

WATER AND SANITATION MARKET ASSESSMENT: POTENTIAL REGIONAL VIABILITY OF WATERCREDIT & MICROFINANCE SOLUTIONS IN PERU

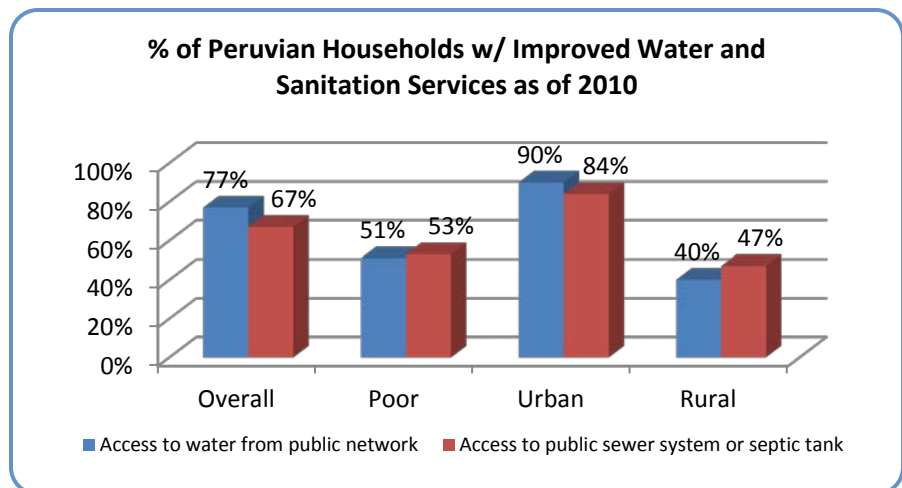
Executive Summary

This report was developed by Water.org in collaboration with the Inter-American Development Bank (IDB), the Multilateral Investment Fund (MIF) and sponsored by PepsiCo. The objective was to assess the market for water, sanitation and hygiene (WASH) services in Peru and gauge potential opportunities to expand access to new or improved WASH through financial services. It builds upon previous efforts by Water.org, IDB and MIF to identify the potential for microfinance-focused solutions for WASH in Peru, as all of these organizations are interested in better understanding the current WASH and microfinance landscapes and the potential intersections between them. PepsiCo has the goal of providing access to safe water to 3 million people by the year 2015, and this study contributes towards project preparation.

The report was based on analysis of the WASH and microfinance markets across a representative geographic sample of seven regions of Peru from September - November 2011. Researchers conducted a comprehensive series of interviews with a broad range of actors representing government entities, WASH providers, WASH materials manufacturers, non-governmental organizations (NGOs), and financial services providers; with particular focus on previous and existing efforts to improve WASH. Researchers also conducted 16 focus groups with residents in peri-urban areas of seven cities to better understand the nature of demand for improved WASH across Peru¹.

Peruvian Water and Sanitation Services Market

Access to improved WASH has increased in recent years, but significant shortfalls in both public infrastructure and household WASH facilities remain. Access to WASH varies dramatically by geography and income level. Rural households and poor² households (urban and rural) generally have very limited access to improved WASH. While urban WASH coverage is generally higher than rural coverage, pockets of peri-urban communities still exist in which access to WASH remains low. Amongst poor households, nearly 40% obtain



Source: National Institute of Data and Statistics (*Instituto Nacional de Estadística e Informática*), National Household Survey, 2011

¹ Water.org conducted focus groups in the metropolitan areas of Lima, Chiclayo, Trujillo, Tacna, Cusco, Iquitos and Pucallpa. Participants ranged from 20-50 years of age and resided in both informal and formal settlements in homes made of woven mats, wood, brick, and/or cement.

² Based on monthly per capita expenditures relative to the monetary value of a basket of basic goods, as defined by the National Institute of Data and Statistics (*Instituto Nacional de Estadística e Informática*).

their water from rivers and other surface sources, and almost 47% dispose of their waste in pits, rivers or the open³. Even for those Peruvians with access to public water networks, service is inconsistent. For many customers water only flows for a portion of each day or a few days per week. Coverage varies dramatically between localities as well. For example, public water network coverage reaches as high as 95% in the city of Cusco but is a mere 44% in Pucallpa⁴.

