

*Providing Water and Sanitation to the
Urban Poor in Less Developed Countries:
An ICMA Approach*

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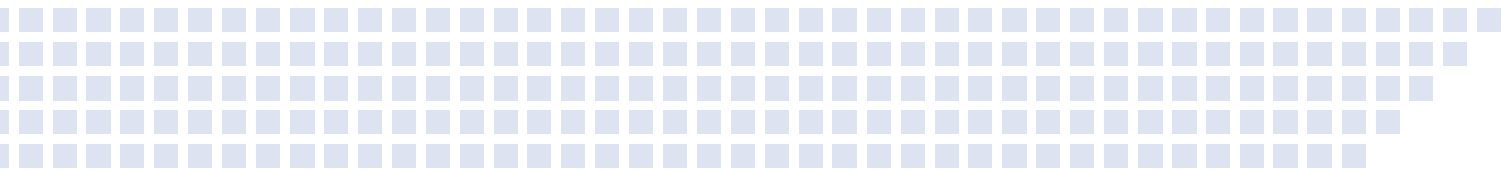
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Introduction

Providing adequate water and sanitation services is one of the most critical challenges faced by cities in the developing world. As rapid urbanization continues throughout Latin America, Asia, and Africa, local governments face growing challenges to absorb and provide even basic services to rural immigrants. Water and sewer services rank at the top of the list of services needed for survival in cities throughout the world. People simply cannot live in the congested areas that generate economic opportunity without a regular supply of water and a way to dispose of human waste. Failure to provide basic water and sewer services creates a myriad of health risks and often prevents the poor from integrating with or contributing to the urban economy.

While slum residents can be highly efficient contributors to local economic growth, failure of their communities to provide basic water and sanitation services often limits their ability to engage with that economy and to produce goods or services. In addition, recurrent family illness is one of the prime anchors that pulls poor households back into the poverty trap even after they have found places in the informal urban economy. In most developing countries, cities are losing this battle badly. While a few high-profile projects extend services to some long-established slums, hundreds of slum communities in major cities remain unserved, and new arrivals create new unserved slums on the periphery every year.

After decades of focusing primarily on rural health and economic growth, the international donor community is now shifting part of its focus to cities. For almost two generations, development theory has been dominated by two corollary assumptions: (1) that successful rural development can reduce pressure on cities and (2) that city governments can find a way to serve their poor populations. Both assumptions have been proven wrong.

First, it appears that even when rural development strategies are successful, rural-to-urban migration cannot be stopped. The young, the mobile, and the talented continue to seek broader horizons in cities—just as they have across cultures and across the millennia. Second, most cities simply do not have the governance skills or financial resources to meet the growing demand. They may have more government institutions than rural communities, but most are plainly not up to the task of providing even basic services to the poor within their boundaries. In short, those who focus on reducing poverty in the developing world have had to shift more of their focus to cities because that is where an increasing share of the poor live—and that trend will continue.

While the failures of Asian, African, and Latin American local governments to provide water and sewer services are clear, their role as a catalyst for sustainable solutions is only now being recognized. In fact, the key role of local governments in crafting and implementing pro-poor services is perhaps the most underappreciated part of the complex urban water and sewer puzzle. The key role of local governments has been underestimated because successful programs often involve local government working in partnership with nongovernmental organizations (NGOs) or private entities to deliver these critical services. Even when the city government is not physically delivering the service, it is often instrumental in making it happen.

The key role of local governments in delivering critical water and sewer services has been underestimated because successful programs often involve local government working in partnerships with others.



A second reason is that the roles played by local governments on each continent are and will be different. In Latin America local governments may emerge as coordinators of small, informal providers operating de facto private infrastructure systems. In African cities, where piped infrastructure systems are often missing, the role of local government may be to broker agreements between services based on trucks and storage tanks. In the larger slums of Asia's megacities, local government's role may be to package and promote the integration of formal and informal service systems for funding under national-level financing schemes such as India's Jawaharlal Nehru National Urban Renewal Mission (JN-NURM).

ICMA is ideally positioned to help meet this long-emerging need. The provision of urban water and sewer services is not a theoretical problem but a very practical one, and one that ICMA's 9,000 member professionals address very successfully on a daily basis. The building blocks of functional water and sewer systems are well known—appropriate design, sound financing, system-wide cost recovery, planning for maintenance and replacement, and competent daily management. But American technical solutions often do not work in less developed countries. The challenge is to translate this knowledge into programs that work in the context of the imperfect governance skills, incomplete information, weak financial systems, and poor enforcement prevalent in many countries.

Not only do ICMA's members know this issue inside and out, but they can work directly with their counterparts in Asia, Africa, and Latin America in ways and on scales that no other organization can match. The key is not in transferring the technical design of American water and

sanitation systems to less developed countries (in fact, our bias towards “piped” systems and hard infrastructure may not be appropriate as a short- or medium-term strategy in some African cities), but in sharing our knowledge of how to empower both government and citizens to jointly find those water and sanitation systems that will work for them.

Over the past decades, many donor-funded programs have focused on empowering citizens to engage, advocate, and demand better services, but empowerment of local government to respond to those demands has received much less attention. ICMA can help redress that imbalance. While top-down strategies aim at restructuring national-level support, and bottom-up efforts empower the poor to demand service, the critical middle ground—the local governments that are and should be responsible for delivering these services—has too often been ignored. Sustainable, long-term solutions require a competent and engaged local government, and strengthening local governments is what ICMA does best.

