About 71% of people without access to improved sanitation and 56% of those who lack safe water live in Asia. Without these basic services, they face incredible health risks and suffer everyday indignity and inconvenience.

Water utilities, which have the critical responsibility of providing water supply and sanitation services to the region’s 4 billion people, are at the forefront of efforts to rectify this common scenario. However, their task is hampered by numerous challenges, such as artificially low tariffs, staff incapacity, and insufficient budgets for infrastructure development.

To deliver sustained, world-class service, utilities need help from various partners. One key partner is their peers.

**Partnering Operators**

The Asian Development Bank (ADB) and the Global Water Partnership Program began collaborating in 2006 to implement the Water Operators Partnerships (WOPs) Program. The WOPs Program helps water utilities improve service coverage and delivery, financial sustainability, and other aspects of their performance.

The WOPs Program is part of a larger plan to achieve breakthroughs in vital areas of water supply and resources management and to attain the Millennium Development Goals. Announced by the United Nations Secretary-General’s Advisory Board on Water and Sanitation (UNSGAB) in early 2006, the Hashimoto Action Plan called for breakthroughs in six key areas: water operator partnerships, financing, sanitation, monitoring and reports, integrated water resources management, and water disaster response. UNSGAB asked various regional development banks, including ADB, to assist in making the plan operational.

ADB implements the WOPs Program through Regional Technical Assistance (RETA 6396) financed by the Japan Special Fund, which was approved in April 2007.

**Strategies for Operational Efficiency**

To achieve its aims, the WOPs Program adopted key strategies with interlinked activities and outputs to ensure that targeted support is given to utilities. These strategies are as follows.

- **Formation of water utility networks.** These networks promote alliances, knowledge exchange, and capacity development among member water utilities. They also anchor all program activities designed to improve the operational and financial efficiency of members.
- **Continuous improvement and benchmarking.** This involves collecting, analyzing, and comparing key performance data of water and sanitation utilities and, on the basis of analysis, developing a strategy and work program to improve specific aspects of a utility’s performance.
- **Twinning of water utilities.** Exemplary water utilities in the region are being tapped to help developing utilities enhance their skills and operational efficiency.
• **Training workshops.** The WOPs Program will implement a series of workshops focused on technical aspects of utility operations, including managing nonrevenue water, improving tariff structures and institutional arrangements, and introducing regulatory principles.

**The Water Operators Partnership Program Today**

After almost 3 years of implementation, the WOPs Program has already shown promising results.

**Formation of Water Utility Networks**

There are three water utility networks currently implementing their programs.

- **Southeast Asian Water Utilities Network (SEAWUN).** This network was established in August 2002 (prior to the WOPs Program), but its activities are now implemented with WOPs Program support. SEAWUN has 80 member utilities from Indonesia, Lao People’s Democratic Republic, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.

- **South Asian Water Utilities Network (SAWUN).** Established in April 2007, SAWUN has 23 members from Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

- **Central Asia and South Caucasus Water Utilities Association (CASCWUA).** CASCWUA was established in November 2007, and has 13 members from Armenia, Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan.

The organizational structure of water utility networks has three tiers:

- a steering committee or governing board, comprising elected representatives from each participating country’s utilities, which is responsible for setting the network’s policies, plans, and monitoring results;
- a secretariat, headed by an executive director and based in a host utility, which oversees the daily operations of the network; and
- member utilities, composed of public or private water and/or wastewater utilities, national water and wastewater associations, and small-scale service providers.

Each network serves as a platform for the major initiatives of the WOPs Program: continuous improvement and benchmarking, twinning with expert utilities, and training workshops for capacity development. They also implement their respective business plans and mobilize resources for their specific needs.

**Continuous Improvement and Benchmarking**

This activity helps utilities establish internal processes and build skilled teams to collect, analyze, and measure their services and then compare their performance and service practices against those of other utilities. This yields sufficient insights to enable the teams to identify improvement opportunities, craft change proposals, and then drive their implementation to achieve better results.

