



## Community Participation and Low Cost Technology: Bringing Water Supply and Sanitation to Brazil's Urban Poor

From 1988 to 1996, the PROSANEAR project supported the scaling up of a new approach to delivering water supply and sanitation services to the urban poor in Brazil. The approach combined cost effective technologies with community participation. The project provided one million poor people with piped water supply and sanitation. It also contributed to building stronger communities and showed how WSS can be an integral part of local area development plans.

### REACHING OUT TO THE URBAN POOR

The efforts of the government of Brazil to connect more people to water supply and sanitation (WSS) services in the 1970s and 1980s had little impact on the urban poor, who in many cases remained unserved. In 1988, the government developed a new approach to delivering WSS services to the urban poor. The World Bank provided an IBRD loan of US\$80 million to support the new approach. The project was called the First Water Supply and Sanitation project for the Low Income Populations, or PROSANEAR I for short.

### COST EFFECTIVE TECHNOLOGY AND COMMUNITY PARTICIPATION

PROSANEAR I was grounded in cost effective technology and community participation. In reality, PROSANEAR I was not a single project, but consisted of dozens of separate projects in many different communities around the country. Each project was the product of neighborhood residents

working with engineers, consultants, and officials of the local water agency. The implementation of these projects was carried out by local executing agencies, with assistance and oversight from both regional and national coordinating units. Instead of expensive, conventional, high-tech systems, neighborhoods were able to choose from a range of simpler, innovative systems that made water supply and sanitation more affordable and more technically appropriate for poor and crowded settlements. In many places, groups of households were batched together in a creative "condominium" approach that not only made the networks more efficient and affordable (by providing a more rational layout of collector sewers in people's backyards, and thus allowing them to be laid at shallower depths), but also forged new bonds among neighbors.

The project also sought a more permanent impact by mobilizing local women's, sports and religious clubs to educate people about the importance of sanitation and to teach them to operate and maintain their new systems.

### THE IMMEDIATE RESULTS: CLEAN WATER, SAFE SANITATION

PROSANEAR I resulted in a total of 900,000 people obtaining potable water piped directly into their homes and around 1 million people obtaining sewerage services in 60 low-income settlements in 17 cities. The unit cost of extending services was relatively low: on average, costs were US\$104 per capita for sanitation and US\$84 per capita for water.



#### BRAZIL AT A GLANCE

Population: 178.7 million; 82% urban; 18% rural;  
1.2% annual growth rate  
Surface area: 8,514,900 Km<sup>2</sup>  
Life expectancy: 68.7 years  
GNI per capita: US\$ 3,090  
Human Development Index ranking:  
63 out of 177 countries

% below the basic needs poverty line: 17%  
% with improved water access: 89%  
% with improved sanitation access: 75%

#### MORE INFORMATION

PROSANEAR - People, poverty and pipes: a program of community participation and low-cost technology bringing water and sanitation to Brazil's urban poor, Alex Bakalian and Yoko Katakura. WSP, September 1998

Staff Appraisal Report, Brazil-Low Income Sanitation Technical Assistance Project – PROSANEAR, World Bank, 1988

Project Appraisal Document, Brazil-Low Income Sanitation Technical Assistance Project – PROSANEAR, December 1999

## THE SPIN OFF: STRONGER COMMUNITIES

With all the innovative elements at work, PROSANEAR projects became more than just infrastructure projects; they became neighborhood projects, fueled by the creative energy of fully informed and involved local residents. Some groups that came together to build water and sewer systems stayed together to work on other neighborhood needs. Women, involved in PROSANEAR, found an unusual chance to speak and gain respect in the community. In addition, local construction and consulting firms adjusted their business and technical practices to include the community consulting and low-cost technology alternatives.

The project demonstrated the power of combining community participation and appropriate, lower-cost technology. In addition, discussing and agreeing upon cost recovery, tariff policy, and operation and maintenance routines with all stakeholders during project preparation proved to be beneficial. The project helped change the view that the poor could not pay for WSS services. On the contrary, the poor paid, as they understood what they were paying for and that they would receive adequate services in return.

Finally, the project demonstrated that water and sanitation interventions should be carried out as part of a local area development plan, and critical complementary investments (such as drainage, paving, housing improvements, etcetera) should be identified early in the process.

## EXTENDING THE SUCCESS: PROSANEAR II

In 2000, the World Bank initiated another phase of PROSANEAR through a second IBRD loan of

US\$30.3 million. PROSANEAR II is a technical assistance project that builds on the lessons learned from the first phase, principally the preparation of participatory integrated WSS engineering designs which contemplate complementary infrastructure interventions. The project is also supporting training and awareness-raising for municipal, beneficiary community and federal stakeholders in the undertaking of these participatory designs, as well as analyses of best-practice approaches to rolling out WSS and related services to slum communities, and the preparation of manuals consolidating these approaches. This ongoing project is expected to benefit low-income communities in some 35 municipalities throughout the country.

## THE MULTIPLIER EFFECT

The experience of the PROSANEAR program has caused a paradigm shift with policy makers, engineering consultants and service providers concerning the design and delivery of WSS and complementary infrastructure services in hard-to-serve low-income, peri-urban areas in Brazil. PROSANEAR has also caught the attention of governments in other parts of the world, including in South Africa, Indonesia, Bolivia and the Philippines. The challenge is to tailor the PROSANEAR approach to national and local conditions that may be very different from those in Brazil.

### RELEVANT PROJECTS

**Water Supply & Sanitation Project for Low-income Areas and Municipalities- PROSANEAR I**

Project ID P006437

**Low-income Sanitation Technical assistance Project- PROSANEAR II**

Project ID P039199