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This paper outlines a potential approach to water and sanitation for the urban poor that will be effective, will draw on ICMA’s strengths, and will establish ICMA as the clear leader in this emerging field. Before outlining that strategy, however, we need to define several terms used throughout the paper.

- An *urban local government* is a government entity responsible for providing local services in an urbanized area. Although usually a municipal government, it may also be another authority or agency authorized to oversee service delivery in an urbanized area.
- A *formal sewer and water provider* (FSWP) is a private, governmental, or quasi-governmental entity legally authorized to deliver water and sanitation services in an urban area. It may be the urban local government that provides those services, or it may be an independent, self-governing entity authorized by the government to provide those services.
- A *small sewer and water provider* (SSWP) is an individual or entity providing water and sanitation service for a local area without formal authority from the government responsible for that area. SSWPs are often not formally organized, incorporated, or registered with the government and are paid directly or indirectly by the poor who use their services.
- A *slum area* is a portion of the urban area characterized by a dense concentration of housing, generally located on disputed or environmentally sensitive land, where residents generally do not have clear

legal rights to occupy land, and that is not served with formal water and sewer infrastructures and services.

- A *peripheral slum area* is a slum area that is located outside the formal boundaries of an urban local government authority but adjacent or close enough that it is likely to be included as the urban local government's boundaries expand.

Lessons for a successful approach

ICMA's signature approach to this daunting challenge is firmly grounded in lessons that the development community has already learned about providing water and sanitation to the urban poor. It focuses on the overlap between those lessons and ICMA's unique strengths—particularly its deep grounding in effective local governance and service delivery. ICMA's approach applies the proven skills of its 9,000 local government professionals to fill in the missing pieces of the water and sewer puzzle—pieces that experience shows are keys to long-term success.

At the broadest level, the urban poor cannot access adequate water and sanitation services because existing incentives, institutions, and financing do not promote and support increased pro-poor service delivery. Ironically, many informal small sewer and water providers (SSWPs) have overcome those obstacles—they have filled the gap in formal services by providing water to hundreds of thousands of slum dwellers every day, but at prices far higher than those paid by users of the formal sewer and water providers (FSWPs) and in ways that delay and discourage the expansion of reliable lower-cost services from reaching the poor. There are two ways to approach this problem:

1. Increasing access for the urban poor through supporting SSWPs and integrating them with FSWP systems at the local level (a *place-based approach*)
2. Increasing access for the urban poor through reform of the enabling environment (a *macro systems approach*).

Local place-based solutions

While reforms at both levels are needed, there is a growing focus on place-based solutions, and that is where ICMA shines. The evolution of successful water and sewer systems in the United States shows that reforms in this field move upward from local success more often than they flow downward from national mandates. More specifically, geology, hydrology, soils, and water sources vary locally, and most U.S. cities began their water and sewer services by using “whatever worked” in light of those constraints. As the cities grew, systems were refined and expanded, threats to public health were removed, unsustainable and unreliable sources and providers were replaced, and larger investments were made to serve difficult topography. Smaller-scale providers were



bought out or absorbed into broader, more reliable, and more sustainable systems over time.

Water and sewer provision are place-based problems—particularly in the flood-prone drainageways and difficult terrain where many slum communities are located—so the growing focus on place-based solutions is well founded.

State and federal government reforms supported these services with programs to guard the environment, protect consumers, lower the costs of borrowing and investment, and prevent fraud. In the United States, the federal government also offered generous financing for water and sewer treatment plants, but that generally occurred long after basic systems were in place. In brief, water and sewer provision are place-based problems—particularly in the flood-prone drainageways and difficult terrain where many slum communities are located—so the growing focus on place-based solutions is well founded.

ICMA's Added Value

The emerging trend toward place-based solutions dovetails with two of ICMA's core strengths: (1) a large pool of local infrastructure program designers and problem solvers with decades of practical experience and (2) broad experience involving residents in program design and decision making.

Key role of urban local government

Place-based solutions require strong local governments. Only local governments can bridge the gaps between the disparate players in water and sewer delivery, ensure that those services are part of a broader slum upgrading strategy, and document the opportunities necessary to attract additional financing.

In general, SSWPs and FSWPs find it hard to cooperate with each other. The cloudy legal status of many slums makes it difficult for their residents to engage with FSWPs to obtain lower-cost services; the unclear legal status of some SSWPs makes it difficult for them to obtain financing to expand their services; and many microfinance institutions (MFIs) and banks are unaware of viable business opportunities in lending for the expansion of water and sewer systems and connections.

Urban local governments relate to all these actors—slum residents, FSWPs, SSWPs, and MFIs—and only local government has the incentives to make them come together to provide better services on a sustainable

Bangalore water utility's social development unit

The Bangalore (India) Water Supply and Sewerage Board has a Social Development Unit that focuses on connecting households in slums to piped water and sewerage. This unit is headed by a proactive senior development specialist who interacts directly with community groups, NGOs, and influential individuals to promote communication, implement connection programs, and resolve complaints. To promote connections, the unit has introduced a reduced connection fee that can be paid in installments and has simplified connection procedure, leading to 65 percent of total households within the 26 slums connected to the network choosing to connect and thus to receive water on alternate days (data are from 2005).

