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Environmental Cooperation-Asia (ECO-Asia)

Water and Sanitation / Environmental Governance Programs

2011 Annual Report

Implemented by AECOM International Development

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Environmental Cooperation-Asia (ECO-Asia)
Water and Sanitation / Environmental Governance
Fiscal Year 2011 Annual Report

Title:
Environmental Cooperation-Asia
Water and Sanitation / Environmental Governance
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Acronyms

ADB	Asian Development Bank
ACEE	Appraisal Center for Environmental and Engineering (China)
AECEN	Asian Environmental Compliance and Enforcement Network
ASEAN	Association of Southeast Asian Nations
ASEAN ESC	ASEAN Environmentally Sustainable Cities Initiative
BDP	Basin Development Program
CNU	Chia Nan University (Taiwan)
CWD	Calamba Water District (Philippines)
DECCW	Department of Environment, Climate Change and Water
DOE	Department of Environment (Malaysia)
DONRE	Department of Natural Resources and Environment
EAB	Environmental Appeals Board (USA)
ECO-Asia	Environmental Cooperation-Asia
ECAC	Environmental Compliance Assistance Center
EIA	Environmental Impact Assessment
EPA	U.S. Environmental Protection Agency
HCMC	Ho Chi Minh City
IGES	Institute for Global Environmental Strategies (Japan)
ISH	Initiative for Sustainable Hydropower
INECE	International Network on Environmental Compliance and Enforcement
IWA	International Water Association
IWK	Indah Water Konsortium
K-Water	Korean Water Resources Corporation
LLDA	Laguna Lake Development Authority
LMB	Lower Mekong Basin
LVVWD	Las Vegas Valley Water District (USA)
MCWD	Metro Cebu Water District (Philippines)
MDGs	Millennium Development Goals
MfE	Ministry of Environment (New Zealand)
MJP	Maharashtra Jeevan Pradhikaran (India)
MOE	Ministry of Environment
MoNRE	Ministry of Natural Resources and Environment
MRC	Mekong River Commission
NCAR	National Center for Atmospheric Research
NGO	Non-governmental Organization
NWSDB	National Water Supply and Drainage Board (Sri Lanka)
PAWD	Philippine Association of Water Districts
PBAPP	Penang Water Supply Corporation (Malaysia)
PDAM Tirta Musi	Palembang Water Supply Company (Indonesia)
PDAM TK	PDAM Tirta Khatulistiwa Kota Pontianak (Indonesia)
PERPAMSI	Indonesia Water Supply Association
PHED	Public Health Engineering Department (Rajasthan, India)
PMP	Performance Management Plan
PSU	Portland State University
PWA	Provincial Waterworks Authority (Thailand)
Ranhill	Ranhill Utilities Berhad (Malaysia)
RDMA	Regional Development Mission/Asia
REO	Regional Environment Office
SADCO	Hai Phong Sewerage and Drainage Company
RSAT	Rapid basin-wide hydropower Sustainability Assessment Tool
SEAWUN	Southeast Asian Water Utilities Network
USAID	United States Agency for International Development
WBPCB	West Bengal Pollution Control Board

WHO	World Health Organization
WOP	Water Operator Partnership
WSP	Water and Sanitation Program (World Bank)
WWF	Worldwide Fund for Nature

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SUMMARY

Under USAID contract number 486-C-00-05-00010-00, AECOM International Development (AECOM) implements the Environmental Cooperation-Asia (ECO-Asia) project in support of the Regional Environment Office (REO) of the USAID Regional Development Mission Asia (RDMA). The ECO-Asia contract has three components: (1) improved access to clean water and sanitation for the urban poor; (2) regional environmental governance and transboundary cooperation; and (3) overarching program support. In FY 2011 ECO-Asia, met or exceeded all of its targets under the Performance Management Plan (PMP) (see Table 1). This annual report provides a summary of achievements against annual program targets. The annex contains selected FY 2011 ECO-Asia success stories in USAID's Telling Our Story format.

Water and Sanitation

Under the Water and Sanitation component, ECO-Asia continued to increase access to reliable and sustainable water and sanitation services to support regional health security and prosperity in Asia. As the principal regional initiative implementing the Paul Simon Water for the Poor Act in Asia, ECO-Asia promotes achievement of the Millennium Development Goals (MDGs), and disseminates and replicates results through regional networks. During FY 2011, RDMA implemented 14 twinning partnerships in five countries resulting in improved access to water and sanitation for over 530,000 people. RDMA activities led to the adoption of nearly 60 improved laws, policies and plans, increased capacity of over 1,200 practitioners, and mobilized nearly $6,300,000 from non-USAID sources.

A key accomplishment supported by ECO-Asia in FY 2011 was the continued strengthening of the WaterLinks network that included: establishing an independent secretariat as a non-governmental organization (NGO) based in the Philippines to promote sustainability and organizing the associated Board of Trustees; implementing a range of twinning partnerships; completing the facilitation guidelines; and continuing to improve the WaterLinks website (www.waterlinks.org). In coordination with the International Water Association (IWA) and the Asian Development Bank (ADB), ECO-Asia also continued to represent WaterLinks at international, regional and national events and reached out to a number of multi-lateral and bi-lateral donors related to their future support for WaterLinks. In FY 2012, ECO-Asia will support efforts to transfer key secretariat functions related to outreach, communications and events support to the NGO. ECO-Asia will also continue to implement all water and sanitation activities as WaterLinks activities.

In FY 2011, ECO-Asia continued to partner with the Association of Southeast Asia Nations (ASEAN) in support of the ASEAN Environmentally Sustainable Cities initiative by facilitating city-to-city twinning partnerships aimed at improved sanitation services. ASEAN continues to be a key ECO-Asia partner by supporting replication and dissemination of water and sanitation best practices.

Overall, ECO-Asia Water and Sanitation program performance is on track with mission goals. During the first six years of contract implementation, ECO-Asia has achieved program requirements by demonstrating best practices and developing strong collaborative linkages with regional partners and networks. In FY 2012, ECO-Asia will focus on scaling-up and replication of best practices using WaterLinks to further disseminate results and catalyze wide-spread adoption of solutions that are most appropriate for Asia.

Environmental Governance

For the Environmental Governance component, ECO-Asia implements two activities: (1) support for the Asian Environmental Compliance and Enforcement Network (AECEN) in promoting improved environmental compliance and enforcement; and (2) transboundary cooperation in strengthening access to improved water services in the Mekong River basin.

Asian Environmental Compliance and Enforcement Network. ECO-Asia continued to strengthen AECEN, a regional practitioner network, by serving as the AECEN Secretariat and working with AECEN member agencies at the country and regional levels on: (1) pilot projects and twinning activities on improved policies, practices and systems; (2) AECEN Annual Forum; (3) Asian Justices Forum on the Environment; (4) targeted regional studies; (5) specialized regional trainings; and (6) AECEN website (www.aecen.org). In FY 2011 RDMA, through AECEN, catalyzed the adoption of 10 policies, laws and regulations, and trained over 300 practitioners from 15 agencies and organizations, and mobilized over $200,000 in funds from non-USAID sources.

Key results included the establishment of improved capabilities for EIA for the hydropower sector in Nepal, improved implementation of new rules for adjudicating environmental law cases in Indonesia, new tools and capabilities in public participation and pollution control in Thailand, and improved policy framework and technical capabilities for effective contaminated soil monitoring in Vietnam. The environmental agency from Laos joined AECEN, bringing the number of members to 19.

In FY 2011 ECO-Asia facilitated establishment of five twinning partnerships that enabled the sharing of best practices through significant cost-share of participating mentor agencies: Australia - Vietnam (strengthening self-monitoring and self-reporting in Ho Chi Minh City), Malaysia-Nepal (EIA practices for the Hydropower sector), New Zealand – Thailand (improving community participation in water pollution control and management), and Korea – Vietnam (developing technical guideline on contaminated soil monitoring) and Philippines – Indonesia (improved environmental adjudication).

From its beginnings in 2005, AECEN has grown into a recognized regional platform for promoting environmental compliance in Asia. During FY 2009 – FY 2010 ECO-Asia facilitated an offer by Japan's Institute for Global Environmental Strategies (IGES) to assume AECEN secretariat responsibilities. In 2011, IGES opened an office in Bangkok and assumed AECEN Secretariat responsibilities including co-organizing the 2011 AECEN Regional Forum to take place in Bangkok during FY 2012.

