



Water Services that Last in Central America

Recommendations for financial viability, equitable distribution, and water source protection

Prepared by Catholic Relief Services

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According to official figures, the percentage of Central Americans with access to improved water has progressed rapidly over the past two decades, increasing from about 60% to about 80% (average). However, progress in the water sector is likely to backslide in the coming years for several reasons: first, the way water service indicators are currently measured exaggerates progress; second, there are serious threats to water quality; and third, current infrastructure is degrading rapidly.

Problems related to water access and availability in the region are generally problems of poor water management, not scarcity: water resources are wasted, contaminated, and distributed inequitably as a result of poor policies and management at micro, local, national, and regional levels. These problems disproportionately affect the poor in the region.

There is an emerging consensus among leading organizations and think tanks that the sector needs to shift its focus from infrastructure to sustainable and financially viable water services.¹ This brief is designed to contribute to this discussion by focusing on the following question:

How can external investments more effectively contribute to the goal of water services that last, for everyone?²

We argue that solutions to achieve sustainable water services for everyone, the sector must focus primarily on two goals:

- (1) Make water services financially viable and equitable, and
- (2) Protect water sources for current and future water demand.

To achieve these goals, investments should prioritize the following:

- Strengthen the capacity of community and government water service delivery providers, focusing on locally managed services combined with robust monitoring and regulation by government.
- Focus on cost recovery: highlight the need for water users to pay the real cost of water services, and structure subsidies that are pro-poor and pro-conservation. Water metering is a key tool to make this happen.
- Use credit wisely: governments, bilateral funders, and donors should collaborate with governments to use funds strategically to leverage credit for improving water infrastructure and services.
- Encourage corporations, especially local industries, to invest in water stewardship based on a triple-bottom-line approach of: profits, people, and planet.
- Protect water sources urgently, with a focus on small and medium towns, and peri-urban areas, with rapidly growing populations.

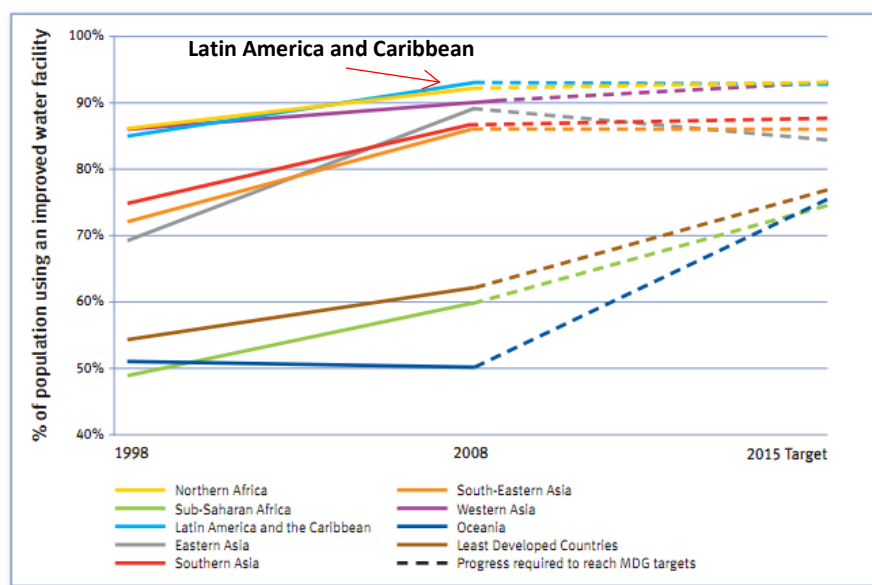
¹ As an example, the Sustainability Forum held in Washington DC March 10-11 (2013) focused on this issue: <http://sustainablewash.org/2013-wash-sustainability-forum-resources>

² The phrase “water services that last” is adopted from IRC’s excellent research at www.waterservicesthatlast.org/, and the question echoes the phrase Everyone, Forever, promoted by Water for People www.waterforpeople.org

LAC data on access to water are good, but there are serious threats

As a region, Latin America and the Caribbean (LAC) has already met its 2015 Millennium Development Goal for the percentage of population with “access to improved water supply”; LAC has the highest coverage of any other developing region, at more than 90%.³ However, disaggregating the data by country, several Central American countries are below the regional average, at around 80%. While progress has been rapid since the late 1980s, there are some serious challenges for the water sector in Central America, with real potential for backsliding.