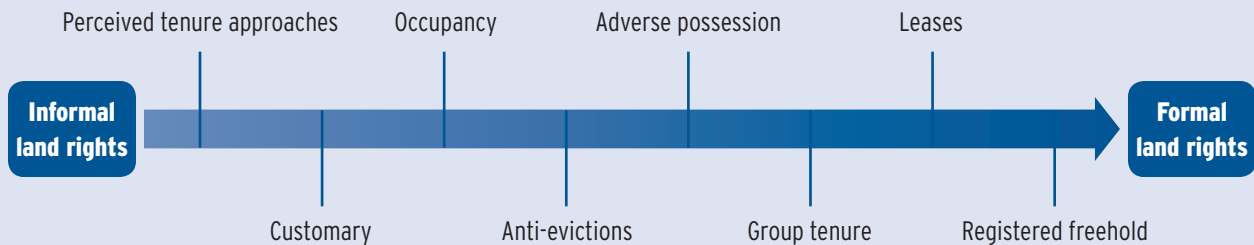
basis. As local democracies mature, healthier, more affordable, and more reliable water and sanitation are at the top of many slum voters' lists of what they want their elected government to provide, and they will increasingly elect candidates who can make that happen. The urban local government does not have to provide these services itself, and U.S. experience shows that many successful water and sewer systems use independent districts that are deliberately insulated from local government politics. But even where local governments do not provide services directly, they have the incentives (and should have the responsibility) to ensure that reliable, healthy, affordable water and sewer services are provided by some stable combination of private, quasi-public, and public entities with strong incentives to continue providing good service over time.

Through local governments, water and sewer services can be coordinated with more comprehensive strategies for slum upgrading.

It is also through local governments that water and sewer services can be coordinated with more comprehensive strategies for slum upgrading. Unfortunately, many slum upgrading approaches flounder over questions of land tenure, which have proven to be very difficult to resolve. Some FWSPs are authorized to provide service only to "legal" residents and parcels, and legality is difficult to establish in most slum areas. Because of this barrier, strategies to provide pro-poor water and sanitation services should not be conditioned on the granting or determination of legal land tenure for slum dwellers.

However, urban local governments can be instrumental in working around the land tenure issue by allowing the provision of full water and sanitation services in spite of long-standing disputes. Often, what is needed is an agreement not to evict or relocate residents, notwithstanding the often cloudy legal status of the land. Once providers are more certain that the local government



Figure 1 Land rights spectrum

will not initiate or cooperate in actions that relocate those who are paying for service and connections, the risk of providing those services and connections drops significantly. By providing better water and sewer services to slum communities (or allowing FSWPs to provide them), local governments reduce the service gaps between slums and other areas of the city and strengthen the case for full legal tenure in the future. Good water and sewer services are roads toward legal tenure, not the other way around.

Figure 1, from a UN-HABITAT program in Kandahar, Afghanistan, illustrates this point. Programs that attempt to move slum residents from the far left to the far right end of this spectrum often fail, because there are simply too many unanswered questions and vested interests between those two points. But providing reliable and healthy water and sewer service does not depend on reaching the far right end of the spectrum; the key is to find the point that will remove enough risk of non-payment that FWSPs or SSWP will extend services and MFIs or other financial institutions will lend the money to do so.

Place-based urban development demands a great deal from local governments. While the idiosyncrasies of local terrain and politics can be overlooked at the national level, they loom large at the local level. The focus changes from numbers to real people, but the solutions reached are correspondingly better tailored to local needs. Place-based solutions require local government skills focused on

- Identifying *community-based assets* and understanding how they can serve as a foundation for improved services
- Knowing and working with *respected local leaders*
- Promoting *community-based planning* and implementation
- Engaging with and responding to *empowered citizens*
- Entering into *partnerships* to secure additional human and financial resources to provide services
- Creating *new urban management structures* and systems that better respond to the realities of place-based solutions.

While crafting workable place-based strategies is more labor- and time-intensive than developing national strategies, the results are much more likely to be implemented and to be sustained over the long run. While working to create tailored place-based solutions, it is still important to promote national policies and frameworks to expand and sustain reforms. Those national policies will be effective only if they support programs and solutions that work at the local level, so they must be informed by the results of local initiatives.

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This process will vary by the level of decentralized local authority in specific countries. In countries such as India, Uganda, and Indonesia, with decentralized urban governance systems in place, ICMA's national policy advocacy may focus more on sharing successful (and warning against unsuccessful) practices. In most African countries and in those Asian and Latin American countries with centralized urban governance, ICMA can help craft national policies that replicate successful lessons learned from specific local water and sewer programs. Competent and empowered municipal associations can play a key role in both best practice sharing and policy advocacy.

ICMA's Added Value

Again, the trend toward focusing on local rather than national governance and service delivery plays to ICMA's strength. ICMA members have extensive experience in forming the kind of partnerships that are needed to rapidly expand access to healthy and sustainable water and sewer services. ICMA can help build local government skills not only in expanding the services themselves, but also in building partnerships between diverse actors with different strengths and motivations—much as U.S. governments do in any public-private partnership.

Pro-poor design and delivery

The development community has also learned important lessons about how to design and deliver public services that actually reach and benefit the poor. Over the past decades, top-down restructuring of water and sewer programs has led to an increased focus on cost recovery of operating (and if possible capital) expenses. While that much-needed move is critical to municipal financial stability, it has also strengthened local government's tendency to focus municipal service design on those who can pay. Middle- and higher-income citizens already have more political influence to draw scarce municipal funds into their neighborhoods, but

the push for water and sewer cost recovery gives urban local governments another economic rationale to avoid serving slum areas.

Pro-poor water and sewer systems require that local governments focus on (1) enabling (rather than discouraging) service delivery to slum areas and (2) implementing citywide (rather than neighborhood) cost recovery strategies. Experience in Ahmedabad, India, and elsewhere shows that the poor can and will pay for better water and sewer service, but they often cannot pay the full cost of operating and maintenance (let alone capital expansion). As a practical matter, pro-poor water and sewer planning often means some level of cross-subsidy from rates charged in middle- and upper-income areas to cover costs that cannot be recovered from slum areas.

