficult than it is when resources are plentiful. Recently, in Chennai, India, the government made it compulsory to construct rainwater harvesting structures in every building after the city faced an unprecedented water shortage. Two years later, the groundwater levels in Chennai have risen substantially.

Rather than reacting to near-disasters, public authorities and utilities should adopt comprehensive forward-looking strategies to reduce water losses and encourage the adoption of water saving technologies and low-cost sanitation at the household and community level.

Adopt Alternative Technologies and Delivery Systems

Several alternative technologies have been developed and successfully introduced in poor and marginal communities. They include:

- Pour-flush latrines with septic tanks: On-site sanitation options are widely used in urban areas where it is impractical to lay sewers and where residential plots are large enough to absorb effluents.
- Condominial sewerage systems: The unit to which service is provided is a group of houses, rather than individual houses. Small bore connection branches that run from the main sewer through household lots with a direct connection to each house are constructed with smaller pipes and installed at shallower grades than conventional sewers, resulting in cost savings (see Box 16).
- Bulk sewerage: A sewerage connection is provided at the boundary of the community into which the community-managed sewerage system is discharged.
- Interceptors and shallow sewers: These are appropriate for neighborhoods with septic tanks.
- Low-cost sewage treatment technology adapted to local conditions, using low-cost materials and construction techniques.
- Rainwater collection system: Roof channels divert rainwater to a filter and then to a ground level storage tank from which it is pumped by hand to an elevated tank.
- Community storage tanks: When service is unreliable or intermittent, large storage tanks can be installed in poor communities to increase the hours of availability.
- Bulk water supply: Water is supplied to a community tank to which the community connects its internal



Box 16: Condominial Sewerage in Brasilia

Between 1993 and 2001, Brasilia's water and sewerage utility CAESB applied the condominial model on a massive scale in both low-income peri-urban neighborhoods and in more affluent areas of the capital. An estimated 188,000 condominial connections benefiting 680,000 people were installed. Sewerage treatment capacity was also increased using adapted technologies and it was expected that universal coverage of sewage treatment would be achieved in 2004.

Substantial cost savings resulted from several alternative technical practices. For example, in Santa Maria, a large neighborhood that typifies the system as a whole, the average public network length is about 2.8 meters per connection, compared with about 5.6 meters per connection for conventional systems. In addition, whereas conventional network design usually calls for a minimum pipe diameter of 150 millimeters, pipes of 100 millimeters were used for 56 percent of the system. The pipes were also laid at a minimum depth of 0.5 meters, compared to the conventional 1.0 to 1.3 meters, and simple inspection chambers were installed instead of high-cost manholes for 84 percent of the inspection points.

Throughout the metropolis, the condominial branches conformed strictly to standards of pipe location, hydraulic capacity material specifications, and building regulations, but a few exceptions were made to accommodate highly localized physical conditions. Residents at the level of each condominium were allowed to choose among three location options for the branch routes: through the backyard, the front yard or under the sidewalk. Routing through the yard has the advantage of being less expensive to install, but the household is responsible for maintenance. With the more expensive option of routing under the sidewalk comes the advantage that the utility assumes responsibility for maintenance.

As the cost of condominial branches (US$2.8 million) was borne by the beneficiaries, CAESB's costs (US$1.7 million) were much lower than for conventional sewerage. However, it was estimated that consumers paid no more for the condominial branches than they would have paid for conventional connections. About 1.5 percent of households opted to install the branches themselves and consequently paid no connection charge, but were expected to pay for materials. Finally, the regular sewerage charges for households that opted for routing through the yard were discounted by 40 percent.

Prior to undertaking investments, CAESB undertook a process of social intermediation. During a series of meetings, the approach was explained and each community chose an option and signed the required agreements. This process did not result in any delays in the execution of the works. Especially in the lower-income communities, the mobilization efforts led to greater contact among neighbors and built social capital.

The alternative technical practices have resulted in neither a higher incidence of obstructions nor a higher cost of maintenance relative to the pre-existing conventional system.

Source: Melo, Jose Carlos. August 2005. *The Experience of Condominial Sewerage Systems in Brazil, Case Studies from Brasilia, Salvador, and Parauapebas.* World Bank.

distribution system. Consumption is invoiced on the basis of a macro-meter at the tank, which registers the consumption of the entire community.

- Relaxed standards: In Manila, the private operators and community associations have installed water pipes and connections above ground.
- Street or block metering for water supply: Meters are installed at the end of each street or block. Billing of each individual connection is based on average consumption.

