

## ECO-Asia Water and Sanitation Program

# Demonstrating Sustainable Sanitation Solutions

The Paul Simon Water for the Poor Act of 2005 strengthens the United States Government commitment to enabling access to safe water and sanitation for developing countries, and supports achievement of Target 10 of the UN Millennium Development Goals to reduce by half the proportion of people without sustainable access to safe drinking water by 2015.

In Asia, the United States Agency for International Development (USAID) implements regional water and sanitation activities through the Environmental Cooperation-Asia (ECO-Asia) Water and Sanitation Program. ECO-Asia develops and implements pilot projects that demonstrate innovative strategies for expanding, improving and financing water services delivery in Asia. One program focus is demonstrating and replicating sustainable sanitation solutions that deploy low-cost decentralized technologies and approaches that meet the priority needs of target communities.

**Challenge.** Less than half of all Asians have access to sanitation, a lower percentage than in any other region in the world. Inadequate sanitation in densely populated urban areas leads to increased water-related infections and parasitic diseases. Among the urban poor, who are most vulnerable, awareness of the need for sanitation is relatively low, especially among men. Moreover, lack of sanitation is a public health crisis that has direct costs in lost wages, revenues and opportunities. In the Philippines alone, this economic loss is estimated at US\$1.3 billion per year.

Most Asian cities are, however, not investing in conventional centralized sewerage systems, due to high investment costs, challenges in construction and operations, and limited access to a reliable supply of piped water. More and more, urban populations and local governments are developing decentralized treatment systems that apply appropriate, low-cost technologies tailored to community resources and needs.

**ECO-Asia Response.** ECO-Asia partners with cities and local communities to demonstrate sustainable decentralized and low-cost sanitation solutions that provide long-term safeguards for public health and



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protect the environment. For all projects, ECO-Asia employs a participatory approach (see box next page) that mobilizes local decision-makers and other stakeholders in identifying priority sanitation challenges, and solutions. The ECO-Asia planning process not only ensures community commitment, but also helps build stakeholder capacity and awareness of health risks and promotes better hygiene.

All ECO-Asia pilot projects demonstrate sustainable solutions that ensure full-cost recovery for construction, debt servicing and operations. ECO-Asia provides information or technical assistance on financing strategies, or facilitates access to finance.

In addition, ECO-Asia works with civil society groups to implement social marketing campaigns that focus on increasing demand for sanitation services and increasing citizen willingness to pay. ECO-Asia also works with communities to modify behavior via hand washing campaigns for schoolchildren.

**Pilot Activities.** Based on participatory planning outputs, ECO-Asia works with cities and communities to pilot innovative sanitation solutions that leverage local funds and expertise. Systems employ low-cost technologies or innovative approaches that address specific community sanitation challenges. In developing these systems, ECO-Asia also facilitates access to best practices in the region, including structuring “twinning”

arrangements where counterparts engage in sustained cooperative exchanges.

**Marikina City, Philippines.** ECO-Asia works with Marikina City to develop a low-cost interceptor sewer and waste-water treatment system that addresses septic tank effluent and storm water, and will serve 65,000 people. ECO-Asia has facilitated involvement of Manila Water Company, which will provide up to \$400,000 to fund system design and construction. In addition, ECO-Asia assists Marikina City in establishing a comprehensive septic tank cleaning service for over 90,000 households, or an estimated 460,000 people. To strengthen both initiatives, ECO-Asia assists with integrated hand-washing and awareness-raising campaigns.

**San Fernando City, Philippines.** In San Fernando City, government officials and key stakeholders identified the public market as their top sanitation hotspot. Through a collaborative decision-making process and technical inputs and guidance from ECO-Asia, San Fernando City has mobilized city funds to design and construct a low-cost wastewater treatment system that will impact over 5,000 people. ECO-Asia also supports development and implementation of integrated hand-washing and awareness-raising campaigns.

**Nuwara Eliya, Sri Lanka.** To support the Municipal Council in achieving its stated vision of making Nuwara Eliya “the most beautiful and environmentally friendly city in Sri Lanka for everyone’s admiration”, ECO-Asia is assisting the city addressing a top pollution hot spot, and in city practices on septage management. In particular, ECO-Asia works with the Municipal Council to develop a low-cost wastewater treatment system for over 300 residential homes. ECO-Asia also assists in strengthening the city’s septage treatment facility and septic tank desludging practices, including developing a new municipal ordinance based in part on experience from the Philippines. As a result, more than 20,000 residents will receive improved sanitation services.

**Halong City, Vietnam.** ECO-Asia is working with Halong City and BORDA to develop a low-cost Decentralized Wastewater Treatment System (DEWATS) system to address wastewater from slaughterhouse. By subsidizing this innovative on-site treatment facility, Halong City, which is designated a UNESCO World Heritage Site, is demonstrating its commitment to protecting Halong Bay, and providing a model for Vietnam and the region. The system also includes a waste-to-energy component that will reduce greenhouse gas emissions.

**Regional Cooperation.** ECO-Asia also facilitates regional dialogue and promotes sharing of lessons

learned among partners, including development of toolkits and support for regional workshops. ECO-Asia also disseminates results through regional networks and supports peer-to-peer sharing of experiences and learned lessons during site visits and roundtable discussions.

### **ECO-Asia Participatory Planning Process for Developing Sustainable Sanitation Solutions**

#### **1. Stakeholder Consultation and Priority Setting**

- Organize stakeholder workshop to identify community sanitation needs
- Assist stakeholders in prioritizing projects and developing action plan
- Identify pilot project area

#### **2. Project Design and Development**

- Provide targeted technical assistance on project design and development
- Provide information on appropriate technology and funding options
- Design a social marketing and education campaign to increase community support
- Facilitate preparation of any needed regulations or ordinances

#### **3. Pilot Implementation**

- Support partners in completing engineering designs, procurement and other project requirements
- Assist in developing an operation and maintenance manual

#### **4. Replication and Sharing**

- Develop toolkits and conduct training
- Facilitate linkages with other cities

### **Environmental Cooperation-Asia**

Environmental Cooperation-Asia (ECO-Asia) is a regional program of the United States Agency for International Development (USAID). The ECO-Asia Water and Sanitation Program is active in Cambodia, India, Indonesia, Philippines, Sri Lanka, Thailand, and Vietnam.

#### **Contact:**

John Pasch  
U.S. Agency for International Development  
GPF Witthayu Towers, 93/1 Wireless Road  
Bangkok, Thailand 10330  
Office +66-2-263-7400 - Fax +66-2-263-7499  
Email: [jpgasch@usaid.gov](mailto:jpgasch@usaid.gov)