Experience from the African Development Bank and the World Bank's Water and Sewer Program suggests six key lessons for pro-poor planning:

1. Engage the poor from the very start.
2. Improve on what currently works for the poor.
3. Support community-level investment and community management.
4. Make pro-poor services financially sustainable and affordable.
5. Establish pro-poor incentives for service providers to "scale up" access.
6. Address the technical, administrative, and institutional constraints.

The first lesson is key and has been confirmed by almost all donors and major water and sewer programs over time as well as by ICMA's own experience. Solutions crafted without true community buy-in just don't work and won't be sustained over time. Including the slum residents from the start requires an accurate understanding of who is influential—who calls the shots—in poor urban communities, so that local governments can work with those individuals to design solutions that will be effective, and to ensure that the voices of slum communities are reflected in those designs.

ICMA members have expertise in citizen-oriented planning and broad experience in training and supporting NGOs to help poor communities frame and prioritize options to best meet local water and sewer needs. In addition to working with credible local leaders, effective, inclusive slum resident involvement requires gathering information through channels they trust, meeting when their often-erratic work schedules allow, developing trust through proven results, working with other NGOs active in the community, and transcending language and literacy barriers.

The second of these lessons is also very important, because improving on what currently works for the poor means working with the SSWPs that currently provide many of those services. Just as the development community has had to abandon its belief that slums need to be razed and residents moved to new locations, it needs to abandon the belief that small, informal providers are part of the problem and to find ways to make them part of the solution. Those who install private hoses, common water taps, or plastic tanks so that they can sell water at a profit need

Brazil's PROSANEAR program

In 1988, the World Bank provided Brazil with a loan of US\$80 million to support a new approach to delivering water and sanitation to the poor. The project was called the First Water Supply and Sanitation project for the Low Income Populations, or PROSANEAR I for short. Prior to planning water supply and sanitation projects, PROSANEAR teams went to 17 cities and towns 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.



to be viewed as part of the answer. The African Development Bank has identified four steps to achieve this goal:

- Include SSWPs in the water supply strategies of governments and donors and in the development plans of local authorities and water utilities.
- Provide a conducive legal framework that recognizes and encourages greater longer-term investments by SSWPs (i.e., legalize them) within the context of private concessions and decentralization of services.
- Build incentives for SSWPs to improve their services while respecting their core competencies.
- Facilitate SSWPs' access to financial resources to increase their capacity to invest in the sector and reduce their cost of capital.¹

Similarly, World Bank research with ten SSWPs in the metro Manila region led to three significant recommendations:

- Find ways for SSWPs to reduce house connection fees as much as possible. Connection fees are the major factor keeping many poor households from accessing adequate service.
- Encourage transparent collaboration between SSWPs and FSWPs. SSWPs have a comparative advantage in delivering water to the poor and managing appropriate billing and collection methods. FSWPs have a comparative advantage in producing safe water in bulk at the lowest cost.
- Avoid regulation of SSWPs' prices by encouraging competition instead and by permitting FSWPs to offer bulk water discounts to SSWPs.²

The success of these ground-level pro-poor strategies, however, will rely on support by the urban local government. At a minimum, local government policy must advocate for full water and sewer services in slum communities on terms that are affordable for their residents (i.e., adopt

an explicitly pro-poor water and sewer policy). That usually requires the appointment of an individual or office charged to advocate that position and then to implement pro-poor initiatives.

ICMA's Added Value

ICMA members have experience designing programs using federal funds that are required by law to benefit the poor. While pro-poor programs in the United States are not the same as they are in Asia, Africa, or Latin America, knowing how to embed and sustain pro-poor programs and policies in urban local government budgets is a skill that ICMA can help transfer.

Adding three key ICMA perspectives

To provide effective water and sewer services to the urban poor, ICMA supplements the six important lessons listed above with more detailed insights on three topics: (1) specific skills needed for urban local governments to serve as catalysts for place-based change, (2) appropriate design of successful water and sewer systems, and (3) adequate and sustainable financing.

Urban local government

Competent and engaged urban local governments are the linchpins of effective and sustainable water and sewer service to poor urban areas. In many cases, the municipal government does not actually provide those services—FSWPs may be independent of city governance, and SSWPs are almost always independent (and often unregulated) entrepreneurs. However, as the focal institution of local elected democracy in Asia, Africa, and Latin America, the urban local government retains a key role in aggregating demands for urban services, prioritizing responses to those demands, protecting public health and the environment, and ensuring that the needs of its citizens are met. Even when water and sewer services are provided by independent entities, voters often hold the local government politically accountable for the price, reliability, and safety of those services.

Urban local governments are formed to provide services within their legal boundaries, so focusing on the role of local government means focusing primarily on providing services to existing slums and to newly forming or future slums within those boundaries. This is both a legal and political reality—it is unlikely that local elected officials will agree to spend their limited resources to provide services outside their boundaries while slum communities within their boundaries remain unserved.