The price paid for WASH varies dramatically between Peruvian households with and without water and sanitation connections. According to focus groups, communities without networked services are paying on average five times more for the same quantity of water as communities with networked services. In one sample city, Iquitos, researchers estimated that if a household obtained a connection to the public water system, they would save enough in 6 months to pay for the connection or install a half-bathroom.

Increased investment is necessary to address the WASH infrastructure shortfall. The 2006-2015 National Sanitation Plan estimates that Peru needs to invest approximately USD 4 billion to reach the Millennium Development Goal of halving the existing gap in access to potable water and improved sanitation. While average annual investment in WASH has recently increased alongside Peruvian economic growth, the necessary investment in infrastructure, annualized for the next 10 years, exceeds historical WASH investment trends⁵.

Demand for Improved Water and Sanitation Services

Amongst the communities surveyed, access to networked water and sewerage was very limited. Approximately half of the communities present in focus group discussions did not have networked water and sewerage connections. Of those respondents that did have connections, there were many circumstances prohibiting regular consumption of water such as non-continuous service.

All of the communities surveyed reported some interest in microfinance for WASH improvements. Fifteen of the sixteen community focus groups listed improved WASH among the top three community needs. Specific needs mentioned by focus group participants included improved bathrooms inside households, water and sewerage connections, improved sanitary installations (toilet with septic tank, upgraded latrine), tanks for rainwater collection or water storage, and improved drainage. Based on historical trends and existing levels of access, Water.org researchers estimate the potential national market for new household water connections from 2012-2015 at 452,000-520,000. The sewerage connections market is similarly sized at 420,000–530,000.

Amongst poor Peruvians, perceptions regarding the need for improved household WASH differ between women and men. Poor Peruvian women are often responsible for domestic duties such as cleaning and washing. Consequently they are more likely bear the opportunity costs associated with inadequate household WASH facilities. The research suggests that women place greater importance on having potable water and toilet facilities **within** the household (as opposed to community solutions).

³ National Institute of Data and Statistics (*Instituto Nacional de Estadística e Informática*), National Household Survey, 2011

⁴ National Superintendent of Sanitation Services (*Superintendencia Nacional de Servicios de Saneamiento*), 2010

⁵ National Superintendent of Sanitation Services (*Superintendencia Nacional de Servicios de Saneamiento*), 2011

Bottlenecks to Water and Sanitation Services Improvements

While WASH improved in Peru from 2007-2010, public and quasi-public WASH providers have been hampered by a plethora of challenges including varying and/or burdensome regulations, high staff turnover and limited financing:

- Regulations – Laws related to WASH provider role, structure, oversight, and customer billing changed significantly from 1994-2006. Roles and regulatory structures were often unclear and debated, distracting focus from service expansion/improvement. For example, until 2009 there was an outstanding debate about who held the responsibility for service provision in small cities: municipalities or water and sanitation utilities.
- Staff Turnover – Within the water and sanitation utilities, 20-40% of personnel do not have term contracts or staff positions. On average, a manager stays in his/her post for just 6 months. Several Companies have faced significant labor disputes⁶.
- Financing –The cumulative metering rate for Peruvian water and sanitation utilities is just 55%, and many WASH service providers struggle to collect fees. The average water and sanitation utility account is 2.1 months in arrears⁷.

Structural bottlenecks appear at various chokepoints: WASH network, WASH network-household connection, WASH household facilities/fixtures. Each chokepoint faces its own unique situation in terms of financing improvements:

- Expansion of secondary networks - Complicated project approval and inability to obtain compensation from public WASH providers prevents alternative community financing.
- New household connections - Several of the local water and sanitation utilities ostensibly offer customer financing for new connections at affordable interest rates. However, Company access to capital for customer financing is limited, and local regulations often limit large scale financing. Also, loan tenors are often unrealistically short and eligibility requirements poorly defined.
- Household facilities/fixtures - Most WASH materials manufacturers don't offer extensive customer financing for the installation of new household WASH facilities/fixtures. However, many manufacturers have demonstrated willingness to partner with financial services providers and offer product discounts.