Figure 1: The LAC region, on whole, has met its MDG targets. Source: UN Water Joint Monitoring Program (JMP) Report 2011



- Despite progress in LAC, there are currently 77 million people without access to an improved source of water, according to UN figures.⁴
- The actual definition of “access to an improved source of water” fails to consider two critical factors: **(a) water quality and (b) sustainability of access**. When both of these factors are included in global assessments, tens of million more people would be considered “water insecure” in the region.
- The official figures and projections reported by the UN are **based on a false assumption that once communities have access to water they always have it**. In fact, water systems (hand-pumps, borewells, and gravity systems) require constant maintenance or they tend to fail fairly quickly. In Central America an estimated **70% of rural water systems begin failing within a few years of construction**. Few communities collect enough user fees to cover maintenance and operational costs of water systems (even when users can afford to pay).

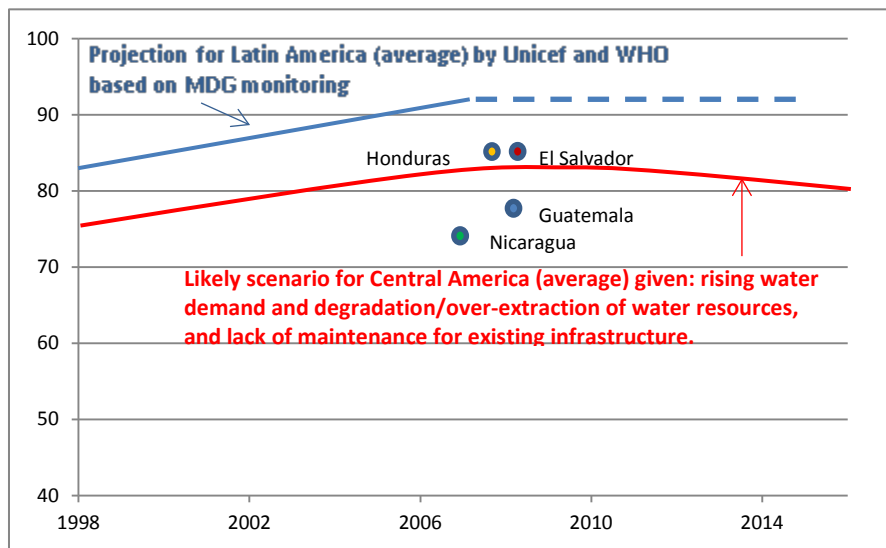
³ Drinking Water Equity, Safety and Sustainability: Thematic report on drinking water 2011. WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP). Website: www.wssinfo.org

⁴ JMP, 2011

- In Latin America, it is typical for rural and small urban communities to have only **intermittent water service** because of poor management. Even in urban centers, such as San Salvador, many marginal neighborhoods have intermittent supplies, with only a few hours of running water every day.
- **Rapid urbanization** and economic growth drive up the demand for water. Over the past decade, the population in nearly all countries in the region transitioned from majority rural to majority urban, and this trend is accelerating rapidly. As the poor become increasingly urbanized, people living in peri-urban shanties and inner-urban slums struggle most to access clean water. The urban poor usually pay much more for water than their wealthier neighbors because they often have to buy from vendors (such as water trucks), rather than getting water from piped systems.
- Surface and groundwater resources (aquifers, springs, streams, and lakes) are threatened by **pollution** and environmental degradation. In Central America, 90% of surface water is contaminated, and there has not been sufficient focus on protecting drinking water sources. Up to 60% of the water used in the region is pumped from aquifers, which are also increasingly threatened by urbanization and contamination.
- It will be much more challenging to reach the last 10-15% of people without “access to an improved water supply” because these people tend to be: (a) geographically isolated, (b) marginalized socially or politically, or (c) they are people that refuse to pay for water services.

For all these reasons, the percentage of people in Central America with “access to an improved water supply” is not likely to exceed 85% and will probably slide backward in the coming years. Also, as MDGs indicators are revised in the coming years, the current rates for the region are likely to be revised downward.