Where the FSWP's service boundaries are larger than the city, there may be opportunities to extend water and sanitation strategies to include slum communities located between the municipal boundaries and the FSWP's boundaries. Within many cities, however, there are unplanned and unsettled areas that will become slums unless the local government takes steps to plan the area and extend water and sewer services before the inevitable informal development arrives. Integrating those areas into city service

Nairobi's association of water kiosk operators

In the informal settlement of Kibera in Nairobi, Kenya, more than a half million poor people get water from over 650 informal local water kiosks. The kiosk operators lay pipes up to 1,500 meters long to connect their storage tanks to the local utility network. For many years, the utility considered kiosk operators to be part of the problem, and driving them out of business was viewed as an effective measure to reduce unaccounted-for water. In May 2004, kiosk operators decided to form an association, which they called Maji Bora Kibera (MBK), Swahili for "Better water services for Kibera." Soon a joint task force was formed with members from the utility, MBK, and Water Sanitation Project (WSP)-Africa. At the suggestion of the utility, the 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 service 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, and MBK and the utility continue to build their relationship.



networks before slum development occurs can dramatically improve the lives of the residents at much lower cost than retrofitting services later.

Because existing slums have often had decades to pressure for at least partial water service, while newly annexed slums have not, the newly included areas may be those most in need of basic water and sanitation.

At the same time, continued migration to urban areas has led many cities to move toward expansion of their legal boundaries, and those expansions will very likely result in new (currently "uncounted") slums falling within the city. Because most cities are already crowded and existing ("counted") slums generally resist additional crowding, peripheral slums are in many cases the most crowded and underserved. As municipal boundaries expand and these areas are included, the city's slum population may expand disproportionately. More seriously, because existing slums have often had decades to pressure elected officials for at least partial water service, while newly annexed slums have not, the newly included areas may be those most in need of basic water and sanitation. It is wise to anticipate these changes and to design programs that can include peripheral slum communities as they are absorbed into the city in the future.

In addition, urban local government often plays a key role in connecting SSWPs and FSWPs to financial institutions whose participation is critical to expand and improve water and sewer services. While individual SSWPs may be too small to justify the attention of banks and investors, local governments can help aggregate those needs and articulate them to financial institutions or provide the credit enhancement needed to make them financially viable. City governments can also encourage banks and microfinance institutions to offer new and improved services to the urban poor as a condition of gaining a share of other municipal government business, much as they do in more developed economies.

To fill their multiple roles effectively, urban local governments will need to develop the skills that enable them to

- Carry out effective and participatory community planning for water and sanitation services
- Assert regulatory authority to legitimize SSWPs and facilitate their financing so that they can improve the quality and quantity of service in slum communities
- Prioritize pro-poor water and sanitation services and facilities
- Mobilize human and financial resources for city, SSWP, and FSWP implementation of infrastructure projects
- Oversee effective project implementation by the city staff, SSWPs, and FSWPs
- Adopt baseline goals for the quality, quantity, reliability, frequency, and overall delivery of the services
- Establish coverage, reliability, and water quality goals; incentives for exceeding stated goals in these areas; and penalties for failure to meet the goals
- Drive successful approaches through a citywide scaling-up process.

ICMA's Added Value

ICMA's wide network of experienced water and sewer engineers, budget and finance experts, and program administrators can help urban local governments in Africa, Asia, and Latin America gain the skills needed to carry out the activities listed above through design and implementation of specific place-based projects. ICMA's strength is not in designing pilot projects in hopes that they can be replicated, but in using specific water and sewer projects to teach community involvement, design, implementation, and outreach skills that can then be applied to craft different solutions for different neighborhoods.

Appropriate design

While the earliest steps in basic water and sewer delivery may be based on individual, unrelated decisions, the evolution of those ad hoc arrangements into reliable, healthy, and affordable systems requires sound

planning, integration of available facilities, and competent operational management. This is where the concept of pro-poor design meets the real world. Unless there is strong support for appropriate, pro-poor system design and administration, slum communities will be ignored in favor of “legal” areas of the city where residents are better able to pay for water and sewer services and to help FSWPs achieve their cost recovery goals. Because serving the urban poor requires governments and FSWPs to look beyond their traditional business models, pro-poor policies are conspicuously absent from most local water and sewer systems.

Unless there is strong support for appropriate, pro-poor system design and administration, slum communities will be ignored in favor of “legal” areas where residents are better able to pay for water and sewer services.



Fact-based planning Planning for water and sewer services should take place within broader planning for slum upgrading on many fronts. The key role of these services in the lives of the poor often makes water and sewer programs the entry point for broader slum upgrading efforts, however, and these broader programs often find that reliable, low-cost water and sanitation are among the top priorities of many slum communities. Either way, key factors to be considered in water and sanitation planning include (1) the number of slum community consumers and where they are located; (2) the number of potential slum consumers currently without adequate services; (3) available water resources and other physical features of the area; and (4) the location, capacity, and condition of existing SSWP and FSWP infrastructure (including temporary/mobile facilities such as tankers and hoses).

While it is essential to have accurate data on individual slums as a foundation for good planning, it often requires a collective effort by many voices to collect the data. Slum communities must link together to bring their needs for healthy, safe, and affordable water and sewer services to the attention of the urban local government and must be willing to work together with private entities and NGOs to provide new solutions.

System integration Designing a system that builds on what already works for slum residents means integrating and expanding both SSWP and FSWP systems, which in turn requires

- Identifying new infrastructure projects that can work with the existing pattern of SSWP and FSWP services and facilities
- Considering communal solutions as well as individual household connections

- Analyzing realistic opportunities for cross-subsidization of pro-poor services and facilities within an expanded FSWP system
- Identifying business products that can expand revenues and can be implemented jointly by SSWPs and FSWPs
- Coordinating the timing and design of new infrastructure projects so as not to interfere with continued provision of existing water and sewer services during the construction period.