Microfinance for Improved Water and Sanitation Services

The Peruvian microfinance market is amongst the most developed in the world. In 2010 the Economist Intelligence Unit's *Global microscope on the microfinance business environment* ranked Peru as the best climate for microfinance for the second consecutive year. There is a wide variety of types of microfinance institutions (MFIs), ranging from commercial banks with large portfolios and nationwide coverage, to NGOs offering small local credit programs. In between, there are *Cajas Municipales* and *Cajas Rurales de Ahorro y Crédito* (Municipal Savings and Loan Associations- CMACs and Rural Savings

⁶ Rojas, Gobernabilidad y Gobernanza. De La Teoría a la Práctica. Aplicación a los Servicios de Agua Potable y Saneamiento. 2010.

⁷ National Superintendent of Sanitation Services (*Superintendencia Nacional de Servicios de Saneamiento*), 2010

and Loan Associations- CRACs, respectively) and *Empresas de Desarrollo de Pequeñas y Microempresas* (Small and Micro Enterprise Development Associations- EDPYMEs). Several different umbrella associations (e.g. ASOMIF, FEPCMAC) effectively organize and support the various types of MFIs at the national level. Review of financial indicators demonstrates strength across the breadth of the microfinance system, and international investors and local commercial banks are investing in Peruvian microfinance expansion.

Some Peruvian MFIs offer home improvement products, but they are generally not a priority for the MFIs, and they are not customized for WASH improvements for the poor. Interest rates for these products are often prohibitively high for poor Peruvians. While the state-run *Banco de Materiales* offers more manageable interest rates, land title requirements disqualify many poor Peruvians.

While examples of microfinance for WASH improvements are relatively scarce in Peru, numerous lessons can be drawn from recent small scale WASH finance pilot programs. From 2007-2010 the World Bank Water and Sanitation Program (WSP) collaborated with USAID and the Peruvian Deputy Minister of Construction and Sanitation to work with numerous MFIs and NGOs in five peri-urban and rural markets. In 2012 WSP will scale up to new markets under an umbrella initiative called Mi Baño. As part of a separate initiative, the National Association of Water Utilities and several MFIs piloted multiple WASH finance products in Cusco, Chiclayo, Iquitos and Ayacucho.

Researchers identified several lessons from these and other WASH focused programs in Peru:

- Demand does exist in rural and peri-urban areas for WASH finance products, but credit may be difficult to access for the poor due to hindrances such as high interest rates and borrower documentation requirements, e.g. land title;
- Diverse WASH product offerings allow customers to select the appropriate WASH solution to meet their particular household needs;
- Loan covenants restricting eligible WASH providers limit demand from potential clients;
- A variety of stakeholders may be necessary to bolster the WASH value chain at the outset. Each actor (e.g. WASH NGO, MFI) should focus on its core competency: marketing, raising awareness of the benefits of improved WASH through health education, identifying communities without improved WASH, or providing loans.

Conclusions and Recommendations

There exists significant need for additional investment in WASH, and a partnership model focused on MFIs, NGOs and WASH manufacturers is well suited to the Peruvian marketplace. Water cost savings gained from new network connections could be adequate to finance connections if affordable up-front financing is available from MFIs. The strong Peruvian microfinance sector has the capital and reach to provide financing for improved WASH, and there are likely potential MFI partners with the capacity to profitably lend for WASH at interest rates and terms that do not exclude the poor. Local, national and international actors have piloted some strategies to facilitate finance for improved WASH, and there is ample opportunity to expand on those efforts.