Policymakers should avoid land-use ordinances or technical and environmental regulations that prevent or discourage the use of alternative technologies. For example, in Recife, Brazil, in the mid-1990s, an environmental policy that favored tertiary treatment of sewage threatened to block the construction of simple condominial sewerage systems with primary treatment in urban slums. Likewise, the requirement that wastewater treatment plants be located a minimum of 100 meters from residences made it difficult to build

small-scale treatment plants in densely inhabited slums. Project designers successfully argued that primary treatment was better than no collection and/or treatment at all, but the distance rule remained a barrier.[26] Since the objective of the distance rule is to protect health and avoid eyesores in residential neighborhoods, it might be just as effective to substitute stringent safety measures and aesthetic designs for a rule regarding distance. Regulation should be flexible enough to allow improvements. The best should not be the enemy of the good.

Adopt Modular Planning

Modular planning has been advocated as a method for reducing initial investment costs in water supply and sanitation infrastructure. The Town Water Supply and Sanitation Initiative of the Bank–Netherlands Water Partnership explored this concept in one of its final reports.[27] Under a modular approach, design and construction are viewed as regular activities, and include incremental improvements, rather than large, one-time investments. The underlying principle is to construct only when the investment leads to increased revenues in an acceptable timeframe. A modular approach means that system components are initially designed with

[26] *Establishment of a Regulatory Framework for Water and Sewerage Services in the Municipality of Recife, Initial Diagnosis.* Report submitted by Deloitte Touche Tohmatsu to the Secretary of Infrastructure and Public Services, Municipality of Recife, January 1997, Part VIII. A. Environmental Standards.

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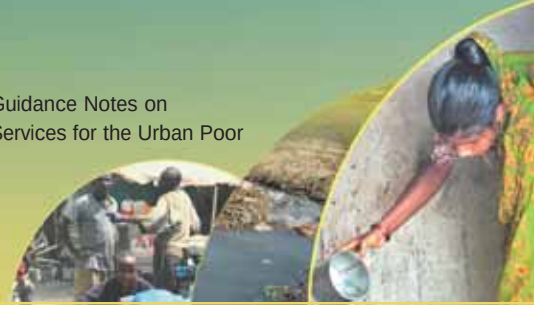


only limited excess capacity determined on the basis of:

- *Economies of scale:* There are usually long-term cost savings in building a component as large as possible, but there is a risk that demand may not grow as much or as quickly as predicted, or that the spatial distribution of the population to be served will change.
- *Mechanical reliability:* Some excess capacity is needed to cover for short-term mechanical failure of similar components, for example, reserve pumps or wells.
- *Security against future availability:* The component may not be readily available at a future date.
- *Uncertainty over the location of future demand:* It is not known in advance where the component will be needed.

Components are also designed so that they can be expanded or upgraded as needed. The shorter planning horizon (less than five years for many components) challenges current practices used for larger urban systems (which typically use a 20- to 25-year planning horizon). Sequential improvements are possible for both water supply and sanitation. For sanitation, the location and design of on-site facilities may reduce the cost of future connection to a sewer system. As long as water consumption is low, on-site disposal may be a reasonable first step; the choice depends on housing density, soil, and groundwater conditions. The location and design of on-site systems should anticipate future conversion to waterborne waste disposal, because with increasing financial resources householders can be expected to increase water consumption to a level that exceeds the capacity of on-site systems. Once the need for evacuating sewage arises, it is best to install sewers that are big enough to meet future demand. The cost of installing sewers is very high compared with the cost of installing water mains because sewers have to be laid to accurate grade at a greater depth than water mains. For water supply, costs can be kept down by sizing pipes so that extra transmission capacity can be added later to increase the quantity of water delivered through the same network.

Getting Started: Actions and Resources

The following actions are recommended:

Policymakers and Project Planners

- Adopt flexible standards that permit the use of alternative technologies and levels of service in poor neighborhoods.
- Enforce land-use, technical and environmental standards in a manner that allows gradual and phased improvements.
- Endorse a modular approach to planning and investments.

Governance Bodies and Service Providers

- Adopt aggressive programs to reduce water losses.
- Encourage the use of water-saving technologies and low-cost sanitation by customers.
- Consider alternative technologies when faced with physical conditions that prevent the use of conventional technologies.
- Explore the possibilities for modular approaches.