Mekong Transboundary Waters. In FY 2011, ECO-Asia continued to collaborate with Mekong River Commission (MRC), Worldwide Fund for Nature (WWF) and ADB to support full trials of the Rapid Basin-wide Hydropower Sustainability Assessment Tool (RSAT) in the Mekong basin. Based on inputs from the trials and a consultation workshop supported by ECO-Asia, the RSAT was updated and delivered to the MRC's Initiative for Sustainable Hydropower (ISH) which will take the lead in promoting and building country capacity for the tool between 2011- 2015. In addition, ECO-Asia supported the MRC's Basin Development Programme (BDP) by conducting an assessment of costs and benefits of water resource development scenarios in the Mekong basin. The assessment provided guidance on how MRC planning efforts can continue to evolve, improve, and be better integrated in future versions.

Overarching Support

ECO-Asia continued to provide program support to REO in small grants, exchanges, communications and reporting. Notable activities and accomplishments included:

- Issued five small grants, with an average grant size of $25,000
- Facilitated 56 exchanges for 441 participants, 24% of whom were women
- Developed communications materials, including success stories and outreach materials
- Developed or enhanced the ECO-Asia, AECEN, and WaterLinks websites
- Worked closely with RDMA to support the development of REO's portion of the RDMA FY 2011 Performance Plan and Report
- Assisted in the editing and production of outreach materials for other REO contractors and cooperators

Table 1: FY2011 ECO-Asia Performance Management Plan Results Summary

Indicator	Description	Target FY 2011	Result FY 2011
SO: Improved Response to Environmental Challenges in Asia			
SO 1	Number of policies and model actions applied and replicated	20	45
SO 2	Number of beneficiaries with improved environmental services	325,000	546,694
IR 1: Enabling Conditions Improved			
IR 1.1	Number of improved water and sanitation policies, laws, plans or model actions strengthened, developed, adopted, and/or implemented	14	58
IR 1.2	EG:Environment:CPE – Number of improved policies, laws, regulations, agreements related to pollution and urban environment drafted with USG assistance	7	10
IR 1.3	Number of USG-supported initiatives/mechanisms designed to reduce the potential for violent conflict over the control, exploitation, trade or protection of natural resources	2	3
IR 1.4	Number of non-governmental stakeholders engaged in environmental governance	11	26
IR 1.5	Amount of funds from non-USAID sources mobilized and applied	$1,000,000	$7,900,929
IR 2: Human and Institutional Capacity Strengthened			
IR 2.1	Number of key national and local institutions with increased capacity	75	200
IR 2.2	Number of women in key national and local institutions with increased capacity	250	260
IR 2.2	Number of people trained in improved water and sanitation practices	500	1,316
IR 2.3	EG:Environment:CPE – Number of people receiving USG supported training in environmental law, enforcement, public participation, and cleaner production policies, strategies, skills and techniques	350	338
IR 2.4	Number of people trained in conflict prevention and management in transboundary waters	50	39
IR 3: Model Actions Demonstrated			
IR 3.1	IIP:Health:WSS – Number of people in target areas with access to improved drinking water supply as a result of USG assistance	100,000	149,210
IR 3.2	IIP:Health:WSS – Number of people in target areas with access to improved sanitation facilities as a result of USG assistance	50,000	78,575
IR 4: Regional Platforms Strengthened to Catalyze and Sustain Change			
IR 4.1	Number of regional environmental platforms created or strengthened	3	3
IR 4.2	Number of new members in regional environmental platforms	2	2

I. BACKGROUND

Under USAID contract number 486-C-00-05-00010-00, AECOM International Development (AECOM) and its subcontractors implement the Environmental Cooperation-Asia (ECO-Asia) Water and Sanitation/Governance project in support of the Regional Environment Office (REO) of the USAID Regional Development Mission Asia (RDMA). Key program countries in FY 2011 included: India, Indonesia, Philippines, Sri Lanka, Thailand and Vietnam. Under the ECO-Asia contract, AECOM implements three components:

Task 1: Improved access to clean water and sanitation for the urban poor;
Task 2: Cross-cutting initiatives to improve regional environmental governance and transboundary cooperation; and,
Task 3: Overarching program support.

To implement Task 1, ECO-Asia collaborates with water services providers, cities, civil society partners and regional partner organizations and networks to catalyze improved access to safe water and sanitation for the urban poor. Through pilot activities and counterpart twinning arrangements, and regional capacity building and networking activities, ECO-Asia demonstrates best practices and achieves on-the-ground impacts. ECO-Asia also promotes replication and dissemination of results and best practices through the WaterLinks network.

To accomplish Task 2, ECO-Asia works with regional partner organizations and networks to promote improved environmental governance in two areas: (1) improved enforcement of environmental laws, and (2) improved management in transboundary waters. For improved enforcement, ECO-Asia has established AECEN and serves as the network secretariat in implementing country and regional activities. To address transboundary conflict, ECO-Asia cooperates with the MRC and Worldwide Fund for Nature (WWF) and ADB to promote effective regional cooperation in the Mekong by facilitating the adoption of improved policies, plans, and mechanisms on transboundary waters.

Under Task 3, ECO-Asia provides program support for Task 1 and 2 activities, including performance monitoring and reporting, communications support, a small grants program, and an exchange program. In addition, ECO-Asia provides support to REO by collecting and organizing performance monitoring information from other RDMA environmental contractors, grantees, and other partners. ECO-Asia also provides some communications support to REO.

II. WATER SUPPLY AND SANITATION

ECO-Asia increases access to reliable and sustainable water and sanitation services to support regional health security and prosperity in Asia. Under the Water and Sanitation Program, ECO-Asia pilots and replicates innovative strategies for expanding and sustaining access to services, especially to the urban poor, through partnership with cities, water utilities and financing institutions. Key programming areas in FY 2011 included: (1) enabling safe water access; (2) promoting sustainable sanitation; and (3) strengthening water services utility performance.

As the principal regional initiative implementing the Paul Simon Water for the Poor Act in Asia, ECO-Asia promotes achievement of the MDGs, and disseminates and replicates results through regional platforms and networks, including ASEAN, South East Asia Water Utility Network (SEAWUN), World Health Organization (WHO), and World Bank's Water and Sanitation Program (WSP).

During FY 2011, RDMA implemented 14 twinning partnerships in five countries resulting in improved

access to water and sanitation for over 530,000 people. RDMA activities led to: the adoption of nearly 60 improved laws, policies and plans; increased capacity of over 1,200 practitioners; and mobilization of nearly $6,300,000 from non-USAID sources. These results were in line activity targets.

ECO-Asia continued to partner with ASEAN in FY 2011 in support of the ASEAN Environmentally Sustainable Cities Initiative (ASEAN ESC) and its Clean Water Framework by facilitating three city-to-city twinning partnerships with ASEAN cities. ECO-Asia is continuing twinning partnerships with ASEAN cities in 2012.

In FY 2011, ECO-Asia, together with ADB further strengthened WaterLinks by establishing an independent, non-profit WaterLinks secretariat based in the Philippines and recruiting for the WaterLinks Board of Trustees; promoting WaterLinks at global, regional and national events; and in developing the WaterLinks twinning facilitation guidelines. ECO-Asia served as the interim WaterLinks secretariat and implemented the 2011 WaterLinks workplan that included website management, outreach and coordination with various development partners (UN-Habitat, WHO, national associations) and preparation for the 3rd WaterLinks Forum to take place in early FY 2012.

In Vietnam, ECO-Asia supported a twinning partnership between Nha Trang's Khanh Hoa Water Supply and Sewerage Company and the Macao Water Supply Company focused on improving Khanh Hoa's water supply quality in accordance to its Water Safety Plan. In the partnership, Macao Water provided hands-on training and demonstrated technologies for monitoring water quality and for ensuring that Khanh Hoa's water supply in the distribution network met national standards, safeguarding Nha Trang residents against potential contamination. Khanh Hoa invested in a re-chlorinator unit and, with Macao Water guidance, in cleaning its storage reservoir to elevate chlorine residual levels. More than 39,000 people as a result have safer water supply.

