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Technical Brief 6

URBAN WATER SERVICES

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TECHNICAL SERIES

INTRODUCTION

Cities play a key role in building a better future in an increasingly urbanized world. Improved urban services, such as reliable domestic water services, contribute to improved economic growth, health, and cleaner environments. The purpose of this technical brief is to provide guidance on factors to consider in the United States Agency for International Development's (USAID's) urban water programming.

KEY TAKEAWAYS

- Activities need to account for the fact that **urban residents access drinking water from a variety of sources and providers**, which can be complementary and depend on where they live.
- **Focus on capacity and efficiency improvements first, before making large investments in infrastructure.** Use available public and donor resources to improve services and build credibility with customers before aiming to raise revenues and apply commercial principles to service provider improvements.
- **Ensure targeted interventions for the underserved, poor, and vulnerable.** Informal areas are growing faster than providers can currently respond, and non-utility service providers often play an essential role in servicing these groups.
- Activities must invest in the **governance, institutional, and financial arrangements** that support improved urban water services. Positive incentive structures must be embedded across policy, institutional, regulatory, and financial structures in order to achieve sustained improvements in service delivery.

THE URBAN WATER SERVICE CHALLENGE

The global urban population is rapidly expanding, especially in Asia and sub-Saharan Africa.¹ As of 2018, an estimated 4 billion people, or 55 percent of the global population, lived in urban areas. Currently, 60 million new residents move to urban areas every year. Much of this growth is happening through expansion of metropolitan areas and secondary cities, especially in unplanned, informal settlements that lack basic services. Although precise numbers are difficult to determine,² it is estimated that more than one in four urban residents live in informal settlements, amounting to over 1 billion people with inadequate housing, limited access to basic services and usually lacking land tenure security.³ Rapidly growing small towns are also creating a new set of challenges in service delivery.⁴

While global statistics show that urban populations are far more likely to have sewer connections and piped water supplies,⁵ these figures mask significant disparities between rich and poor populations. And, while rural access to drinking water has improved steadily since 1990, urban access has stagnated or improved only marginally,⁶ even falling in some places.⁷ In sub-Saharan Africa, while access to piped water in urban areas increased in absolute numbers, the percent of the urban population served with piped water on premises declined from 40 percent to 33 percent.⁸ In a dramatic example, in Nigeria access to piped water in urban areas declined from 32 percent in 1990 to 7 percent in 2015.⁹ These access figures also hide issues of service quality, such as poor reliability and intermittent supply, which have consequences for the quality of drinking water and ability of households to obtain sufficient supply.¹⁰ The pressures created by climate variability, aging infrastructure and increasing demand from a burgeoning urban population are putting even more strain on urban water services.

What is Urban?

While the exact definition of urban is based within a national context, urban areas tend to offer a wider range of services and facilities than non-urban areas and span a range of forms, including central cities, small towns, and peri-urban areas. A small town will often be smaller than central cities and secondary towns, but larger and denser than rural villages. Countries generally have their own definition for classifying urban areas based on country-specific criteria.¹¹

What is Peri-Urban?

Peri-urban areas are physically just outside existing urban areas and have characteristics of urban conditions: dense populations, specific economic activities, and an intensive concentration of mobility, with the population living there usually utilizing services in the city.

What is an Informal Settlement?

U.N. Habitat defines informal settlements as urban areas with one or more of the following characteristics: poor structural quality of housing; overcrowding; inadequate access to water and/or sanitation and other vital infrastructure; and insecure residential status.

USAID recommends following the local definitions of these and other terms (e.g., “urbanizing” and “pre-urban”), while designing interventions to be responsive to the local context.

¹ UN/DESA. (2018). *2018 Revision of World Urbanization Prospects*. United Nations, Population Division, New York.

² M. Kuffer, C. Persello, K. Pfeffer, R. Sliuzas and V. Rao. (2019). “Do we underestimate the global slum population?” 2019 Joint Urban Remote Sensing Event (JURSE), Vannes, France.

³ World Bank. (2014) and UN. (2019).