Spokespersons for the Poor, and Civil Society Organizations

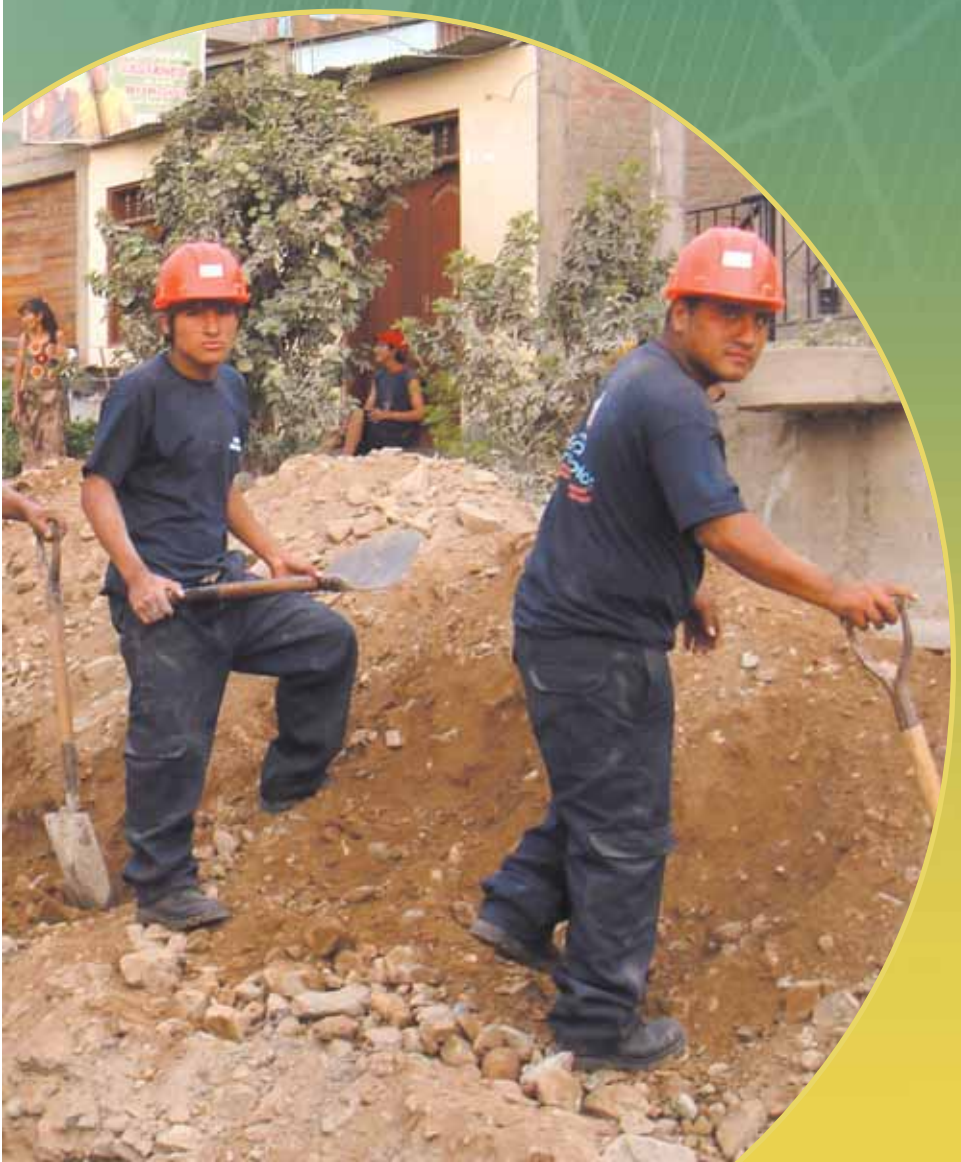
- Assist communities to examine alternatives to conventional infrastructure and adopt appropriate solutions.

Table 6: Relevant Case Studies in Accompanying Volume

Case Study	Topic
Lima, Peru (Case Study 16)	Condominial sewerage
Tegucigalpa, Honduras (Case Study 15)	Bulk water supply
Karachi, Pakistan (Case Study 5)	Bulk sewerage connection
Manila, the Philippines (Case Study 4)	Street or block metering

Section 8

Summary of Policy Issues



Many governments are seeking to improve the quality of life of urban residents through security of land tenure, improved housing, and essential services.

The Policy Framework

Rapid urbanization has already outpaced infrastructure development and has been accompanied by a proliferation of slums, increased homelessness, growth in urban poverty and crime, and an increase in pollution and ecological change. To date, efforts to address urban problems have focused on the planning and implementation of development projects but too little attention has been paid to the people themselves. Many governments are now seeking to redress this by improving the quality of life of urban residents through security of land tenure, improved housing, and essential services.