In Indonesia, ECO-Asia facilitated a partnership between Malaysia's Ranhill Utilities and the Pontianak Water Supply Company to assist Pontianak in delivery safe water supply. Ranhill first helped Pontianak to develop its Water Safety Plan, the first for an Indonesian water company. Ranhill and Pontianak then collaborated to implement the Plan by focusing on water treatment optimization and distribution network management. With Ranhill guidance and support, Pontianak improved water quality for more than 59,000 people.

In the Philippines, ECO-Asia started a partnership on water quality management between the Korea Water Resources Corporation (K-Water) and the San Jose del Monte Water District. K-Water gave practical recommendations and organized trainings for San Jose to improve its treatment and laboratory management practices. San Jose is investing in new technologies and infrastructure that will benefit more than 60,000 people in FY 2012.

In Thailand, ECO-Asia continued support for the Provincial Waterworks Authority (PWA) to optimize water treatment processes in its Khon Khaen waterworks, and to scale-up water quality management improvement initiative through the development of Water Safety Plans. In Khon Khaen, ECO-Asia facilitated monitoring by PWA's partner, K-Water, on ongoing system improvements that ultimately benefitted more than 100,000 residents through safer water supply. K-Water has also seconded an expert staff to PWA for one year to assist PWA in system upgrades. In addition, through a workshop involving the 10 PWA regions, ECO-Asia supported efforts to scale-up the Water Safety Plan framework for PWA's network of 230 waterworks. In the workshop, the Water Corporation from Australia shared its knowledge and procedures for institutionalizing the Water Safety Plan. PWA as a result has established a Water Safety Plan Committee and selected 10 additional waterworks that will develop the Plan in FY 2012.

In Indonesia, ECO-Asia continued to facilitate a twinning partnership between Malaysia's Penang Water Supply Corporation (PBAPP) and the Palembang Water Supply Company (PDAM Tirta Musi) to scale-up achievements in providing continuous water supply in Palembang. Through additional trainings and consultations on water loss management, the PDAM expanded its continuous supply improvements to 130,000 residents. Due to its success, the PDAM is mentoring two other Indonesian water companies in a domestic twinning arrangement supported by the ADB through WaterLinks in FY 2012.

In India, ECO-Asia supported the Maharashtra Jeevan Pradhikaran (MJP) and the Rajasthan Public Health and Engineering Department (PHED), two state-level water services providers, to scale-up continuous water supply efforts with assistance from their twinning partner, Malaysia's Ranhill Utilities. Ranhill provided additional training to manage zones and reduce water losses that enabled MJP and PHED to supply 24/7 service in Amravati and Jaipur, respectively. MJP added at least 10 more zones while PHED expanded to Jodphur and four other cities, improving service for about 74,000 urban residents.

In Indonesia and the Philippines, ECO-Asia facilitated an innovative partnership approach on developing and implementing septage management programs that included a mentor partner, Malaysia's Indah Water Konsortium (IWK), and multiple water district recipients (Baliwag, Cabanatuan, Laguna, Metro Cebu and Calamba). IWK shared its practices and provided training to the five water districts in the Philippines to institutionalize septic tank desludging operations, including collection, treatment and disposal. The Baliwag Water District procured new desludging trucks and began facility construction with IWK assistance. In Indonesia, IWK gave hands-on training for two wastewater management service providers in Jakarta and Kota Bandung to optimize ongoing desludging operations and expand into new service areas. The resulting service delivery improvements and expansion plans have benefitted more than 68,000 residents in these two cities.

In the Philippines, ECO-Asia facilitated a multiple-recipient twinning partnership between Taiwan's Chia Nan University (CNU) and the Calamba Water District (CWD) and two municipalities to develop and manage domestic wastewater using natural treatment technologies around the Laguna Lake region. In the partnership, CNU helped CWD and the local municipalities of Lucban and Angono to understand how natural processes work and to design site-specific natural treatment systems. More than 50,000 people benefitted from improved access to sanitation services. To support replication, ECO-Asia also engaged the Laguna Lake Development Authority (LLDA) in the partnership activities. LLDA and CNU are exploring opportunities to expand the partnership with their own support mechanisms that entail at least four more municipalities around Laguna Lake in FY 2012.

ECO-Asia also initiated partnerships on climate change adaptation and mitigation. ECO-Asia linked the Palm Beach County Water Utility Department and the U.S. National Center for Atmospheric Research (NCAR) with the Philippines' Manila Water and Maynilad Water to consider and integrate climate change into their planning processes. Palm Beach and NCAR shared their experiences and gave training on using a water resources management software that allowed the two Manila service providers to adapt to potential climate change impacts in FY 2012. To reduce energy use and associated carbon emissions, ECO-Asia partnered the Las Vegas Valley Water District with the Metro Cebu Water District. In the partnership, Las Vegas assisted Cebu with optimizing groundwater pump operations and water distribution that will reduce energy use in FY 2012.

ECO-Asia worked with 13 water operators in four countries to develop promotion campaigns to expand access to services using the ECO-Asia 10-Step Promotion Program Toolkit. Based on user feedback, including during a Training of Trainers event, ECO-Asia revised and strengthened the Toolkit. In late FY 2011, ECO-Asia rolled out the Toolkit and launched the 10-Step Promotion Program Toolkit website (10step-toolkit.org), with pages available in both English and Bahasa Indonesia.

Overall, the ECO-Asia Water and Sanitation Program performance is on track with mission plans. Over the last six years, ECO-Asia has achieved program requirements by demonstrating best practices and developing strong collaborative linkages with regional partners and networks. In FY 2012, ECO-Asia will use WaterLinks to facilitate service provider twinning, capacity building and knowledge sharing to further disseminate results and achievements to catalyze wide-spread adoption of solutions that are best for Asia.

The annex contains Success Stories of FY 2011 ECO-Asia water and sanitation activities.

Summary of Accomplishments

Enabling Water Services Delivery for the Urban Poor

- Assisted six water service providers in Indonesia (PDAMs) design promotion campaigns to increase water connections for the urban poor using ECO-Asia's 10-Step Promotion Program Toolkit. As a result of the campaigns, nearly 50,000 people now have household water connections for the first time.
- Supported the launching of a promotion campaign in Hai Phong (Vietnam) by the Hai Phong Sewerage and Drainage Co. (SADCO) to increase awareness and willingness for households to desludge their septic tanks using the10-Step Promotion Program Toolkit. More than 100 residents were able to schedule desludging services at the event.
- Worked with PDAM Tirtanadi and the Medan Municipal Government to expand sewerage connections in Medan through use of ECO-Asia's 10-Step Promotion Program Toolkit. ECO-Asia helped review PDAM Tirtanadi's 2009-2010 promotion programs, supported the launching of new promotion activities in targeted service areas, and trained PDAM staff on customer outreach and communications. As a result of the promotion campaigns over 2,500 households are now connected to the sewer system.
- Organized a regional Training of Trainers on the 10-Step Promotion Program Toolkit in Bangkok. Representatives from eight organizations in five countries participated in the 3-day training to learn more about the 10-step process and how it could be applied to their water and sanitation initiatives. Feedback from the training was used to helped strengthen the Toolkit.
- Facilitated application of the 10-Step Promotion Program Toolkit with three Vietnamese water companies in Bac Ninh, Hai Duong and Son Tay to expand household connections amongst the urban poor. As a result of the promotion campaigns nearly 3,000 people now have a piped household connection for the first time.
- Assisted the Sri Lanka National Water Supply and Drainage Board (NWSDB) to begin to use the 10-Step Promotion Program Toolkit in support of its water supply service expansion plans to the urban poor in Lunawa area, part of Greater Colombo. The promotion program will be launched in FY 2012.
- Prepared and disseminated a Request for Grant Proposal to apply the Toolkit support water and wastewater service expansion through a small grant. Of 13 organizations that applied, four organizations were selected to provide a detailed proposal and to participate in a Training-of-Trainers workshop. A grant was ordered to an NGO in the Philippines to expand water and sewerage services to the urban poor in metro Manila.