⁴ Dos Santos, S. et al. (2017). *Urban growth and water access in sub-Saharan Africa: Progress, challenges, and emerging research directions*. Science of the Total Environment.

⁵ WHO/UNICEF Joint Monitoring Programme

⁶ Dos Santos, S. et al. (2017). *Urban growth and water access in sub-Saharan Africa: Progress, challenges, and emerging research directions*. Science of the Total Environment.

⁷ WHO/UNICEF Joint Monitoring Programme

⁸ Van Den Berg, C. and A. Danilenko. (2017). *Water utilities in Africa: How will they cope with a rapidly growing, thirsty population?* World Bank Blog.

⁹ World Bank Group. (2017). *A Wake Up Call : Nigeria Water Supply, Sanitation, and Hygiene Poverty Diagnostic*. WASH Poverty Diagnostic.

¹⁰ Kumpel, E., Nelson, K.L. (2016). *Intermittent water supply: prevalence, practice, and microbial water quality*. Environ. Sci. Technol. 50, 542–553.

¹¹ For further reference about the term “urban” see USAID’s Urban Policy.

URBAN WATER SERVICE DELIVERY MODELS

Water service delivery in urban areas of developing countries is often fragmented, with people relying on multiple sources for water. Public water utilities that deliver water to households via piped connections are what many people think of as the traditional urban water service delivery model. However, poorer households in urban areas most often access water from utilities via public standpipes, kiosks, or other shared access points, rather than having water available on premises. Although services can be cheaper to deliver at these communal points, they are less convenient for households and often only provide water for limited hours. Limiting service hours is a common strategy for utilities to control supply shortages, but it creates water quality problems, increases the household burden of collecting water, and may mean the household does not have a sufficient quantity of water.

Although utilities are a key service provider and have the best ability to achieve scale and financial sustainability, many people do not have access to utility services or these services are insufficient to meet household needs. This is particularly acute in peri-urban areas and informal settlements where people are settling the fastest. In addition, insufficient or poor urban planning creates technical challenges for infrastructure expansion in these areas. As a result, many people in urban areas access drinking water from sources other than public utility connections, including:

- **Decentralized piped water schemes:** In some urban areas where utility services are not available, operators of small piped networks may offer services, either via household connections and/or public taps. These small scale schemes might be operated by private sector entities or community organizations, and may be part of the formal municipal services via delegated management agreements, or may be operating informally and outside regulatory frameworks.¹²
- **Kiosks:** In some places, people access water via stand-alone kiosks where people can come to collect water for a fee. These kiosks often include their own borehole for accessing raw water and some level of water treatment. These may be run by non-governmental organizations (NGOs), community groups, or private entrepreneurs.
- **Water vendors:** In many cities, private water vendors (formal and informal) have emerged to fill the gaps in supply. These vendors transport water to underserved urban areas often through tanker trucks, gallons, sachets, and carts.¹³
- **Self-supply:** Some urban dwellers elect to use a self-supply approach, where they self-finance and manage their own source of water. In urban areas this approach is often used by wealthier households in order to assure a reliable service, in contrast to the rural water sector. Some households invest substantial amounts of money into wells and electric pumps in order to access groundwater on site.

The relative importance of these different service types varies significantly between urban areas. Although these providers are currently an important and indispensable source of water for unconnected residents of many cities,¹⁴ if not properly regulated they can create water quality and affordability issues for consumers. Poor consumers who rely on these unregulated providers routinely pay far more for water than wealthier people, often requiring a large portion of their daily wages.¹⁵ These providers can also create risks to groundwater resources, as abstraction by these providers are often unregulated. The degree to which projects engage each of these types of providers will vary based on context.

¹² Safe Water Network. (2017). *The Untapped Potential of Decentralized Solutions to Provide Safe, Sustainable Drinking Water at Large Scale: The State of the Safe Water Enterprises Market*.

¹³ Dagdeviren, H. and Robertson, S. (2011). *Access to Water in the Slums of Sub-Saharan Africa*. *Development Policy Review*. Development Policy Review 29(4):485-505.