This will require reforms in policies, laws, statutes, and procedures, particularly those that inhibit the functioning of land and housing markets, to align them with contemporary urban reality. In addition, sector institutional reform or the consolidation of recent reforms is needed in many countries. The performance, autonomy, and accountability of service providers and oversight entities need to be strengthened. User charges that cover at least operation and maintenance costs must be adopted and a higher degree of community participation should be incorporated into decisionmaking processes. These are sweeping changes and their success will depend on gaining the support of all stakeholders.

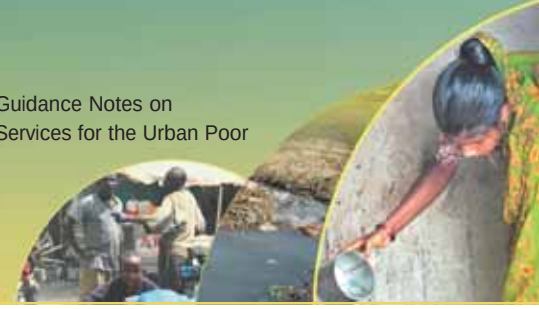
These guidelines recommend practical tactical strategies for overcoming obstacles to improving water supply and sanitation services for the urban poor but, in many cases, overcoming the obstacles will require more than tactical strategies. It will require changes in policies or legislation, or more effective implementation. Even when policy reform is not essential, the proposed strategies might benefit from a more supportive policy or legal environment. A diagnosis of national, state, and municipal policy and frameworks, and how they are implemented, may be needed to determine where the gaps, overlaps, and inconsistencies exist. Some policy changes and legal amendments will undoubtedly be warranted. However, in many cases, while current policies themselves may be adequate, their implementation is weak, or they may not be understood and appreciated by the key actors. In those cases, strategies to improve the implementation of policies may be needed.

List of Policy Issues Associated with the Proposed Strategies

Some of the key policy issues that need to be addressed in the context of the proposed strategies have been identified in each of the previous sections of these Notes. These are consolidated below.

Give the Poor a Voice

The relevant policy reforms that would enhance the voice of the poor in



planning and delivering service improvements include:

- Establishing requirements for greater transparency in all aspects of service planning and delivery, and more public access to information.
- Formulating local policies to print materials in local languages.
- Setting down requirements or incentives for utilities to create the institutional mechanisms to promote better client relations and special units to assist the poor.
- Empowering the poor to participate in elections and run for office.

Take Vested Interests into Account

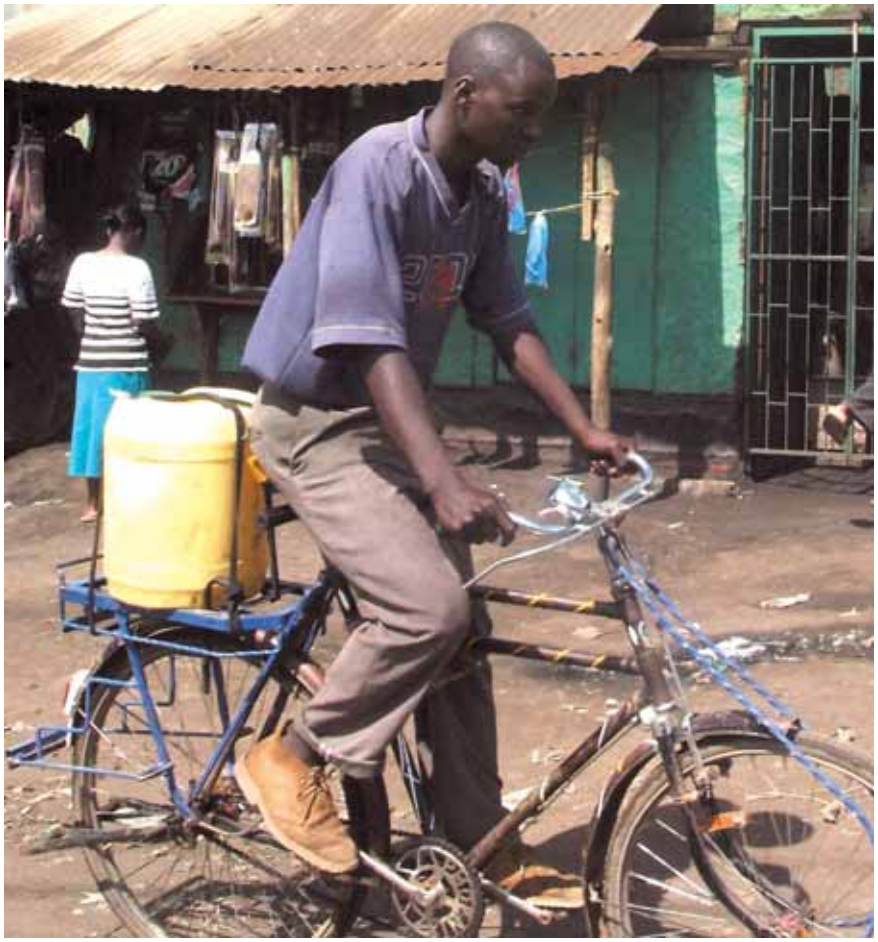
Policy reforms that would reduce opportunities for the illegal activities that inhibit reform include:

- Legalizing and regulating small-scale service providers.
- Initiating policies that would promote more competition among small service providers.
- Creating policies and procedures to promote transparency and public access to information.

Eliminate Administrative and Legal Barriers

Lack of land tenure is one of the major barriers to access to services by poor households. Removing this obstacle requires:

- Initiating land tenure reform.
- Linking service provision to long-term occupancy, not land ownership.



- Streamlining or simplifying procedures for poor residents.

Strengthen Capacity, Autonomy, and Accountability of Service Providers

Legislation or *de facto* practices regarding the respective roles of key actors and their institutional formats may not clearly distinguish roles or promote accountability.

This may result in gaps or overlapping responsibilities. Regulations and/or their enforcement may not allow for adequate flexibility in technical solutions. Reforms may be needed to ensure:

- Adopting management models that promote the autonomy and accountability of service providers.
- Establishing effective tariff regulations, mechanisms for monitoring service quality, and incentives for service providers to operate efficiently and provide reliable services.
- Clarifying the responsibilities of states and municipalities and eliminating any overlaps, inconsistencies, and gaps in their roles.
- Adopting minimum standards that can be adapted to local conditions and needs.

Make Appropriate Investment Finance, Cost Recovery, and Subsidy Policies

All the recommended actions require a supportive and rational financial framework. Existing laws should be evaluated to determine whether they allow and provide for:

- The principle of full cost recovery for services.
- Targeted subsidies for investments and connections (but not tariff subsidies) for poor households, where warranted.
- Tariffs that recover all operating and maintenance costs at the minimum.
- Reliable sources of subsidies so that the financial viability of service providers is not compromised.

Overcome Physical and Technical Barriers

Improvements in the planning and delivery of services are essential to promote more efficient use of water resources, but must be complemented by an effective framework for overall water resources management.

This requires national and regional as well as local solutions. In poor communities this often has to do with the specific local topography and/or geology and requires local adaptations and solutions.

Existing legislation should be evaluated to determine whether it promotes:

- Coherent national, regional, and local approaches to effective water resources management.
- The reduction of water losses by utilities and the adoption of water-saving technologies by customers.
- Flexibility for environmental and technical standards and management models to be adapted to local needs and conditions.

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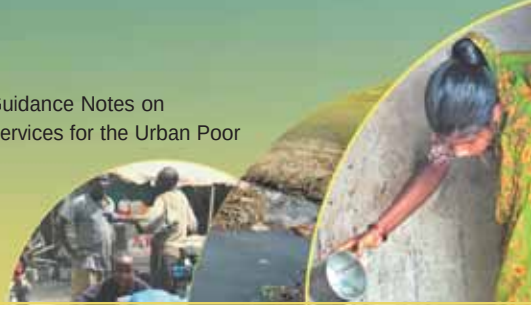

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Center for Science and Environment, New Delhi (www.cseindia.org)

Global Program on Output-Based Aid (www.gpoba.org)

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National Water and Sewerage Corporation of Uganda (www.nwsc.co.ug)

Self-Employed Women's Association (SEWA), a nonprofit organization that advocates for the rights of women working in the informal sector, conducts research on the contributions and working conditions of women, and develops strategies for working with women who work in the informal sector (www.SEWA.org)

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WaterAid, U.K.-based NGO that promotes access to safe water, sanitation, and hygiene education (www.wateraid.org)

Water, Engineering and Development Center, Loughborough University, the United Kingdom (www.wedc.lboro.ac.uk)

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