Improving Performance of Water and Wastewater Services Utilities

- Facilitated a WOP establishment between K-Water in South Korea and the Philippines' San Jose del Monte Water District on water quality management. Activities included a MoU signing, work plan finalization, technical visits to South Korea to observe treatment optimization and laboratory

improvements practices, technical trainings by K-Water on water quality analysis, filtration system optimization, and Water Safety Plan development (with the World Health Organization); and remote consultations on treatment system improvements.

- Supported a WOP between Ranhill Utilities in Malaysia and PDAM Kota Pontianak in Indonesia to ensure safe water supply for the city of Pontianak. PDAM and Ranhill identified a pilot area consisting of more than 50,000 residents for water quality improvements. Activities included a technical training by Ranhill in Pontianak to optimize water treatment process in one of its facility and verify potential sources of low chlorine residual in the PDAM's pilot network area, and training in Singapore by WHO on developing a Water Safety Plan. PDAM visited Ranhill operations in Johor Baru, Malaysia to observe real applications of ISO-certified laboratory operations, water sampling programs and stations, and automated treatment system operations. In addition, there were technical monitoring visits on overall treatment operations and distribution, Water Safety Plan development; and remote consultations on system improvements.
- Facilitated a WOP between Macao Water Supply Co. and the Khanh Hoa Water Supply and Sewerage Company in Nha Trang, Vietnam to ensure safe water provision and to reduce Khanh Hoa's energy consumption. The partnering water companies developed a 15-month work plan that included capacity building and knowledge sharing by Macao on model water quality management and energy efficiency practices to benefit more than 40,000 residents with safe water and to reduce energy use by 5 percent.
- Supported the completion of the WOP between Ranhill Utilities/Maharashtra Jeevan Pradhikaran (MJP) in India and the Public Health Engineering Department (PHED) of Rajasthan in India on enabling 24/7 water supply in Jaipur and additional Rajasthan cities. Ranhill and MJP supported PHED through experience sharing, training and field observation on technical know-how to operate and manage continuous supply zones.
- Initiated a WOP between the Las Vegas Valley Water District and Metro Cebu Water District in the Philippines on climate change mitigation through energy use optimization/reduction of Cebu water pumping operations. MCWD has started implementing energy input reduction measures, as recommended by LVVWD, by changing pump configurations and operations in a pilot area.
- Established a WOP between Palm Beach County Water Utility Department and Manila water operators, Manila Water and Maynilad on integrating climate change adaptation into their investment planning process. An expert from the U.S. National Center for Atmospheric Research (NCAR) provided additional technical assistance related to water resource planning and climate risk factors evaluation. All partners signed a WOP MoU and drafted a joint work plan.
- Supported India's Maharashtra Jeevan Pradhikaran (MJP) to scale-up its conversion to 24/7 water supply activities in Amravati and Yavatmal through additional technical assistance on hydraulic modeling and GIS, and technical training by Ranhill on continuous supply zone verification and maintenance.
- Facilitated an extended partnership between PDAM Tirta Musi in Palembang in Indonesia and Penang Water Supply Company in Malaysia to scale-up continuous water supply services to six additional service areas in Palembang to benefit at least 30,000 residents by facilitating the development of a scale-up action plan, technical review of past field activities and training on water supply distribution management by Penang.
- Co-organized a workshop with the Provincial Waterworks Authority of Thailand (PWA) for a methodology to roll-out WSP development and implementation throughout PWA's network of 230 waterworks. Water Corporation, an Australian water company with extensive experience in overseeing and monitoring WSPs in 160+ waterworks, and the WHO shared their insights and experiences. PWA has established a technical committee to review submissions of WSP.

Demonstrating Sustainable Sanitation Solutions

- Established and facilitated a WOP between the Chia Nan University in Taiwan and the Calamba Water District and local governments in Angono and Lucban and the Laguna Lake Development Authority or LLDA in the Philippines on developing natural wastewater/ septage treatment facility, benefitting at least 50,000 residents. Activities included technical training/visits on system design/operations and maintenance, facility siting; and discussion with the World Bank and Water and Sanitation Program to support replication of system application in other sites around Laguna Lake through LLDA.
- Initiated a WOP between Indah Water Konsortium (IWK) in Malaysia and five water districts in the Philippines – Baliwag, Cabanatuan, Laguna, Calamba, and Metro Cebu – on developing and implementing a septage management program to benefit at least 45,000 residents. This involved exchange visits/training at IWK with additional technical support by the Philippines' Maynilad Water as a local mentor to share experiences in septage collection and management.
- Established and facilitated the WOP between IWK and Indonesian service providers - PD PAL Jaya of Jakarta and PDAM Kota Bandung - on improving septage management operations. The Indonesian operators visited IWK to learn about IWK septage operations. Service providers from Surakarta and the Malang District also participated in the technical visit to prepare for replication.
- Facilitated the final training on sludge treatment by IWK to support the Hai Phong Sewerage and Drainage Company in Vietnam in scaling-up its improved septage management services in new areas in Hai Phong where more than 20,000 people reside.
- Supported the final training by IWK to assist Maynilad Water commission its five new/upgraded combined sewerage systems, in support of Maynilad's scale-up plans. Maynilad began institutionalizing commissioning guidelines and procedures with IWK's technical guidance to benefit more than 18,000 people served by the systems.

Other Notable Accomplishments and Activities

- Developed a new 10-Step Program website that provides an overview of the 10-step process and details each step for users.
- Disseminated the USAID ECO-Asia Gender Scan Methodology at the Philippines Association of Water Districts (PAWD) Convention and discussed its application with the Davao City Water District in the Philippines. The methodology is specifically targeted to assist operators assess their performance and potential for developing and implementing gender friendly policies and practices and improving gender mainstreaming.
- Supported drafting of procedures and strategies for WaterLinks organizational structure and its initiatives such as a road map for establishing a non-profit WaterLinks Secretariat (or "Center"); a strategy for strengthening national water associations in India, Indonesia, Philippines, and Vietnam.
- Supported the establishment of the independent WaterLinks Secretariat that included registration in Philippines and identification of potential incorporators/Board members.
- Completed and implemented the WaterLinks 2011 work plan in coordination with the ADB and IWA including WaterLinks website updates, WaterLinks Award selection, development of WaterLinks Forum agenda, and WOP Facilitation Guidelines preparation.
- Co-organized with ADB a session on WaterLinks and WOPs for the South East Asia Water Utility Network (SEAWUN) Conference in Manila, attended by more than 40 participants. The session included highlights on principles and approaches for effective WOPs, and a moderated discussion by water operators that have participated in regional and in-country WOPs.
- Co-organized with ADB and IWA a session on WaterLinks and WOPs for the ADB Water and Choices Week in Manila attended by at least 30 participants. The session included presentations

and highlights on approaches for effective WOPs, replication and scale-up initiatives, and lessons from ongoing/past regional and in-country WOPs.

- Co-organized with IWA a session on WaterLinks and WOPs for the Global Water Safety Conference in Kuching, Malaysia and facilitated participation of four water operators to showcase tangible water treatment and distribution improvement activities that led to safe water provision. New water operators from Malaysia and Australia expressed interest to participate in new partnerships for improving water quality through WaterLinks.
- Promoted and presented WaterLinks in regional and global events that included the Indonesia Water and Wastewater Exhibition and Forum in Jakarta, the 2nd High Level Meeting on ASEAN Environmentally Sustainable Cities in Kitakyushu, Japan, the ADB Sanitation Dialogue and the 2nd IWA DEWATS Conference in Manila, Asia Water in Kuala Lumpur, the Singapore International Water Week, the 1st Global WOP Alliance Congress in Cape Town, South Africa, and the Stockholm World Water Week.
- Explored opportunity to support PERPAMSI in launching and structuring its domestic WOP program in Indonesia.

Indicator Results Summary

As detailed in Table 3 below, ECO-Asia exceeded two principal performance target for USAID common indicators – number of people with access to improved drinking water supply and number of people with access to improved sanitation facilities – due to greater than expected results with our water promotion campaigns in Indonesia and water quality activities in Palembang, Indonesia and Nha Trang Vietnam and our sanitation activities in Indonesia.