¹⁴ Matsinhe, N. et al. (2008). "Regulation of formal and informal water service providers in peri-urban areas of Maputo, Mozambique"

¹⁵ WaterAid (2016). "Water: At What Cost? The State of the World's Water 2016."

WORKING WITH PRIVATE WATER PROVIDERS IN PERI-URBAN MOZAMBIQUE

In Mozambique, more than 1,800 private piped water providers serve over 23 percent of the peri-urban population via small piped networks that deliver water to household connections and standpipes. These providers have experienced difficulty raising financing partly due to their need for a longer-term time horizon to operate (licensed providers have, on average, five-year licenses) and uncertainty regarding how long they can operate within a given area. In addition, the providers' systems can be decommissioned without compensation when the public sector is able to extend its networks, creating a level of risk that is unacceptable to commercial finance institutions. To address these challenges, Water, Sanitation, and Hygiene Finance (WASH-FIN) and the Supporting the Policy Environment for Economic Development (SPEED+) programs have supported these private water providers by helping develop and implement a clear licensing and regulatory framework; facilitating a better understanding of private water providers' financial contribution to the sector; and facilitating dialogue to establish symbiotic relationships between private water providers, public water utilities, and national and local government actors.

APPROACHES FOR IMPROVING URBAN WATER SERVICES

Creating sustainable improvements in urban water services requires taking a holistic approach that addresses sector governance, finance, and the performance of water service providers. Reforms in these areas are interconnected and can generate virtuous cycles as improvements in one area enable and drive improvements in other areas.¹⁶

I. STRENGTHENING GOVERNANCE AND INSTITUTIONAL ARRANGEMENTS

Achieving sustainable outcomes of water service delivery in the long run requires attention to the sector-wide governance and institutional arrangements in a given country that inhibit or enable positive sector outcomes,¹⁷ including:

- **Policy:** the legal and regulatory framework by which governments guide actions with the objective of achieving specific goals. There are many processes and tools for creating and implementing policy. Yet, in many countries there is a large gap between stated policies and the actual situation. Even good laws may fail to change incentives and achieve objectives due to poor implementation or enforcement.
- **Institutions:** the organizations and mechanisms that are established to formulate policy and implement actions on the basis of formal and informal rules and norms. Institutions shape service provision as they outline the roles and responsibilities of actors from national policymakers to frontline service providers. Often, roles and responsibilities are not clear, partially as a result of the complexity of governance of urban water services. Also, institutions often lack the capacity to successfully implement policies and regulations.
- **Regulation:** the rules and performance standards and enforcement. An effective regulatory environment is essential to ensure the delivery of affordable, quality and sustainable services to citizens. Many countries have established WASH regulators with responsibility for tariff setting, monitoring

¹⁶ Goksu, A., Bakalian, A., Kingdom, B., Saltiel, G., Mumssen, Y., Soppe, G., Kolker, J. and V. Delmon. (2019). [Reform and Finance for the Urban Water Supply and Sanitation Sector](#). World Bank, Washington, DC.

¹⁷ Mumssen, Y., Saltiel, G. and Kingdom, B. (2018). [Aligning Institutions and Incentives for Sustainable Water Supply and Sanitation Services](#). World Bank, Washington, DC.

operational and financial performance, and creating incentives for efficient investment. However, evidence shows that having a regulatory agency in place does not automatically produce better results—especially on coverage—as most regulators primarily focus on the existing customers, not on expansion or business viability.¹⁸

Work on governance and institutional arrangements should also account for the role of small and informal providers (SIPs)—the small piped scheme operators, vendors, and kiosk operators described above. Given the current limitations of utility-managed water services, SIPs play an important role in delivering water, especially to the poorest and most vulnerable, yet they are often not officially recognized or regulated. Evidence suggests that bringing SIPs into the regulatory fold would allow for oversight that could dramatically improve quality and services.¹⁹ Any work on policy or regulation regarding SIPs should ensure there are not unintended negative effects on users of those services.²⁰

Reforming governance and institutions requires an inclusive and coordinated process that incorporates the needs of the entire population. Any institutional context has a diverse set of actors, including the government, private sector, civil society, and water consumers. Citizen engagement is also critical to this process as service providers must be accountable to their customer base. Many countries have decentralized service provision to a local level under the theory that local governments will have a better understanding of needs and be more responsive. In practice, success has been mixed, as these local authorities may lack the capacity or resources and systems may be too small to achieve economies of scale.