Figure 2. Central American countries will backslide without serious efforts to improve services and protect water resources



Recommendations for External Investments in the Water Sector to Achieve Water Services that Last

Investing in water supply is a [smart investment](#) for improving human and economic development: a conservative figure is that every dollar invested in improving water supply generates six dollars in improved health and economic performance. But international funding for the water sector needs to be more effective in this Central America. Donors have over-emphasized funding infrastructure and under-funded the management and operation of existing water services. There needs to be a shift from dependency on assistance for infrastructure toward cost recovery from water users for operation, maintenance, and upgrading services over time. With this in mind, we describe six ways that external investments could more effectively achieve water services that last, for everyone.

1. Make water service delivery the key metric for success rather than infrastructure.

- Avoid the pitfall of measuring infrastructure as an indicator of water security. Instead, focus on water service delivery, because (a) it's a more critical indicator and (b) it helps to focus analysis and solutions on services, systems and governance. In Latin America it is rare for any community not to have some sort of water infrastructure. Asking why the service delivery is poor, with rigorous and honest analysis, will lead to smarter development solutions.
- The national water services of Honduras (SANAA) has probably the best current indicators and monitoring tools in the region (see an example of a SANAA report below). These tools should be integrated into the UN-Water [GLAAS](#) monitoring.

Example of survey from Honduras National Water Agency of rural water systems (2010)

Level	General Description of Condition	No.	%	Priority Interventions
A	System functions well, there is potable water every day, with regular maintenance.	1868	35.4	Provide continued support to water committee and encourage community participation in management decisions.
B	System may function well but there are management problems. No infrastructure investments needed immediately.	1508	28.6	Strengthen (or reform) the water committee, and help build accountability. Advocate for adequate water fees.
C	System may function but there are serious management and infrastructure problems. Some investment in infrastructure may be required, but costs should be covered by community/users.	753	14.3	Same as B, but may also require assistance to obtain funding for repairs to the system.
D	System is so degraded that the community cannot repair with its own resources. A major rehabilitation or new system is needed.	1147	21.7	Define criteria (conditions) required to obtain external funding for construction, such as management structure, accountability, and increase in water fees.

2. Aid should focus on building the capacity of community and government water service providers, rather than directly funding infrastructure

Failing infrastructure is a major problem in the region and will soon hit critical levels, as many systems built in the late 1990s and early 2000s (post-Hurricane Mitch) need repairs and rehabilitation. The solution is not new infrastructure. The focus needs to be on rehabilitation and maintenance, and strengthening the capacity of water service providers.

- There is a common but false idea that water systems have a “useful lifespan” of about 15 or 20 years. As a result, parallel and redundant systems are often funded and built unnecessarily. In

fact, pipes and water tanks can last for many decades (or longer) if built right. Parts of these systems require constant care, repair, and replacement, but systems rarely have to be fully replaced. So investments should go towards improving services, not replacing systems.

- “Strengthened capacity” of water services providers should be measured by the ability to recover costs. (This is covered in more detail below).
- Water service delivery is better when run by municipal or community level organizations, rather than by national water agencies. There is ample evidence for this throughout Central America. While national policies recognize this, national budgets have been slow to reflect this shift, so one policy priority is to have national governments (and bilateral/multilateral donors) shift more financial resources and training to local levels.
- There are many water systems in rural and small urban areas that are managed well. Documentation on lessons learned from the last five years of the Howard G. Buffett Foundation Global Water Initiative (GWI) will highlight factors for success in rural systems (report due in April 2013).
- The International Water and Sanitation Centre (IRC - Netherlands) is leading very good analysis on the sustainability water service delivery and costing in Africa. See [WASHCost](#), [Sustainable Services at Scale \(Triple-S\)](#), and [Water Services that Last](#).