ECO-Asia also exceeded other programming targets due primarily to an unexpected increase in participant interest in water and sanitation programming. These indicators include number of policies and model actions applied and replicated, institutions with increased capacity and number of practitioners trained, In particular the indicator measuring the amount of funds leveraged from non-USAID sources was greatly exceeded due to partners' infrastructure investments in sanitation activities in Indonesia and the Philippines and water activities in India. These results, when taken together, are not surprising results for a successful regional program with strong regional counterpart and development partner support.

Table 3: FY 2011 Water and Sanitation Performance Management Plan Results

Indicator	Description		
		Target FY 2011	Result FY 2011
SO: Improved response to environmental challenges in Asia			
SO 1	Number of policies and model actions applied and replicated	45	45
SO 2	Number of beneficiaries with improved environmental services	450.500	546,694
IR 1: Enabling Conditions Improved			
IR 1.1	Number of improved water and sanitation policies, laws, plans or model actions strengthened, developed, adopted, and/or implemented	50	58
IR 1.4	Number of non-governmental stakeholders engaged in environmental governance	6	9
IR 1.5	Amount of funds from non-USAID sources mobilized and applied	770,000	7,552,338
IR 2: Human and institutional capacity strengthened			
IR 2.1	Number of key national and local institutions with increased capacity	45	88
IR 2.2	Number of women in key national and local institutions with increased capacity	110	119
IR 2.3	Number of people trained in improved water and sanitation practices	785	1,316
IR 3: Model actions demonstrated			
IR 3.2	Number of people in target areas with access to improved drinking water supply as a result of USG assistance	292,500	374,850
IR 3.2	Number of people in target areas with access to improved sanitation facilities as a result of USG assistance	158,000	171,844
IR 4: Regional platforms strengthened to catalyze and sustain change			
IR 4.1	Number of regional environmental platforms created or strengthened	1	1

III. ENVIRONMENTAL GOVERNANCE

Asian Environmental Compliance and Enforcement Network

Under the Clean Productive Environment Policy and Governance sub-element, ECO-Asia is leading efforts to strengthen the Asian Environmental Compliance and Enforcement Network (AECEN), a regional practitioner network. The AECEN mission is to: (1) promote the development and implementation of improved environmental policies, laws, regulations, and institutional arrangements; (2) strengthen practitioner capacity through specialized training and skills development; and (3) facilitate regional sharing of best practices and information on strengthening compliance and enforcement. Network members are environmental regulatory agencies committed to improving compliance and enforcement through regional cooperation and information exchange.

As the AECEN Secretariat, ECO-Asia prepares an annual work plan of country and regional activities for review by the AECEN Executive Committee, which at present consists of representatives from China, India, Indonesia, Japan, Singapore, Sri Lanka, Thailand, USAID, ADB and UNEP. ECO-Asia supports the Committee in the performance of its tasks, including organizing committee meetings to review activity implementation and plans. ECO-Asia also develops and maintains the AECEN website to highlight network activities and provide information resources for members and the public.

With support from RDMA, the U.S. Environmental Protection Agency (EPA) is a core AECEN partner, providing technical assistance and training support. The ADB and World Bank contribute direct funding resources and technical expertise.

Through AECEN partnerships and other activities, in FY 2011, ECO-Asia catalyzed the adoption of 10 policies, laws and regulations, and trained over 300 practitioners from 15 agencies and organizations, and mobilized over $200,000 in funds from non-USAID sources. These results were in line with activity targets.

Key results included the establishment of improved capabilities for EIA for the hydropower sector in Nepal, improved implementation of new rules for adjudicating environmental law cases in Indonesia, new tools and capabilities in public participation and pollution control in Thailand, and improved policy framework and technical capabilities for effective contaminated soil monitoring in Vietnam. The environmental agency from Laos joined AECEN, bringing the number of members to 19.

In FY 2011, Japan's Institute for Global Environmental Strategies continued to assume responsibilities from RDMA as the legacy organization for AECEN and future AECEN secretariat. The transition will continue through FY 2012.

The annex contains Success Stories on ECO-Asia's environmental governance activities that were developed during FY 2011.

Summary of Accomplishments

During FY 2011, ECO-Asia continued to strengthen and expand AECEN through a range of country and regional activities. The AECEN Annual Forum in Kyoto, Japan in November 2010 both achieved programmatic goals, and expanded the reach of the network.

Major FY 2011 accomplishments include:

- Supported Department of Natural Resources and Environment (DONRE) of Ho Chi Minh City (HCMC) to develop a draft new self-reporting form and accompanying guideline for use by industry in HCMC, incorporating best practices from Department of Environment, Climate Change and Water (DECCW) of New South Wales, Australia. Also facilitated a visit by experts from DECCW to HCMC to conduct training on effective environmental regulation for staff of DONRE of HCMC and other Vietnamese environmental agencies.
- Supported consultation between Nepal Ministry of Environment (MOE) and Malaysia Department of Environment (DOE) to develop new tools to streamline environment review of hydropower projects in Nepal. Stakeholders from various sectors in Nepal provided feedback on the consultant registration scheme and training program which aimed at improving the quality of EIA reports and ensuring a more efficient review process. ECO-Asia also provided technical input through review of draft training curriculum.
- Facilitated discussions between Sri Lanka Central Environmental Authority and China Appraisal Center for Environment and Engineering (ACEE) - Ministry of Environmental Protection, China on a twinning partnership to improve environmental impact assessment (EIA) policies and practices in Sri Lanka.
- Established and facilitated a new AECEN twinning partnership between Vietnam's Ministry of Natural Resources and Environment (MoNRE) and the Korea Ministry of Environment (MOE) to develop an improved policy framework for contaminated soil management. MoNRE and MOE signed a Letter of Intent for cooperation. Experts from MOE, Korea Environmental Industry & Technology Institute and Korea Environment Cooperation visited MoNRE and exchanged views with Vietnamese experts on legal and policy frameworks to promote effective soil monitoring for suspected contaminated areas.
- Facilitated a partnership between the Ministry for Environment (MfE) of New Zealand and Thailand's Ministry of Natural Resources and Environment (MoNRE) to develop a community participation framework in Tha Chin River Basin, based on similar experience in Waikato, New Zealand. The Waikato Regional Council and MfE hosted an observational program in Waikato for stakeholder representatives from Thailand's MoNRE and civil society groups from the Tha Chin River Basin to see first-hand community involvement tools and techniques in protecting and restoring waters.
- Facilitated and supported the partnership between Indonesia and Philippines on strengthening environmental adjudication in Indonesia through a certification program of environmental judges in the country. The Philippines Supreme Court and the Philippine Judicial Academy (PHILJA) hosted officials of the Indonesian Supreme Courts in Manila and Pampanga. U.S. EPA also shared information and provided feedback on the guidelines and training curriculum in line with Indonesia's proposed certification program for environmental judges.
- Facilitated a presentation by the Environmental Appeals Board (EAB) of the U.S. EPA at a roundtable to share with Chinese judges the design, content and training methodologies of an environmental adjudication training program EAB has developed for international audiences.
- Coordinated with U.S. EPA on work and activities in India and China. The U.S. EPA conducted an enforcement workshop in Hyderabad, India to identify priorities of concerned ministries and next steps for the partnership.
- Supported and facilitated participation of Indonesian officials to learn from the experience of China and the U.S. on pollution discharge permitting system in Nanjing, China. The Indonesia Ministry of Environment is currently drafting new permitting regulations in accordance with the Environmental Management and Protection Act of 2009.
- Established an AECEN Task Force with members from partners in India, Philippines and Thailand, and facilitated discussions among members to develop a toolkit on establishing environmental compliance assistance centers to promote further replication of the compliance assistance centers in Asia.