Simply put, the change processes—and the skills to achieve change—is the continuous improvement part, while benchmarking provides comparative information that can be used to develop change proposals.

Continuous improvement and benchmarking workshops have been conducted for each water utility network, designed to build staff capacity for the process and to provide guidance on institutionalizing continuous improvement and benchmarking in the organizations. About 100 utility staff members attended these sessions. In addition, 21 member utilities from SAWUN, 17 from SEAWUN, and 11 from CASCWUA have also agreed to participate.

**Twinning with Expert Utilities**

Although most twinning arrangements pair off entities with similar characteristics on the assumption that they will share similar problems and solutions, the WOPs Program approach is to match a stronger water and sanitation utility (expert) with a developing utility (recipient). The aim is to enable the latter to improve service coverage and delivery, financial sustainability, and other aspects of its performance.

There is no commercial motive in this twinning; it is essentially a case of one utility helping out another. Activities include a diagnostic study of the recipient twin by the expert twin and ADB, exchange visits, and onsite demonstrations.
### Status of ADB Twinning

<table>
<thead>
<tr>
<th>Recipient Twin</th>
<th>Expert Twin</th>
<th>Date of Agreement</th>
<th>Status as of April 2010</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binh Duong Water Supply Sewerage Environment Company Ltd. (Binh Duong, Viet Nam)</td>
<td>Phnom Penh Water Supply Authority (Phnom Penh, Cambodia)</td>
<td>July 2007</td>
<td>Completed</td>
<td>Reduced nonrevenue water from more than 14.0% to 11.7%, and improved customer service and training practices.</td>
</tr>
<tr>
<td>Thimphu City Corporation (Thimphu, Bhutan)</td>
<td>Male Water and Sewerage Company, Pvt., Ltd. (Male, Maldives)</td>
<td>February 2008</td>
<td>Completed</td>
<td>Nonrevenue water baseline confirmed at 24.7%, targeting 15.0%. Reduced unbilled usage, decreased leaks, and improved bulk metering.</td>
</tr>
<tr>
<td>Davao City Water District (Davao City, Philippines)</td>
<td>Ranhill Utilities Berhad (Johor Bahru, Malaysia)</td>
<td>May 2008</td>
<td>Completed</td>
<td>Reduced nonrevenue water from 28.8% in 2008 to 24.3% in 2009. Meter replacement and nonrevenue water programs initiated.</td>
</tr>
<tr>
<td>Da Nang Water Supply Company (Da Nang, Viet Nam)</td>
<td>Hai Phong Water Supply One Member Company Ltd. (Hai Phong, Viet Nam)</td>
<td>May 2008</td>
<td>Completed</td>
<td>Reduced nonrevenue water, and improved meter reading and collection practices.</td>
</tr>
<tr>
<td>National Water Supply and Drainage Board (Colombo, Sri Lanka)</td>
<td>Jamshedpur Utilities and Services Company Ltd. (Jamshedpur, India)</td>
<td>June 2008</td>
<td>Ongoing</td>
<td>Reduced nonrevenue water in pilot from 48% to 34% and still expected to go down to 20%. Also targeting energy efficiency in its operations but too early for results.</td>
</tr>
<tr>
<td>Metropolitan Cebu Water District (Cebu, Philippines)</td>
<td>City West Water (Melbourne, Australia)</td>
<td>June 2008</td>
<td>Completed but extended</td>
<td>Reduced nonrevenue water in pilot area from 39% to 11%. Initiated other improvements on asset management, planning, organization, and rollout of leak detection activity.</td>
</tr>
<tr>
<td>Karachi Water and Sewerage Board (Karachi, Pakistan)</td>
<td>Puncak Niaga (M) Snd. Bhd. (Selangor, Malaysia)</td>
<td>September 2008</td>
<td>Ongoing</td>
<td>Focus is on water quality and operating practices of water treatment plant.</td>
</tr>
<tr>
<td>Dhaka Water Supply and Sewerage Authority (Dhaka, Bangladesh)</td>
<td>Korea Water Resources Corporation (K-WATER) (Daejeon, Republic of Korea)</td>
<td>October 2008</td>
<td>Canceled</td>
<td>Implementation delays due to changes in personnel and sporadic communications led to the cancellation of the partnership.</td>
</tr>
<tr>
<td>Hai Phong Water Supply One Member Company (Hai Phong, Viet Nam)</td>
<td>Yarra Valley Water Ltd. (Melbourne, Australia)</td>
<td>August 2009</td>
<td>Ongoing</td>
<td>Areas of interest are corporate planning, asset management, information technology, and human resources management.</td>
</tr>
<tr>
<td>Tonga Water Board (Nuku’alofa, Tonga)</td>
<td>Manukau Water Ltd. (Auckland, New Zealand)</td>
<td>March 2010</td>
<td>Ongoing</td>
<td>Areas of interest include asset management, data management, and system optimization.</td>
</tr>
<tr>
<td>Zheng Zhou Water Corporation (Zheng Zhou, People's Republic of China)</td>
<td>City West Water (Melbourne, Australia)</td>
<td>April 2010</td>
<td>Diagnostic visit completed</td>
<td>Areas of interest are nonrevenue water reduction and improvement of customer service levels.</td>
</tr>
</tbody>
</table>