ASSISTING MUNICIPALITIES IN GUATEMALA TO IMPROVE GOVERNANCE AND SERVICE PROVISION

USAID's Nexos Locales (2014-2023) program was designed to help municipalities across the Western Highlands of Guatemala to improve public service delivery and increase citizen participation in the local development agenda, and is currently working with 22 municipalities. The lack of basic public services, including water and sanitation, are among the major issues facing these communities that hamper their social and economic development. Nexos Locales mapped and analyzed water services, demonstrating areas of inequitable water distribution and highlighting opportunities to improve and expand services in urban areas.

To build citizen engagement and accountability, Nexos Locales is helping the municipalities to craft Citizen Charters—agreements between residents and the municipal government on the standards expected to ensure adequate service provision. For example, the Citizen Charter on water service provision in San Marcos established agreements on water quality standards and responsibilities of each group. Nexos Locales has also helped municipalities establish record-keeping practices and develop systems to monitor service provision. This enables continuous feedback, helps resolve conflicts, and increases end-users' understanding of the constraints that municipalities face. As part of its sustainability strategy, Nexos Locales also promoted citizens' responsibility by highlighting the importance of paying water fees. This experience is expected to be replicated in other municipalities.

¹⁸ van den Berg, C. and A. Danilenko. (2017). *Performance of Water Utilities in Africa*. World Bank, World Bank, Washington, DC.

¹⁹ Trémolet, S. and J. Halpern. (2006). *Regulation of Water and Sanitation Services: Getting Better Service to Poor People*. Output-Based Aid Working Paper, 8. World Bank, Washington, DC.

²⁰ Trémolet, S. and C. Hunt. (2006). *Taking Account of the Poor in Water Sector Regulation*. Water and Sanitation Program Working Note, no. 11. World Bank, Washington, DC.

2. IMPROVING WATER SERVICE PROVIDER PERFORMANCE

Water utilities are often still the best mechanism to reach large areas of unserved populations. This is because many utilities are already well established entities with legal mandates, expertise, and the potential to attract commercial finance. However, many utilities in developing countries currently perform poorly, despite a history of interventions from donors and development partners. These utilities are often stuck in a cycle of decline where poor services lead to consumer disengagement and failure to pay, which leads to a decline in the viability of the service provider and further deterioration of performance. Turning this around into a virtuous cycle of improvement in services, tariff collection, and performance requires multi-pronged interventions.

While evidence shows that there is no one-size-fits-all solution for a utility turnaround program, successful examples include two important pre-conditions: 1) a competent and incentivized utility manager with a relationship with the local and national government that allows for autonomy, and 2) a government champion at either the national or regional level who is committed to making the changes to promote the right incentives. Utility turnarounds also generally rely on certain actions being taken in approximately the same sequence.²¹ Early steps in this process generally include establishing a baseline for services, setting clearly defined targets, improving management information systems (MISs), improving human resources, and increasing billing and tariff collection. Successful cases have improved services and financial performance first, while building formal institutions progressively. Providers should work to engage citizens and build credibility with customers before raising tariffs and only make large capital investments once performance has improved. It is also important for service providers to proactively plan for future risks and climate variability.

IMPROVING UTILITY PERFORMANCE IN HAITI

To address the urban water service challenges in Haiti, the [USAID Water and Sanitation \(WatSan\) Project](#) (2017-2021) is helping local water utilities (known as CTEs) to become self-sufficient by supporting them to adopt a commercial approach to managing water services. Following analysis of each CTE's performance in key utility management areas of 1) organization and strategy, 2) human resource management, 3) financial management, 4) technical operations, and 5) commercial operations, the WatSan Project supported the CTEs to improve billing and collection, reduce energy costs, and reduce non-revenue water through leak repairs.