- Facilitated development of replication "Roadmap" for best practices on environmental compliance at the AECEN Regional Forum in Kyoto, Japan**.** Environmental agencies from 16 countries across Asia as well as Australia, Jordan and the United States shared ideas and experience to strengthen replication of best practices that build on AECEN's successful twinning partnerships. Network members also shared results and accomplishments related to twinning partnerships across a range of areas, including project planning, command-and-control regulation, and voluntary programs.
- Awarded the 2010 Award for Outstanding Service and Commitment by a Woman to Ms. Yoko Maki, Senior Director of the Global Environment Knowledge Center of the Environment Bureau of the City of Kawasaki, Japan. Under Ms. Maki's leadership over the last 30 years, Kawasaki has become a model city for Asia, and the world. Kawasaki was designated as Japan's first "Eco Town", created a zero emission industrial zone, and developed an ordinance on climate change.
- Coordinated and supported the AECEN Executive Committee meeting in Kyoto. Members of the committee discussed on the network's accomplishments for 2010, plans and activities for 2011, updates on transition of Secretariat to IGES and approaches to promote increased member ownership of the network.
- Conducted a survey of regional environmental compliance and enforcement networks and presented results during the Summit of Regional ECE Networks in conjunction with the INECE 9th International Conference in Whistler, Canada. Regional networks represented in the summit agreed to collaborate more closely and explore possible joint initiatives.
- Facilitated participation of AECEN members from Malaysia, Thailand and Vietnam to share environmental compliance and enforcement best practices and outcomes of twinning partnerships during the International Network on Environmental Compliance and Enforcement (INECE) 9th International Conference in June. Members of the AECEN Secretariat also joined panels on environmental compliance and enforcement networks and possibilities for the Rio+20 Earth Summit to share ideas and AECEN experience.
- Discussed with representatives from INECE and the Arab Network on Environmental Compliance and Enforcement (ANECE) on ways to strengthen collaboration among networks and sharing of best practices.
- Supported the implementation of the decisions of the AECEN Executive Committee by developing the necessary action plan and reaching out to members for appropriate action and feedback on the decisions and agreed approaches relating to network sustainability.
- Reached out to development partners to understand priorities for 2012 and beyond and explore opportunities for more concrete collaboration with AECEN. Initial feedback on member priorities were also gathered to assist in facilitating possible future discussions with identified development partners. These were pursued along the lines of ensuring network sustainability and assisting transition towards a permanent Secretariat (IGES).
- Honored Dr. Supat Wangwongwatana, Chair of AECEN, at reception in Bangkok with her Excellency Kristie A. Kenney, U.S. Ambassador to Thailand. During the past 5 years, Dr. Supat has led AECEN's efforts to promote and replicate best practices on environmental compliance and enforcement through concrete peer-to-peer collaboration.
- Supported West Bengal to scale up operations of the Environmental Compliance Assistance Centre (ECAC) of West Bengal to cover for the plastic processing sub-sector under AECEN. At the launching, over 70 participants from industry, industry associations, regulatory agencies, academic institutions and research organizations learned about the new program, and how West Bengal will enable target industries to achieve better environmental compliance through improved access to information on technologies and legal requirements.
- Participated in discussions between Chinese and Japanese counterparts on outcomes of the twinning partnership on energy efficiency and the draft training manual for relevant local agencies. Consultations were conducted with representatives from Shanghai Jiao Tong University and Tsinghua University on improvements to the manual.

Indicator Results Summary

ECO-Asia met or exceeded targets for the number of non-governmental stakeholders engaged in environmental governance, amount of non-USAID funds mobilized and number of institutions with increased capacity. Taken together, these greater-than-expected results reflect the growth and increasing importance of AECEN as a regional platform, and the ability of AECEN to catalyze and replicate positive change. In FY 2012, ECO-Asia will continue to dedicate resources to enhancing the sustainability of AECEN.

Table 4: FY 2011 AECEN Performance Management Plan Results

Indicator	Description	Target FY 2011	Result FY 2011
SO: Improved response to environmental challenges in Asia			
SO 1	Number of policies and model actions applied and replicated	3	3
IR 1: Enabling Conditions Improved			
IR 1.2	Number of improved policies, laws, regulations, agreements related to pollution and urban environment drafted with USG assistance	10	7
IR 1.4	Number of non-governmental stakeholders engaged in environmental governance	5	17
IR 1.5	Amount of funds from non-USAID sources mobilized and applied	$ 105,000	$202,141
IR 2: Human and institutional capacity strengthened			
IR 2.1	Number of key national and local institutions with increased capacity	25	97
IR 2.2	Number of women in key national and local institutions with increased capacity	130	130
IR 2.4	Number of people receiving USG supported training in environmental law, enforcement, public participation, and cleaner production policies, strategies, skills and techniques	335	338
IR 4: Regional platforms strengthened to catalyze and sustain change			
IR 4.1	Number of regional environmental platforms created or strengthened	1	1
IR 4.2	Number of new members in regional environmental platforms	1	1

Transboundary Conflict Prevention and Management in the Mekong River Basin

In FY 2011, ECO RDMA collaborated with MRC, WWF and ADB in developing and trialing a rapid basin-wide hydropower sustainability assessment tool to assess the impact of multiple hydropower projects in a holistic river-basin wide context. ECO-Asia also developed a report entitled "Alternative Planning Approaches for Hydropower Development in the Lower Mekong Basin (LMB)" to support better water resources planning in the Mekong basin. In FY 2012, RDMA will continue to work with partners to strengthen and test the RSAT across the Mekong.

As detailed in Table 5 below, ECO-Asia met or exceeded all targets except for number of people trained and number of non-governmental stakeholders due to workshop postponement by the MRC.

Summary of Accomplishments

- Supported trials of the Rapid Basin-wide Hydropower Sustainability Assessment Tool (RSAT) in the four Lower Mekong countries. Outcomes of these trials were synthesized into a draft report which was shared with RSAT partners including the ADB, Mekong River Commission (MRC) and World Wide Fund for Nature (WWF) at a regional workshop in Vientiane, Laos. Meeting participants discussed key lessons learned from trials, ways forward for improving the tool, and a strategy to promote wider adoption. An international consultant from Entura was contracted to revise the tool based on outcomes of the regional workshop.
- Contracted Portland State University (PSU) and Mae Fah Luang University in Thailand to conduct a rapid assessment to provide the policy and decision makers in the riparian countries of the LMB with a balanced assessment of the benefits from hydropower development of the mainstream Mekong River against the costs due to the negative impacts of mainstream dams on the ecosystem services that are currently provided by an interconnected lower Mekong River system. The assessment complemented the findings of the Basin Development Plan and the Strategic Environmental Assessment of mainstream dams conducted by the MRC, and made recommendations on methodological improvements and additional analyses which could benefit future planning processes.
- Presented the main findings and recommendations of PSU's report, "Planning Approaches for Water Resources Development in the Lower Mekong Basin", at MRC Donors Meeting in Phnom Penh. As a result, the donors agreed to include in the donor statement at the meeting PSU's recommendations for the MRC to apply improved modeling techniques and more comprehensive scenario planning in the next phase of its Basin Development Plan. The MRC Secretariat staff welcomed these recommendations as well as USAID follow-on assistance in these areas to better assess environmental and social impacts of different development scenarios.
- Discussed with key MRC Staff to scope further details of the proposed USAID-supported regional capacity building workshop. Building on the initial recommendations of the PSU report, USAID is working with the MRC Secretariat on a follow–up initiative to support implementation of the MRC's Basin Development Strategy through a capacity building program. Beginning with a workshop planned for 2012, USAID and MRC will build the knowledge base and capabilities of MRC staff and the riparian governments on new methodologies and tools for scenario assessment and strategic planning. To plan for this workshop, ECO-Asia held a series of meetings with MRC key staff to identify workshop key themes, core session topics and potential technical resources to be engaged.

Table 5: FY 2011 Transboundary Conflict Performance Management Plan Results

Indicator	Description	Target FY 2011	Result FY 2011
IR 1: Enabling Conditions Improved			
IR 1.3	Number of USG-supported initiatives/mechanisms designed to reduce the potential for violent conflict over the control, exploitation, trade or protection of natural resources	3	3
IR 1.5	Amount of funds from non-USAID sources mobilized and applied	$105,000	$146,400
IR 2: Human and institutional capacity strengthened			
IR 2.1	Number of key national and local institutions with increased capacity	5	15
IR 2.2	Number of women in key national and local institutions with increased capacity	10	15
IR 2.5	Number of people trained in conflict prevention and management in transboundary waters	70	39
IR 4: Regional platforms strengthened to catalyze and sustain change			
IR 4.1	Number of regional environmental platforms created or strengthened	1	1

IV. OVERARCHING SUPPORT

Small Grants Program

ECO-Asia issued five small grants in FY 2011: (1) Ranhill Utilities Berhad (Ranhill) to implement Water Operator Partnerships (WOP) to manage water quality with PDAM Tirta Khatulistiwa Kota Pontianak, Indonesia (PDAM TK) and support WOP promotion in Asia; (2) Research Center for Family Health and Community Development to expand access to water services through promotion in Vietnam; (3) SPEAK Indonesia to expand access to water services through promotion in Indonesia; (4) SPEAK Indonesia to expand use of the 10-Step promotion program toolkit through video marketing; and (5) Mother Earth Foundation to promote access to urban water and wastewater services.