3. Make credit work for water supply infrastructure

- The [Internal Finance Corporation](#) (IFC) of the [World Bank](#) and the [IDB](#) have both experimented with mechanisms to provide loans to municipal governments and even to rural water committees to improve water infrastructure and services. This should be encouraged and evaluated to determine factors that make these mechanisms work (or not).
- Funding from bilateral donors (AECID, USAID, Swiss Cooperation, etc.) and by national governments in the region could potentially generate much more impact by subsidizing or guaranteeing commercial loans rather than directly paying for infrastructure through grants.
- The [World Bank – Global Partnership on Output-Based Aid \(OBA\) program](#) is an innovative grant mechanism for building infrastructure. CRS partnered with OBA and a municipal government in southern Honduras to build nearly \$1 million in water infrastructure. This partnership provides an alternative to the tendency for bilateral funding model, highlighting how NGOs can play a role in putting donor funds to work. It is worth exploring potential mechanisms for combining [OBA-type grants](#) with credit to subsidize loans for municipal governments.
- What needs to be studied and evaluated is the design of incentives to get local governments and water user associations to (a) provide good services, (b) collect user fees, and (c) repay loans.

4. Water users can and should pay the real cost of water service delivery

It does not make sense for external donors to pay for infrastructure, operation and maintenance of water systems while water users do not pay for services and while subsidies distort incentives.

- Virtually all people in this region can afford the cost of potable water, evidenced by two indicators: wide usage of mobile phones and the high consumption of soft drinks.⁵ There is a culture of not paying for water, particularly in rural areas. This needs to change.
- As a minimum, water meters should always be installed and used for monitoring consumption and for calculating payment. Communities supported by GWI have all increased their monthly fees to cover costs, and metering has been a key factor for motivating people to pay for the water they use.

⁵ There is nothing scientific about these two indicators. Rather, we simply use these as rough proxies when trying to evaluate if a family or a community has the means to pay for its water services.

- Water wastage a major issue in rural and urban systems, which raises the overall operation costs for delivering “effective water”, i.e. water that is actually used. Metering and charging water fees based on consumption are both necessary for reducing leakages, which then reduces the unit cost of “effective water” for all users.
- Subsidies for water supply distort incentives in most countries, leading to waste. In El Salvador for example, all water systems managed by the national service agency, ANDA, are subsidized by the government, no matter the consumption levels, so in effect, the government subsidizes swimming pools! Subsidies should be designed to be pro-poor and to promote conservation. For example, subsidies should only be applied for basic consumption levels, i.e. 50 liters per capita per day, and water fees should be set on a sliding (increasing) scale to encourage conservation.
- Cost recovery tends to be higher for systems managed by water utilities at the municipal level rather than national water agencies. “Mixed” water utilities that are autonomous in terms of financial management and operations, but accountable to municipal governments, appear to be the most sustainable. They tend to be run more efficiently, but the legitimacy provided by their association with municipal governments allows them to impose water fee collection. This is based on our experience in the region, but more in-depth study is required to make specific recommendations.
- Requiring water users to pay for water is necessary for credit to mechanisms to be viable; this underscores cost-recovery as the major challenge and policy/social priority.
- Private companies may also play a role in leveraging credit for water stewardship (see below).

5. Corporate Social Responsibility and Creating Shared Value for Water Stewardship

Promote Corporate Social Responsibility (CSR) or Create Shared Value (CSV) for water stewardship. Several large multinational corporations have begun investing in water resources, for environmental and social reasons, as well as to secure sufficient volumes of safe water for their operations. US-based multinationals have taken the lead on this issue, and there is an enormous untapped potential for local corporations to play similar roles – particularly as many are major water consumers. Local water bottlers, food processing companies, and many others have a “[triple bottom line](#)” incentive for improving water stewardship.

6. Protect water sources

It is urgent that urban areas, small towns, and rural communities protect their water resources now, to meet the current and future demand for this resource. More than 90% of surface water is contaminated in the region; “[bluewater](#)” resources (groundwater and surface water) are being over-extracted; and groundwater is increasingly contaminated by agriculture and industrial waste. Given the rising demand for water with economic growth and urbanization, the costs for protection will rise exponentially in future years because the costs for restoration and rehabilitation are much greater than conservation/protection.

The protection of water resources is closely tied to water users paying for the real cost of water, i.e. protecting the water source is part of the cost of water. GWI (Phase 1) provides many cases where rural and urban communities pay for the protection and improvement of water sources by dedicating a percentage of water user fees toward conservation work. GWI’s work in Honduras provides some of the best examples where rural communities and municipalities have purchased large chunks of watersheds to protect springs and streams for water supply. Honduran forestry policy allows water sources and their recharge areas to be declared “protected areas”, which other countries do not have. Similar policies throughout the region would help empower communities and local governments to purchase and protect land.