Pro-poor operation In addition to planning for and integrating successful pro-poor water and sanitation systems for slum communities, it is important to establish operating systems that will sustain those services over the long run. This requires

- Calculating accurate capital and operating costs of community facilities and services
- Adopting realistic operation and maintenance arrangements for existing and future slum infrastructure
- Ensuring preventive maintenance to ensure that existing infrastructure is kept in good working order and public health goals continue to be met
- Implementing sound asset management, including replacement at the end of each asset's useful life
- Identifying or creating appropriate institutions to oversee construction, environmental protection, public health compliance, operations, and maintenance
- Ensuring that each of the involved institutions has the financial resources, personnel, skills, information, and community support needed for it to do its job
- Monitoring and evaluation for consumer feedback.

ICMA's Added Value

Planning, integration, and operation are basic skills that ICMA can help Asian, Latin American, and African local governments tailor to the specifics of pro-poor urban water and sewer systems. Where piped infrastructure systems exist (e.g., in many Asian and Latin American cities), ICMA members can draw on their skills in designing integrated service delivery programs. Where they do not exist (e.g., in many African cities), the focus may be on crafting innovative alternatives that involve the poor in water delivery and sewage removal.

Financing

Three types of financing have an important impact on the provision of water and sanitation services to the urban poor

1. *Microfinance for slum residents*, to enable slum dwellers to obtain improved access to water and sanitation services, often by helping them pay for connection fees or for their contributions to communal facilities

Lowering house connection costs

Côte d'Ivoire and Uganda reduced connection charges by adding a surcharge to the tariffs paid by all users. In Buenos Aires, poor households were charged lower connection fees in return for providing labor during the construction and installation process. 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.

2. *Microfinance for small sewer and water providers*, to enable informal providers to improve or expand the coverage, reliability, or quality of their services in slum communities
3. *Debt financing for formal sewer and water providers*, to enable formal water and sanitation service providers to extend infrastructure or capacity to serve slum communities.

ICMA can provide city governments with the technical help they need to begin playing an active role in mobilizing all three types of financing.

First, providing microfinance for slum residents requires that MFIs develop new loan products that enable borrowers to pay off their investment in water and sanitation improvements over time. For this to succeed, someone (usually an NGO) needs to mobilize the slum communities to participate in the water and sanitation improvement effort. In addition, MFIs or NGOs need to develop daily (or at least very frequent) collection systems to match repayment provisions to the rhythms of slum income generation. Because most microfinance tools were developed in rural areas, some MFIs have been reluctant to move into urban saving and lending markets, and ICMA can highlight and quantify the financial opportunities for MFI success in this new area.

Second, providing microfinance for SSWPs enables those entities to expand coverage, enhance quality and reliability, and sometimes adapt their systems for a better fit with FSHPs. For this to happen, however, MFIs need to be certain that the city government and/or the FSHPs will continue to allow the SSWP to operate in the slums. City government can play a positive role by formally recognizing the SSWPs and by helping MFIs understand and reach this new market opportunity. Again, ICMA can help SSWPs document revenue streams sufficient give MFIs comfort about the opportunities and risks in this new lending market.

Third, bringing FSHP infrastructure into slum communities or expanding its capacity to allow more reliable bulk water sales to SSWPs requires substantial capital investment, which usually requires debt financing for FSHPs or the city government, or both. The city can help facilitate this borrowing by preparing a multi-year capital investment plan and a financing strategy for its implementation. If the city government commits to



Manila's community-based billing and collection

In the Manggahan Floodway area of Manila, the water supply system includes bulk selling from the water company with street or cluster metering. Each street or cluster has a meter at either end; the water company reads the consumption from the street meter and divides it by the number of active connections to determine the charges for each household. Every street or cluster has a leader, chosen by the residents, who serves as the point of contact between the water company and residents' water committee. The committee is responsible for meter reading, billing, collection, and payments, as well as repair and maintenance. The system provides for a staggered payment of the connection fee ranging from 12 to 36 months. 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.

borrowing a portion of its capital requirements, it will substantially improve its chances of attracting additional grant funding for its water/sanitation projects from higher levels of government or from donor organizations.

In many countries, most of the resources for local government come from the national level and are in fact pass-throughs of donor funds, and this is likely to remain a financial reality in the short and medium term. Mixed financing that combines debt and donor/grant funds has been successfully used to finance water/sanitation projects in a number of Latin American, Asian, and even African countries. The borrowing may be from specialized lenders such as a national development bank, from market sources, or through an individual or pooled bond issue tapping multiple investors.

It is essential for the formal sewer and water provider to have a financial incentive to provide service in slums.

Several factors are key to success in mobilizing or connecting to available debt financing for FSWPs. For an FSWP or city government to raise debt financing, it must have a reliable fiscal surplus that can be used for debt repayment. This means that revenues from all sources must exceed expenditures for all purposes. City governments that receive reliable inter-governmental transfer payments can pledge a portion of those payments (up to the level of their sustainable fiscal surplus) to debt repayment through the creative use of escrow accounts and trusts. In addition, it is essential that the FSWP have a financial incentive to provide service in slums. That is usually possible if the FSWP adapts its billing and collec-

tions for connection fees and household service to the financial rhythms of the poor, which will require working creatively with SSWPs and adapting fee and tariff structures to achieve a positive return for serving the poor. Finally, FSWPs will need to demonstrate competence in basic financial skills such as investment planning, budgeting, raising income, billing and revenue collection, banking, maintaining accounts, and financial reporting. ICMA members can help them master these skills.