Participant Exchange Program

In FY 2011 ECO-Asia facilitated 56 exchanges for 441 participants, 24% of whom were women. Water and sanitation exchanges involved 361 participants, AECEN exchanges included 80 participants and MRC exchanges involved 0 participants. Total cost share for the exchanges was $110,929 or 36% of total cost.

Communications

ECO-Asia continued to develop communications materials, including outreach materials, and continued populating the ECO-Asia, AECEN and WaterLinks websites. Some notable communication products include:

- Updated REO promotional material and developed communications materials for other REO contractors
- Delivered 11 new Telling Our Story articles to RDMA
- Revamped the WaterLinks, 10-Step Promotion Program Toolkit and AECEN websites
- Supported major events with talking points and news releases,

- Continued gathering, editing and transmitting to REO, Weekly Report items
- Developed and transmitted the ECO-Asia Quarterly eNewsletter on behalf of REO
- Updated the ECO-Asia brochure

Program Reporting

Throughout FY 2011 ECO-Asia assisted REO with communications support and materials for ongoing ECO-Asia activities, and activities of other REO contractors and cooperators. ECO-Asia also assisted RDMA in preparing the 2011 Performance Plan and Report.

V. ANNEX: SUCCESS STORIES

- Indonesian Water Companies Connect Urban Poor
- Delivering Safe Water Supply in Pontianak, Indonesia
- Piloting New System to Deliver Safer Water in Nha Trang, Vietnam
- A First: Continuous Water Supply for Communities in Jaipur
- Safeguarding Philippines' Largest Lake
- Bandung, Indonesia Expands Sanitation Services Delivery
- Vietnam Works to Better Manage Contaminated Soil
- Thailand Develops New Framework for Community Watershed Management
- Indonesia to Certify Environmental Judges
- Report Informs Policy Dialogue on Mekong Water Resources Planning

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CASE STUDY

Indonesian Water Companies Connect Urban Poor

Indonesian water service providers use USAID services promotion toolkit to help expand water supply to 50,000 low-income urban residents

ECO-Asia

Staff from PDAM Jombang test services promotion leaflets with target community.

"After we were trained in the 10-Step Toolkit the result of our promotion and outreach campaigns have been much, much better. I believe that the Toolkit is very helpful in organizing a promotion campaign and marketing PDAM products. Now we have a standardized method to do all of our promotion and outreach activities."

– Budiyanto,Director , Director, PDAM Jombang, East Java.

Challenge

Over 50 million urban poor in Indonesia lack access to safe drinking water. Water service providers, or PDAMs, are continuously working to expand their coverage in urban areas but face difficulties in getting poor households to connect to the piped water system. In many cases, the lack of new customers relates more to a lack of awareness of new service availability, rather than customer inability or unwillingness to pay for the services. To successfully expand their coverage and engage the urban poor as true customers, the PDAMs seek better, locally adaptable approaches.

Initiative

A well-designed services promotion program can be an effective way for PDAMs to better connect with the urban poor and bring about positive behavior change related to water services. Through the WaterLinks network, USAID's ECO-Asia project has developed a *10-Step Promotion Program Toolkit* to help water service providers, especially PDAMs, develop targeted and tailored promotion efforts that not only strengthen outreach, but also builds stronger rapport with the urban poor as their customers. Through a step-by-step approach, six PDAMs throughout Java developed new tools and systems to develop targeted outreach campaigns that reflected the specific conditions and needs of their target audience.

Results

Using the Toolkit the six PDAMs in Java created leaflets, local plays and radio spots focused on expanding services to the urban poor. As a result of the targeted promotion campaigns, the PDAMs gained over 9,000 new household customers in the first six months of the campaigns, providing nearly 50,000 people with first-time water access. All six PDAMs are now integrating the Toolkit process into their other promotion and outreach activities.

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CASE STUDY

Delivering Safe Water Supply in Pontianak, Indonesia

Indonesian water operator joins hands with Malaysian counterpart to improve drinking water quality for 50,000 residents.

Mark Nicol/ECO-Asia

Ranhill and PDAM Tirta Khatulistiwa evaluate Pontianak's piped network.

"Water quality management is a pressing issue for us. Being able to take another leap to optimize our operations and better address water quality constraints supports our goal of providing safe water to our customers. Our partnership with Ranhill paves the way in that reform process."

– Mr. Agus Sutyoso, Managing Director, PDAM Tirta Khatulistiwa

Challenge

The Kapuas River is the main water supply source for Pontianak, a city of over 500,000 in Kalimantan in Indonesia. Rapid population and industrial growth near the river have degraded its water quality, leading to high turbidity and other contaminant loading. As a result, city residents face significant, on-going potential health risks, and the city's water operator, PDAM Tirta Khatulistiwa, is looking for new strategies and tools for improving water quality management and ensuring safe water provision to its customers.

Initiative

In 2011, with support from the Environmental Cooperation – Asia (ECO-Asia) project through the WaterLinks network, USAID linked PDAM Tirta Khatulistiwa with Malaysia's Ranhill Utilities, a water operator recognized for its strong capabilities in water quality management. Over the one-year twinning partnership, Ranhill trained PDAM Tirta Khatulistiwa on water quality management methods and helped to institute a regular water sampling program, upgrade its laboratory management, improve pre-treatment operations and chlorine dosing processes, and maintain adequate chlorine residual levels. With Ranhill support, PDAM Tirta Khatulistiwa also developed a Water Safety Plan per an established World Health Organization framework to identify and mitigate risks associated with water quality incidents through a pilot activity at the Selat Panjang Water Treatment Plant and associated distribution network.

Results

Through the pilot program, PDAM Tirta Khatulistiwa removed the risks of high turbidity levels and stabilized chlorine residual levels in its piped network per required standards, which will safeguard more than 50,000 Pontianak residents against contamination. In addition, PDAM Tirta Khatulistiwa is also the first water company in Indonesia to develop a Water Safety Plan and looks forward to sharing its experiences and lessons with other Indonesian water companies.

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CASE STUDY

Piloting New System to Deliver Safer Water in Nha Trang, Vietnam

Twinning partnership with Macao improves water quality for more than 35,000 residents.

NT Dan, ECO-Asia

Khanh Hoa and Macao Water work together to improve water testing procedures and analysis.

"We had difficulty in determining the solution for our residual chlorine problem. Partnering with Macao Water made it easier to understand the complexities of our distribution system and helped us identify practical approaches to fix the shortcomings, ultimately to protect our customers from unwanted hazards."

- Mr. Tran Van Huy, Director, Khanh Hoa Water Supply and Sewerage Company, Nha Trang

Challenge

Rapid growth in Nha Trang city in Vietnam poses challenges for its recently corporatized water supply company, the Khanh Hoa Water Supply and Sewerage Company. Residents in newly developed areas on the fringes of the city are complaining about contaminated tap water, and as a result Khanh Hoa completed a Water Safety Plan in 2010 to help assess operations and identify public health hazards and risks. Based on that plan, Khanh Hoa seeks practical methods to reduce risks by improving water quality monitoring and management in the distribution network.

Initiative

In 2011, Environmental Cooperation – Asia (ECO-Asia), a project of USAID, through the WaterLinks network established a twinning partnership between Khanh Hoa and Macao Water, an operator recognized for advanced water quality management systems. Through their 14-month partnership, Macao Water shared practical approaches for assessing and cleaning water supply reservoirs, and strengthening water sampling and analysis procedures. It also helped develop a pipe-flushing program and guided Khanh Hoa in piloting an in-line chlorine booster for areas where residual chlorine levels were inadequate. Macao Water hosted technical visits by Khan Hoa to demonstrate the application of advanced technologies for monitoring water quality and managing a piped network, and advised Khanh Hoa on leakage detection.