As a result of these interventions, water service reliability and quantity of water available improved enough for the CTE of a secondary city, Mirebalais, to increase its tariffs and the amount of water supplied to better enable it to fully cover its own costs. The Mirebalais CTE raised its basic tariff from \$1.10 to approximately \$2.50 a month for its private clients and imposed a similar increase on its commercial clients. Mirebalais customers did not object to the tariff increase because they were satisfied with the improved services. As a result, the CTE increased its revenue by over 50 percent compared with prior months.

²¹ Soppe, G., Janson, N., and S. Piantini. (2018). [Water Utility Turnaround Framework A Guide for Improving Performance](#). World Bank, Washington, DC.

3. FINANCING FOR URBAN WATER

The gap in available funding for achieving universal water and sanitation services is well documented, with over 80 percent of countries reporting insufficient finance to meet national water service targets.²² The three traditional sources of financing are 1) tariffs or user fees, 2) domestic tax revenue, and 3) transfers from external sources, such as donor funds. Better directing available public resources and working to improve the financial performance of utilities are both critical to improving and sustaining urban water services.

Public, domestic resources are primarily used to fund large capital investments in infrastructure for urban water services. In addition, public funds can be used to establish policy frameworks, enforce regulation, and structure incentives to achieve financial sustainability. However, many cities may also subsidize operations costs if utilities cannot recover costs from tariffs. In such cases, it is important to ensure that subsidies are provided in a predictable and transparent manner so that the utility can conduct long-term planning. Because public funds are scarce, they are best targeted where other funds are unavailable and costs are unlikely to be recovered through tariffs, such as to provide access to the poor in peri-urban and rural areas. Unfortunately, despite stated goals, subsidies to the water sector from taxes and transfers still often disproportionately benefit the wealthy.²³

Within the WASH sector, urban utilities generally have the highest potential for reaching cost recovery and accessing repayable finance.²⁴ Achieving this goal would free up other public and donor funds for other segments of the WASH sector that are not likely to be commercially viable. Working to improve utility performance, as described in the previous section, is an important step towards achieving this goal. Yet, despite their potential, recent evidence shows that only 15 percent of utilities in developing countries cover operations and maintenance (O&M) costs and generate cash surpluses. However, **operational efficiency gains, such as increasing collection rates and reducing non-labor costs by 15 percent, would enable 65 percent of utilities to cover operating costs and some portion of debt service.**²⁵ Tariffs can also generally be increased as service quality improves and customers are more willing to pay for services, and cross-subsidies between users may be introduced, although many governments are still reluctant to adopt cost-reflective tariffs.

Eventually, many urban water utilities may be able to access repayable finance to support services like those in high-income countries. The [Finance Technical Brief](#) provides more information on this topic.

PROMOTING COST-REFLECTIVE TARIFFS IN NEPAL

In Nepal, [USAID's WASH-FIN \(2017-2021\)](#) project is engaging with partners to develop viable models for decentralized local/municipal water, sanitation, and hygiene (WASH) service delivery. One of the activities is a cost and tariff study of Surkhet Valley Water Supply User Organization (SVWSUO) in Birendranagar, Nepal. Study results were used to calculate an estimated tariff based on the principles of cost recovery, financial viability, efficiency, and social equity. The study contributed to SVWSUO's approval of an average 23 percent tariff increase across blocks in 2018, which still keeps costs below those charged by private bottled water vendors and tankers. There was no increase in tariff for those users consuming less than 8m³ per month. Since then, SVWSUO has also approved a Five-Year Business Plan (2019–2024) that includes capital projects and associated costs and a plan to review the tariffs every two years.

Source: USAID's [WASH-FIN Surkhet Valley Water Supply Users' Organization Water Tariff and Cost Review Update](#)

²² WHO/UN-Water. (2017). [Financing Universal Water, Sanitation and Hygiene under the Sustainable Development Goals: UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water \(GLAAS\) 2017 Report](#). World Health Organization, Geneva.

²³ Abramovsky, L., Andrés, L., Joseph, G., Rud, J.P., Sember, G., Thibert, M. (2020). [Study of the Distributional Performance of Piped Water Consumption Subsidies in 10 Developing Countries](#) – Policy Working Paper. World Bank, Washington, DC.

