

## INTERNATIONAL DEVELOPMENT

# Water Supply and Sanitation



A global priority problem is lack of access to clean water and adequate sanitation. Over 900 million people have no source of clean water, and 2.6 billion people live without toilets. Surveys show that the urban poor pay 10%–20% of their monthly income on water—far more than their more affluent neighbors. As the world strives to meet the Millennium Development Goals, many donors and governments realize that a much larger effort is required to increase people’s access to safe water and improved sanitation.

Expanding potable water supply into slum neighborhoods and rural areas requires a combined effort among local governments, urban water utilities, private sector participants, civil society organizations, and citizens. Improving access to sanitation faces similar problems—such as lack of funding, marginal capacity of responsible parties, inadequate enabling environment—as improving access to drinking water, but it is also crippled by a lack of public demand. As a result, efforts also must focus on public education.

RTI has developed many applied water supply and sanitation tools that are readily applicable to a wide-variety of conditions. We have worked in over 40 countries in

Africa, Asia, Eastern Europe, Latin America, and the Middle East, using our multidisciplinary skills in health, engineering, economics, and social sciences to successfully implement projects. Our reputation for excellence in program design, implementation, and evaluation is widely recognized by the U.S. Agency for International Development (USAID), Asian Development Bank, World Bank, United Nations agencies, and our many private sector clients.

### Urban and Rural Water Supply

RTI works with national ministries, municipal utilities, and regional water authorities in both urban and rural settings to improve their capabilities in strategic planning, capital investment planning, technical design, financing, operations and maintenance, and customer service.

- In Armenia, Brazil, Jordan, Uganda, and Zambia, RTI worked with urban water utilities to plan non-revenue water reduction and control programs.
- In Indonesia, RTI designed and conducted an Advanced Management Training Program and an international study tour for 26 water utility managing directors. The course was adopted and then delivered by the Indonesian Water Supply Professional Association.

#### Expertise

- Water supply and sanitation
- Planning
- Utility management
- Service delivery
- Financing
- Environmental health
- Impact evaluation and assessment



- In Poland, RTI helped establish the National Standards Board, which issued voluntary standards for water service pricing, allowing a balance between local control and high-quality pricing methodologies.
- In Senegal, RTI is using the power of the marketplace to scale up rural water supply services. Through private sector strengthening, entrepreneurs become innovators and learn how to improve services. Wells that previously took 14 days to drill now only require five days, which dramatically increases water availability and affordability to the poor.
- In Tunisia, RTI assisted the government in transferring responsibility for operating rural water systems to rural communities. We also developed the national strategy for water user associations and locally appropriate systems for operations and maintenance.
- In the Indian state of Andhra Pradesh, RTI researched household attitudes and practices related to water treatment, storage, and use to inform the commercial launch of point-of-use water treatment and storage products for consumers earning less than US\$5 a day.
- In Sri Lanka, RTI surveyed 1,800 households to develop a profile of rural water users, including their sanitation and hygiene practices and willingness to pay for improved services. RTI evaluated the spatial correlation of poverty, water, and sanitation through GIS mapping and generated tariff and targeting recommendations for a government initiative to privatize the water supply system.
- In Kenya and India, RTI is monitoring and performing a cost-benefit analysis to promote locally developed commercial solutions for safe water transport and storage that are based on the needs and behaviors of the poor.

#### RTI's Water Supply and Sanitation Tools

- Optimal Non-Revenue Water Management Tool
- Full-Cost Tariff Model for Water Utilities
- DEWATS: an interactive decision tree to design and build decentralized wastewater treatment systems
- Model Benchmarking Tool: to assess utility performance
- Willingness to Pay Survey Tool

#### Sustainable Sanitation

RTI provides technical assistance to local and national governments, development agencies, and communities to improve sanitation from remote rural areas to peri-urban population centers in and around the world's largest cities.

- In Senegal, RTI works with entrepreneurs and communities to conduct latrine demonstration programs. We also are collaborating with communities to implement Community-Led Total Sanitation (CLTS) to create more sustainable behavioral change.
- In Madagascar, under the Santénet2 and Ranon'ala projects, RTI works with local nongovernmental organizations to conduct hygiene education campaigns and implement CLTS.
- In Tangerang, a suburb of Indonesia's capital city Jakarta, RTI teaches local masons how to build on-site wastewater treatment systems for community toilets and schools using low-cost biogas collection and wetlands technologies. The systems have become great sources of community pride that not only solve a major sanitation problem but add to their long-term sustainability.
- RTI developed guidelines published by USAID to help policy makers evaluate the adequacy of national sanitation policies as the first step in reforming programs for improved sanitation services. RTI field-tested the guidelines on the policies of Peru, South Africa, and Uganda.
- In India, RTI surveyed more than 10,000 households to evaluate the child health impacts of improved water and sanitation services and hygiene awareness in the states of Orissa and Maharashtra using quasi-experimental and randomized controlled trial study designs.

#### More Information

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