Under regional technical assistance, ADB is to support 10 twinning partnerships. By the end of April 2010, ADB will have put in place 11 twinning partnerships, and several others are planned in the following months. Of these, seven have already successfully made improvements in their operations. One has not proceeded as planned but has nonetheless initiated positive changes, while another was hampered by internal security issues that prevented onsite support from the expert twin. Yet clearly, based on early results obtained, twinning has proven to be an effective way of building utility capacity and improving service delivery.

## Training Workshops

To improve the technical capacity of water utilities, the WOPs Program is designing and implementing training activities focused on specific aspects

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**Continuous Improvement and Benchmarking Work Flow**

- **Sustain**
  - Commitment
  - Resources
  - Coordination and Facilitation
  - Skills
  - Communications
  - Attitude

- **Implement**
  - Establish partners
  - Analyze differences
  - Identify best practices

- **Innovate**
  - Develop solutions

- **Benchmark**
  - Measure processes
  - Fix the obvious

- **Mobilize**
  - Form teams
  - Define processes
The first training workshop, held at ADB headquarters in May 2008 with support from the World Bank Institute, was part of a programmatic curriculum on nonrevenue water management. Around 70 representatives from 40 SAWUN and SEAWUN member utilities spent 1 week learning how to establish a standardized water balance, calculate water losses, reduce commercial and physical water losses, and formulate a nonrevenue water assessment and management plan. A post-training evaluation revealed that the different backgrounds and perspectives of the participants fostered richer and more diverse discussions, thereby heightening their learning experience.

To ensure application of the knowledge acquired from the training, participants were given take-home assignments to establish their respective utility’s water balance and verify its components, calculate commercial and physical losses, and carry out a pressure monitoring program on their own facilities. These skills will enable utilities to design a nonrevenue water management and reduction program. The assignments must be submitted to ADB before the utility representatives can participate in more advanced courses of this curriculum.

By July 2009, three batches of nonrevenue water training were successfully completed, with 29 water utilities actively participating. As a result, more than 100 water utility staff members from South and Southeast Asia were provided with knowledge and experience in nonrevenue water management.

In the meantime, a series of leadership forums are being prepared for the three water utility networks. These forums will explore the different factors contributing to the success of some Asian utilities, such as Cambodia’s Phnom Penh Water Supply Authority, Philippines’ Manila Water Company, Singapore’s Public Utilities Board, and Viet Nam’s Hai Phong Water Supply Services.

Furthermore, a workshop on tariff setting and regulation is being planned, targeting senior-level officials from water regulatory bodies as well as water utilities both in South and Southeast Asia. The main objective of the workshop is to provide a basic understanding of tariff models, setting appropriate tariffs, and the benefits of tariff regulation to both the utility and the customer. Case studies and good practices from around the region will be presented as models.

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