Rather than investing directly in secondary network expansion, microfinance should focus on making capital available for new connections to existing networks (where feasible) and investments in household WASH facilities. Price estimates suggest that a variety of WASH solutions are affordable for many poor Peruvians if up-front financing is available. Solutions can be customized for connected, potentially-connected and off-grid homes, and can be marketed as individual components or integrated systems, depending on customer requirements. A sampling of potential products and prices include:

Benchmark Prices for Sample Products

PRODUCT OPTION	APPROXIMATE COST (USD)
<i>Household Facilities (existing connection)</i>	
Toilet + Sink + Shower	100
Elevated water tank + toilet + sink + shower	200
Stall + Toilet + Sink + biodigester	1,100
Elevated water tank + stall + toilet + sink + shower + biodigester	1,200
<i>New Connections</i>	
Water connection	130
Sewerage connection	200
Both connections	320
Sewerage connection + toilet + stall + sink + shower	750

Further analysis of WASH loan terms is necessary to structure financial products that are both affordable for customers and sustainable for MFIs. Based on conversations with MFIs, analysis of existing interest rates, assessments of poor household incomes and the cost of WASH solutions, researchers recommend 25% as a benchmark interest rate, with loan tenors up to 24 months. Tools such as subsidized wholesale loans, loan guarantees or outcome-based subsidies should be considered to encourage MFI expansion, but long-term product profitability and sustainability are paramount to achieving widespread impact.

Microfinance for WASH purposes is more likely to succeed in those regions that possess both strong MFIs and high demand for WASH services and facilities. Two possible macro-regions are identified: the north coast area (Trujillo (La Libertad), Chiclayo (Lambayeque), and Piura-Tumbes) and the southern mountains (Arequipa, Cusco, Puno, Moquegua, and Tacna). Partners can take advantage of Peru’s strong microfinance associations to disseminate WASH finance knowledge and expand impact nationwide. Health and WASH education may be necessary in many locations to ensure local understanding of the benefits of improved WASH, and strategies that target women are more likely to be well-received.

For More Information

For additional information on the Peru Market Assessment , please contact April Rinne, Director of WaterCredit, at arinne@water.org.

More information about WaterCredit is available on the WaterCredit website, <http://watercredit.org>, and also on the main Water.org website, <http://water.org/watercredit>.

Organizational Summaries

Water.org

Water.org is a U.S.-based non-profit organization that has transformed hundreds of communities in Africa, South Asia, and Central America by providing access to safe water and sanitation over the past 21 years. Founded by Matt Damon and Gary White, Water.org works with local partners to deliver innovative solutions for long-term success. Learn more and make a difference at <http://water.org>.

PepsiCo

PepsiCo is a global food and beverage leader with net revenues of more than \$65 billion and a product portfolio that includes 22 brands that generate more than \$1 billion each in annual retail sales. Our main businesses – Quaker, Tropicana, Gatorade, Frito-Lay and Pepsi-Cola – make hundreds of enjoyable foods and beverages that are loved throughout the world. PepsiCo's people are united by our unique commitment to sustainable growth by investing in a healthier future for people and our planet, which we believe also means a more successful future for PepsiCo. We call this commitment Performance with Purpose: PepsiCo's promise to provide a wide range of foods and beverages for local tastes; to find innovative ways to minimize our impact on the environment by conserving energy and water and reducing packaging volume; to provide a great workplace for our associates; and to respect, support and invest in the local communities where we operate. For more information, please visit www.pepsico.com.

The Inter-American Development Bank

The Inter-American Development Bank (IDB) supports efforts by Latin America and the Caribbean countries to reduce poverty and inequality. It aims to bring about development in a sustainable, climate-friendly way. Established in 1959, it is the largest source of development financing for Latin America and the Caribbean, with a strong commitment to achieve measurable results, increased integrity, transparency and accountability. It has an evolving reform agenda that seeks to increase its development impact in the region. Today the IDB is owned by 48 member states, of which 26 are borrowing members in Latin America and the Caribbean.

The Multilateral Investment Fund

The Multilateral Investment Fund (MIF) supports economic growth and poverty reduction in Latin America and the Caribbean through encouraging increased private investment and advancing private sector development. It works with the private sector to develop, finance, and execute innovative business models that benefit entrepreneurs and poor and low-income households; partners with a wide variety of institutions from the private, public and nonprofit sectors; evaluates results; and shares lessons learned.

The MIF is a laboratory for testing pioneering, market-based approaches to development, and an agent of change that seeks to broaden the reach and deepen the impact of its most successful interventions.