In addition, ICMA members can help urban local governments plan, project, and document the revenue streams that will flow to MFIs and larger financial institutions from investments in urban water and sewer. Investors invest when they have information convincing them that there will be a reasonable return on investment with a reasonable level of risk. FSWPs often have the skills to generate these projections as they apply to legal lots that they can serve directly, but not for informal lots that will require expensive extensions of piped systems or partnering with an SSWP intermediary. Urban local governments can help document the potential revenue of a combined FSWP/SSWP system and reduce the risk of including SSWPs in that system by providing assurance that they will be allowed to continue their service.



ICMA's Added Value

While urban policy in many developing countries involves money transfers from central to local governments (which dry up when funds run short), most U.S. cities have had to provide the lion's share of financing for water and sewer infrastructure and service from their own revenues. ICMA members have experience crafting politically acceptable cross-subsidy systems—i.e., water and sewer revenue systems that (1) “make up” losses incurred from serving poor populations through increased charges in other areas and (2) result in overall recovery of system-wide costs. In Africa, the focus may be on MFI financing to cover connection costs (with donor funds being used to finance piped system expansions), while in Asia and Latin America it may include public sector borrowing or banking sector financing for hard infrastructure improvements.

The ICMA approach

ICMA can harness the expertise of hundreds of service delivery professionals to help establish sustainable programs for water and sewer services, supported by sound municipal governance and management practices.

Opportunity

Because of its unparalleled experience in local government service delivery, ICMA is uniquely positioned to deliver a sustainable program for municipal governance of water and sewer systems for the urban poor. The fact that many water and sewer development programs have focused on macro-level capacity building and cost recovery at the national or

regional level opens the door to refocusing on the critical real-world importance of local solutions and the unique role played by local government. Local urban governance skills are the missing piece in the water and sewer puzzle facing the swelling global population of urban poor.

Alignment

ICMA's engagement in improving water and sewer services for the urban poor is aligned with its mission, core beliefs, and organizational capabilities. To maintain that alignment, ICMA can help urban local governments, their leadership, their employees, and municipal associations continuously improve the quality of basic city services in urban slums and generate useful, practical, and transferable knowledge that can help other cities address similar challenges through more effective governance and management. While local government may be the linchpin that brings together key actors and drives solutions forward, the end result will be not just successful water and sewer projects but a more competent, financially sound, and resident-focused local government.

ICMA can help urban local governments continuously improve the quality of basic city services in urban slums and generate practical and transferable knowledge that can help other cities address similar challenges through more effective governance and management.

Focus areas

1. The primary focus of ICMA's strategy is supporting innovative local, place-based solutions in urban slum communities. To have maximum human impact and encourage sustainability and scalability, the focus is on larger slum communities in medium-sized and larger cities. Public health risks grow with crowding, and economic growth prospects often increase with city size, so focusing on larger slums and cities can allow ICMA to make a bigger difference in the lives of more urban poor households. While no specific population threshold has been established, the opportunity to improve the lives of large numbers of slum residents and demonstrated urban local government support for the effort are key factors for selecting program participants.
2. The secondary focus is to develop tools, networks, and approaches that will replicate and disseminate those locally developed solutions

throughout the unserved, unplanned, and undeveloped areas of the city and into peripheral slum areas that will become part of the city as it expands.

3. A third focus is on national dissemination through municipal associations and participation in national-level policy and program reforms grounded in solutions that have worked at the local level and on financial system reforms necessary to support local initiatives.

Primary focus on local place-based solutions Within its primary focus area, ICMA can work with Asian, African, and Latin American local governments to

- Develop pro-poor service delivery strategies that include and better integrate SSWPs and FSWPs to meet expressed slum priorities and national health and environmental goals
- Ensure that environmental health goals, promotion of changes in hygiene behavior, eco-friendly technologies, condominium-type (joint ownership) sewers, small bore septic systems, urine diversion dehydrating toilets,³ and other emerging techniques and tools are considered in decision making on place-based solutions and incorporated as appropriate
- Involve urban local government staff and elected officials in all aspects of place-based program design to build local government competence to address water and sanitation issues in urban slum communities
- Build linkages among the city government, the slum communities, and MFIs regarding the need for small-scale borrowing for the individual and community shares of connection or expansion fees and for SSWPs to expand and improve services in slum communities
- Assist MFIs to research new markets and financial products for both slum residents and SSWPs, design the loan products, develop origination and servicing procedures, test the products, and train staff to use them
- Develop and maintain relationships with banks and other financial institutions, and support facility planning and financial analysis to sustain debt financing for FSWPs.

Secondary focus on citywide/peripheral scaling up Without scaling up, successful place-based solutions will remain only pilot programs, and even a large number of successful pilots will not close the growing gap in water and sanitation for the urban poor. At the same time, place-based solutions are just that—solutions that worked in a specific place with a given set of technical, financial, and institutional constraints, so it is not likely that they can be converted into “template” solutions that will work across a broad spectrum of slums or local governments without careful thought and continual tailoring to local conditions. ICMA can help cities evaluate what parts of successful local programs could have broader application, and scale those up to other slum communities in the same city



Peru's alternative water service delivery model

The Peruvian government developed a public-private partnership program devoted to the development of capacities among urban poor communities to manage basic services locally. The program lasted seven years (1993-2001) and benefited 337,500 inhabitants. It involved building autonomous drinking water systems in peri-urban areas that were not being served by the water utility. Works were implemented by (1) the beneficiaries who were represented by the governing board of the settlement, (2) the district municipality, (3) the water utility, and (4) national program staff. The most crucial component of this model was the participation of the community through NGOs and the community's Drinking Water Surveillance and Administration Committee (COVAAP). The COVAAP was organized as a company for cost-effective provision of basic services. Made up of users, COVAAPs were put in charge of managing the supply system within the community from the beginning so that the water utility did not have to deal with questions of land tenure and legal residency.