²⁴ Goksu, A., Trémolet, S., Kolker, J., and B. Kingdom. (2017). [Easing the Transition to Commercial Finance for Sustainable Water and Sanitation](#). World Bank, Washington, DC.

²⁵ Kolker, Joel Evan; Bill Kingdom, Sophie Trémolet, James Winpenny, and Rachel Cardone. (2016). [Financing Options for the 2030 Water Agenda](#). World Bank, Washington, DC.

PUTTING IT INTO PRACTICE

In the past, governments and development partners have worked to address urban water services through single infrastructure-heavy interventions that often lacked sustainability. For example, many projects designed to generate major changes were done without first addressing the foundational issues of sector governance, financial reforms, and utility performance. Reforming urban water services is complex and requires taking a long-term view, which requires the following:

A. Understand the political economy challenges, power dynamics, and incentives: Sustainably reforming institutions and improving urban water service delivery requires a thorough understanding of the local context. Proposed approaches must fit the current context, rather than attempting to follow a textbook approach. At the start of a project, it is important to analyze the local institutional roles and relationships to understand gaps, redundancies or misalignments and identify levers/opportunities for change. When considering changing institutional arrangements, costs, benefits and incentives must be understood. For example, in some contexts, it may make sense to decentralize services, while in others aggregating providers under larger utilities may be more appropriate. The role of public and private sectors will also vary. The [Governance Technical Brief](#) provides guidance on tools and approaches for understanding political economy and structuring incentives.

It is also important to do a basic performance appraisal of any water service providers that a project intends to work with. This is a critical first step for understanding what the biggest issues are and the short-term challenges that must be addressed.²⁶ The International Benchmarking and Network for Water and Sanitation Utilities (IBNET)'s [Benchmarking Database](#) is a good resource for looking at a country's or region's water utility performance.

It will be impossible for a single actor to take on all of the required activities to improve water services in an urban area, so donor coordination must be improved. USAID, as a bilateral donor, most often provides technical assistance, while development banks most often provide loans or credit for capital investments. By working in close coordination, development partners can holistically address urban water challenges in order to put services on a path to sustainability.

B. Prioritize investments in people and institutions: Capacity building (both within utilities and government institutions) needs to happen before making large investments in new infrastructure. Government champions and competent, autonomous management of services is a critical first step to improving urban services.²⁷ Governance arrangements should be structured in ways that enable these champions to make critical decisions and should reward performance, and ideally enable governments to adopt successful reforms at a national scale.²⁸ Where incentives are not well structured to enable high quality service delivery and accountability to water users, these need to be changed.

Some examples of interventions designed to strengthen the institutions that govern urban water services include:

- Support the clear definition of roles and responsibilities of the entities involved
- Create and support implementation of policy frameworks that give service providers the necessary autonomy to implement service improvements

²⁶ USAID Sustainable Water and Sanitation in Africa (SUWASA) [Performance Pathway for Water Utilities](#)

²⁷ Soppe, G., Janson, N., and S. Piantini. (2018). [Water Utility Turnaround Framework: A Guide for Improving Performance](#). World Bank, Washington, DC.

²⁸ [India Financial Institutions Reform and Expansion–Debt and Infrastructure \(FIRE-D\) Ex-Post Evaluation](#)

- Support the development and implementation of a regulatory framework that includes utilities and other service providers
- Establish or strengthen accountability platforms such as utility benchmarking or citizen engagement forums

It is also important to work on utility management and human resources.²⁹ Within a utility or other service provider, some key interventions for improving utility management and human resources capacity include:

- Strengthen or grow training programs for managers and staff
- Support utility business planning processes
- Develop a staffing plan to identify required composition, size and structure of the utility’s staff

C. Look for quick wins to improve service provider performance and build credibility. Actions that cost less and require lower political capital should be done first. Providing early improvements to service provider finances and service quality will help build the credibility of service providers and will provide higher value for the investment than large-scale construction. Activities should focus on using external funds to create these service quality improvements, before pushing for tariff increases. The specific interventions that will be feasible over a given timespan will vary based on the context, but some examples of these are provided in Table I. The sequence of which interventions make sense will also vary by context and should be based on the analysis of challenges done in Phase I.

TABLE I: SAMPLE “QUICK-WIN” INTERVENTIONS FOR IMPROVING SERVICE PROVIDER PERFORMANCE

Financial Management	<ul style="list-style-type: none"> • Develop customer databases linked to billing and collection systems • Improve tariff collection rates • Lower overhead and operations costs
Efficiency improvements	<ul style="list-style-type: none"> • Install metering system and carry out proper bulk water maintenance and reading to quantify non-revenue water • Develop leak detection programs • Provide training to staff on essential tasks for managing pressure to reduce non-revenue water • Reduce energy costs (e.g., connection to electrical grid or installation of solar systems) • Prepare standard operating procedures for O&M of fixed physical assets
Customer Service	<ul style="list-style-type: none"> • Set aside budget and staff to provide service for customers on billing, responding to customer concerns, and connecting people to service • Put in place basic system for informing customers ahead of time about supply interruptions • Provide multiple and convenient ways to pay bills, including mobile payment systems

²⁹ Indonesia Environmental Service Program (ESP) Ex-Post Evaluation

D. Embed reforms in local systems to ensure sustained services: Eventually, the goal of activities should be that service providers can reliably provide high quality services and continue to expand access to the urban population, without a reliance on transfers of external funds from donors or development partners.

Ensuring sustainable improvements in services requires embedding appropriate incentives at both the service provider and governance levels. At this phase, activities should focus on interventions that support strengthening local systems, expanding services, and moving towards financial viability, such as:

- Build accountability, for example by establishing benchmarking of a limited set of key performance indicators or an index at sector, municipality, or utility level³⁰
- Support master planning processes, at either the city or regional level to ensure solid planning for capital investments and maintenance
- Development of long-term financing strategy for services, including plans for projects that can be financed with commercial loans
- Support proactive planning for future risks and shocks, including those due to climate variability and emerging pandemic threats
- Reforming tariffs to be based on the cost of service provision, while ensuring appropriate cross-subsidies so that the poor can still access services
- Support the utilization of on-going monitoring systems, including asset management systems, audits, and assessments as needed
- Strengthen the utility systems needed to monitor operations, billing, human resource management, financial management, and customer service

³⁰ For a list of common benchmarking indicators see [American Water Works Association \(AWWA\) Utility Benchmarking Survey 2020](#) list of indicators

MEASUREMENT AND LEARNING

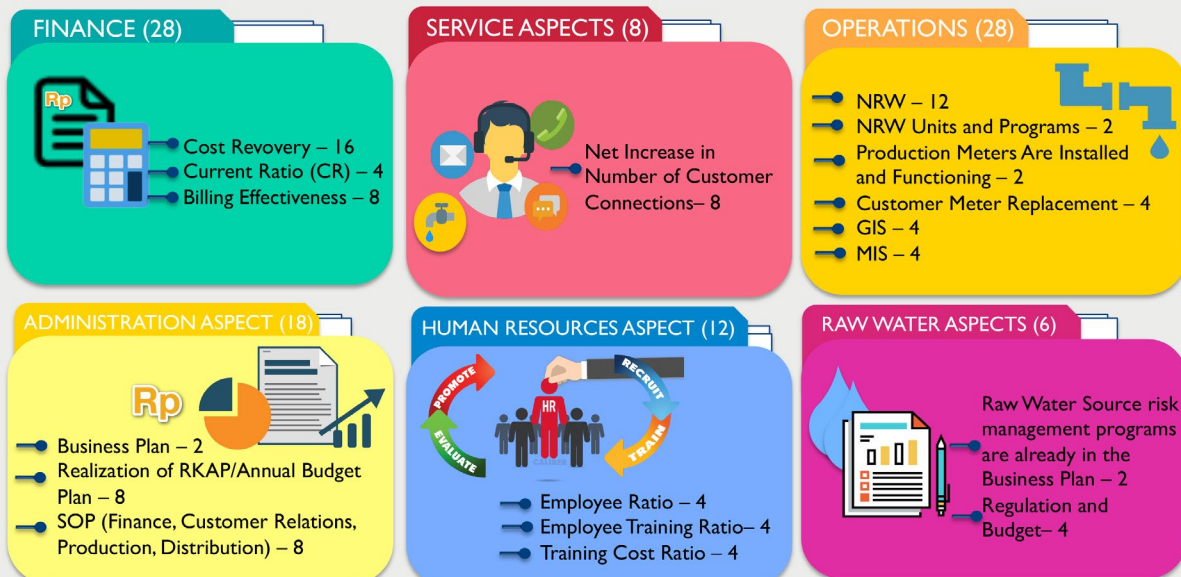
Reforming urban water service delivery is often not a linear process, making flexibility, learning, and adaptation critical to success. For monitoring progress, it is important to select standard and custom indicators that measure how the activity is working and ensure the program is learning from its experience. Indicators should go beyond tracking the number of people reached to capture both near term and long term impacts, changes in the performance of service providers, and progress on governance. Monitoring methods may also need to build in flexibility in order to capture emergent changes or responses to shocks.