and to peripheral slums that will soon fall within the city boundaries. To support this secondary focus, ICMA can work with local governments to

- Organize forums among the urban poor, SSWPs, FSWPs, MFIs, banks, and city government to evaluate what parts of individual place-based solutions are affordable, sustainable, and scalable—i.e., those that can and should be generalized, scaled up, or disseminated through the city or its peripheral regions
- Help local governments develop realistic and cost-effective water and sewer delivery plans and sustainable financial plans that draw on both SSWP and FSWP capacity, and train them to repeat that process for other slums
- Provide support for testing model transactions, analyzing/disseminating their lessons, and helping stakeholders scale-up successful models
- Develop and implement financing strategies for citywide upgrading based on successful project-specific financing tools
- Organize additional pro-poor water/sanitation projects based on successful elements of past projects
- Identify *agents of change*—those within the government and service provider framework, urban poor communities, and private stakeholders involved in water provision who are committed or express a willingness to improve governance in this key area.

Third focus on broader dissemination and policy advocacy Because place-based solutions to slum water and sanitation services can point national policymakers toward solutions that work (and away from those that do not), ICMA's urban water and sewer strategy includes these activi-

ties as a third area of focus. However, these efforts are supplemental to and an outcome of ICMA's primary focus on supporting specific place-based solutions and secondary focus on citywide scaling up. In this area, ICMA can

- Educate municipal associations about the successes and lessons learned in local place-based initiatives and develop materials to assist the associations in disseminating this knowledge among their members as part of a “learning city” initiative
- Advocate system-wide financial reform that will open more resources for capital investment in general, and with strong advocacy for the key role of urban local government in water and sewer services for the urban poor
- Demonstrate through ICMA publications, conferences, and other forums that ICMA leads with knowledge and stands in partnership with local governments throughout the world that are committed to slum upgrading and providing essential services to the urban poor
- Boldly assert a local governance imperative for slum upgrading—that slum upgrading and the delivery of basic water and sewer services cannot occur without effective, responsive, ethical, and capable urban local government.



Conclusion

Providing improved water and sewer services to the urban poor is one of the most important urban management challenges facing the world today. The survival, health, and economic success of millions of the world's most needy depend on our ability to find workable solutions fast. The challenge is twofold: first, to slow down and stop the growth in slums that do not have access to safe, affordable, reliable water and sanitation services; and second, to build the institutions, human capacity, and management systems to provide those services to all populations of the urban poor as part of an integrated, sustainable public service framework.

The survival, health, and economic success of millions of the world's most needy depend on our ability to find workable solutions fast.

ICMA is uniquely positioned to be a key player and catalyst in this process. Nowhere else in the world can one find more professionals who have designed, redesigned, financed, refinanced, improved, managed, and sustained healthy, affordable, and environmentally sound water and sewer systems—not just on a pilot basis but continuously for decades. Importantly, most of the hard work of problem solving, system design,

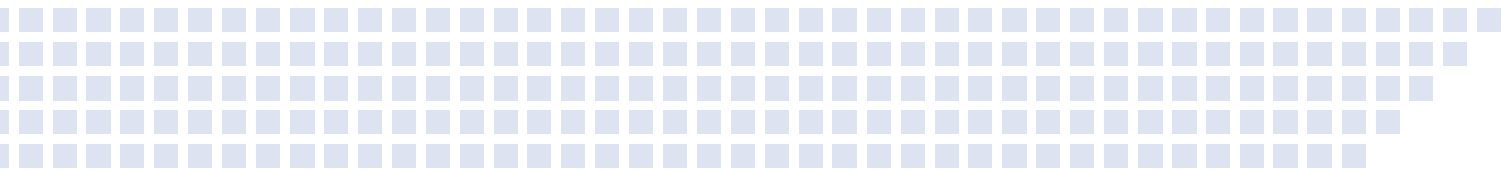
expansion, improvement, and financial sustainability of water and sewer services takes place among U.S. local governments and through engagement of those local governments with the citizens who use and pay for those services.

Higher levels of government help by maintaining a healthy banking system, offering credit enhancement, and enforcing public health and environmental regulations, but those are not substitutes for local government programs that make the water flow to the poor or make the sewage flow away. The heart of those services is in self-interested problem solving by city officials guided by local elected leaders in touch with informed and empowered citizens. ICMA serves as both a home to those professionals and local governments and a platform from which they can offer that knowledge to less developed countries.

ICMA's approach to water and sewer services for the urban poor draws on these strengths in a way that reinforces its mission and produces measurable improvements in the lives of the poor. While the organization's many publications and conferences demonstrate its commitment to disseminating innovations in government, it is not an academic organization. Instead, it is a fundamentally practical organization made up of professionals who do what works and then continuously learn from that process. Our strategy for promoting improvements in water and sewer services to the world's poorest urban citizens reflects that same focus and approach.

Notes

- 1 Reported in Chapter 12 of "Bringing Water to the Poor: Selected ADB Case Studies," African Development Bank, 2004.
- 2 World Bank Water and Sanitation Program, "The Experience of Small-Scale Water Providers in Serving the Poor in Metro Manila: Increasing Access," January 2004.
- 3 Noted in "Urban Poverty and Vulnerability in Kenya," Oxfam GB Briefing Note, 10, September 2009.



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