Indonesia Urban Water Utility Performance Index

To address the performance of water utilities in Indonesia, USAID/Indonesia Urban Water, Sanitation, and Hygiene Clean Environment for All (IUWASH PLUS) (2016-2021) activity is providing technical assistance to over 33 municipal water utilities to establish regular monitoring of overall performance through a Performance Index (PI). The PI was established to determine how utilities are performing and where key weaknesses may exist that prevent them from achieving service excellence. By identifying weaknesses linked to performance, the PI outlines a pathway to guide improvements for the utility's governance institutions and management.

The index consists of 18 key performance indicators across these categories: 1) Financial performance, 2) Operational performance, 3) Service coverage, 4) Human resources management, 5) Business planning and standard operating procedures, and 6) Safeguarding of raw water sources. For each of these, detailed criteria are identified, measured, and scored, with a total score of 100 points. Calculated annually, the index results are shared with national and local government stakeholders and nearby utilities to incentivize improvements and increase accountability. Through 2020, after four years of project implementation, 32 utilities have improved their scores by an average of 9 percent, and 85 percent are considered "healthy" by the Government of Indonesia. Though skeptical in the beginning, local government and water utilities have come to embrace the PI as a useful tool in maintaining accountability in management.

Update on PDAM Performance Index



MEASURING SUCCESS FOR URBAN WATER ACTIVITIES

USAID has standard indicators for water service delivery, which focus on access and service quality improvements, as well as tracking improvements in finance and institutional capacity:

- HL.8.1-2: Number of people gaining access to safely managed drinking water services as a result of U.S. Government (USG) assistance
- HL.8.1-3: Number of people receiving improved service quality from an existing basic or safely managed drinking water service as a result of USG assistance
- HL.8.3-3: Number of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services as a result of USG assistance

Custom indicators are also a critical component of monitoring for the likelihood that these services will be sustainable in the long run. Illustrative examples of these are:

- % reduction in non-revenue water
 - % change in operating cost ratio
 - % change in continuity of service (#hours/day)
 - Average Staff/1000 population served
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CONCLUSION

Urban areas face many challenges in ensuring universal, reliable drinking water services yet experience shows that successful and sustainable reform is possible. There are many pathways to reform, but all must address the fundamentals of sector governance, finance, and service provider performance. Positive incentive structures must be embedded across policy, institutional, regulatory, and financial structures in order to achieve sustained improvements in service delivery. Activities should always account for the variety of service providers working in urban areas and ensure that interventions reach the poor and vulnerable within an urban area.

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2. GIZ. (2018). [Access to Water and Sanitation in Sub-Saharan Africa](#)
3. Goksu, A., Bakalian, A., Kingdom, B., Saltiel, G., Mumssen, Y., Soppe, G., Kolker, J., and V. Delmon. (2019). [Reform and Finance for the Urban Water Supply and Sanitation Sector](#). World Bank, Washington, DC.
4. USAID's Sustainable Water and Sanitation in Africa (SUWASA) [Performance Pathway for Water Utilities](#)