Results

Through the partnership, Khanh Hoa invested in new equipment and systems to ensure safe water provision for at least 35,000 people in a pilot area. It procured new water quality monitoring devices and an in-line chlorine booster pump to maintain chlorine in the far end of its piped network at levels that will remove contaminants. Khanh Hoa also plans to upgrade water storage systems. Having safeguarded its customers in the pilot area, Khanh Hoa will soon expand the improvements in other services areas throughout Nha Trang.

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SUCCESS STORY

A First: Continuous Water Supply for Communities in Jaipur

Partnerships between Indian water companies and Malaysian peers lead to continuous water services for 50,000 residents.

Mark Nicol/ECO-Asia

Ranhill demonstrates leakage reduction equipment to help PHED address NRW and enable continuous supply in its pilot zones in Jaipur.

"We want to build our confidence that we can supply continuous service and minimize water losses given our raw water scarcity. Working with our peers in Maharashtra and having exposure to partners in Malaysia goes a long way in preparing ourselves for future reform."

- Mr. Agam Mathur, Chief Engineer, PHED

In India, nearly all households with piped water supply receive intermittent supply, or less than 24 hours a day, due to weak governance and operational systems. Intermittent supply puts customers at risk from water contamination caused by non-pressurized pipes, and also forces customers to purchase alternative water supply sources. For service providers, intermittent supply accelerates the deterioration of infrastructure, and decreases customer confidence, resulting in reduced willingness to pay for services.

In 2008, through the support of the Environmental Cooperation – Asia (ECO-Asia) project, USAID facilitated a partnership between the Maharashtra Jeevan Pradhikaran (MJP), the principal water supplier for Maharashtra state, and Malaysia's Ranhill Utilities, a water operator recognized for its provision of continuous water supply and management of non-revenue water (NRW). Through technical support and training by Ranhill, by 2009 MJP successfully piloted a continuous water supply system in Badlapur, which benefitted more than 80,000 residents.

Hearing of MJP's success, in 2010 the Public Health Engineering Department (PHED) of Rajasthan, initiated its own partnership with MJP and Ranhill to also pilot conversion to continuous supply in Jaipur. With assistance from ECO-Asia, through the WaterLinks network, over the course of a year, MJP shared with PHED key success factors and practical innovations on hydraulic modeling, development of continuous supply zones, and public promotion campaigns. Ranhill guided PHED on managing NRW to support the conversion process through training on leakage reduction, water meter verification, and continuous supply zone monitoring.

By August 2011, PHED had effectively piloted four continuous supply areas in Jaipur, and is planning similar pilot efforts in five additional towns in Rajasthan, ultimately improving access to 50,000 people. The long-term goal of PHED is to scale-up improvements to all 222 towns within its jurisdiction.

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CASE STUDY

Safeguarding Philippines' Largest Lake

Calamba City partnership with Taiwan University leads to development of innovative natural wastewater treatment system that will serve over 50,000 residents.

CNU

Taiwan's Chia Nan University experts demonstrate a natural wastewater treatment system in Tainan City to its Philippine partners.

"The successful partnership between the Taiwan Chia Nan University and Calamba Water District shows that the natural treatment approach is feasible and can be replicated in many local governments around Laguna Lake. We will advocate and support new activities similar to those ongoing in Calamba, Lucban and Angono for the sake of a cleaner and healthier Laguna Lake."

- Ms. Dolora Nepomuceno, Assistant General Manager, Laguna Lake Development Authority, Manila, Philippines

Challenge

Laguna de Bay, the Philippines' largest freshwater lake, suffers from increasing domestic wastewater pollution. Almost 70 percent of pollutants and untreated waste entering the lake come from households, resulting in adverse environmental impacts. To protect this important water resource, the lakeshore city of Calamba and the Calamba Water District (CWD) are working with the Laguna Lake Development Authority (LLDA) to develop a natural wastewater treatment system.

Initiative

To support CWD's efforts, USAID, through the Environmental Cooperation – Asia (ECO-Asia) project and the Waterlinks network, facilitated a partnership between CWD and the Chia Nan University of Taiwan (CNU), a recognized expert in the development of natural wastewater treatment facilities. In the year-long partnership, CNU shared the technical know-how on wetland system design, from site selection to treatment limits. CNU also trained CWD practitioners on system operations and maintenance through hands-on training and technology demonstrations in Taiwan. CNU and CWD then collaborated to identify proper land selection and landscaping requirements with Calamba City. LLDA and two other local governments near the lake, Angono and Lucban, also participated in partnership activities to help them prepare for similar efforts.

Results

With CNU assistance, CWD completed the detailed facility design and construction specifications for its new natural wastewater treatment system. CWD intends to commission the system in 2012. With the system in place, CWD will provide improved sanitation services for more than 50,000 residents and help to protect the lake from further deterioration. LLDA meanwhile plans to expand the natural system application to more local governments within the watershed through an expanded partnership with CNU.

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SUCCESS STORY

Bandung, Indonesia Expands Sanitation Services Delivery

Partnership with Malaysia improves septage management service delivery, benefiting more than 18,000 residents.

Jay Tecson/ECO-Asia

IWK and Bandung jointly review septage desludging operations.

"We have renewed our commitments to improve our septage services. Indah Water Konsortium's technical assistance not only made us realize our shortcomings, but also gave us the opportunity to excel in services delivery for our customers. This practitioner-to-practitioner exchange is a great way to strengthen our capacities."

– Ir. Pian Sopian, Managing Director of the Bandung Water Services Company

The water services company in Bandung, Indonesia's third largest city, implements a septic tank desludging and septage treatment program that does not yet reach all customers. As a result, a top priority of Bandung's Water Services Company is to increase its capacity to accommodate more customers by expanding and improving the current program, including operations and maintenance.

In 2011, Environmental Cooperation-Asia (ECO-Asia), a project of USAID, facilitated a partnership through the WaterLinks network between Bandung's water services company and Indah Water Konsortium (IWK), Malaysia's national wastewater operator. IWK has extensive experience in managing and implementing wastewater and septage systems. As part of this yearlong partnership, IWK and Bandung worked together to strengthen Bandung's septage management program and help optimize services delivery to support expansion plans. Partnership activities included classroom and hands-on training in Bandung as well as technical visits to IWK operations in Malaysia to better understand septage management practices and technologies.

IWK also reviewed Bandung's operations and collaborated with the water company to strengthen its desludging practices. The partners worked on improving collection and disposal of septage sludge, monitoring of outsourced services, upgrading its customer database management and developing annual targets and budgets. In addition, they focused on establishing better operations and maintenance of desludging vehicles and the sludge treatment facility.

With IWK support, Bandung's water company has successfully re-launched a more efficient septage management program, immediately benefiting 18,000 people who have already paid for services. The water company is also investing in an improved septage collection system, and will expand service coverage for the entire city to ensure a cleaner, healthier Bandung.

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CASE STUDY

Vietnam Works to Better Manage Contaminated Soil

Partnership with Korea leads to adoption of new guidelines for contaminated soil monitoring

Photo by Watcharee Limanon.

Senior officials from Korea and Vietnam share experience in addressing contaminated soil at the air field in Da Nang.

"Partnering with Korea through AECEN has introduced Vietnam to a wide range of new solutions for addressing contaminated soil. Our partners from Korea were extremely helpful in sharing their experience and showing us how policies and practices can be strengthened over time in line with development priorities and available resources."

— *Dr. Le Ke Son, General Director of Office 33, Deputy General Director, Vietnam Environment Administration, Ministry of Natural Resources and Environment, Vietnam*

Challenge

Across Asia, countries are working to adopt new policies and technologies to remediate harm from contaminated soil. Leaders in the region include Japan, South Korea, Singapore, and Taiwan, which have developed more comprehensive regulatory systems, while Malaysia and Thailand are actively developing new legal and policy frameworks. Soil contamination management is also a top priority of the Government of Vietnam. As indicated in the 2009 report, *Comprehensive Assessment of Dioxin Contamination in Da Nang Airport, Vietnam*, the area around the Da Nang Airport, as well as Bien Hoa and Phu Cat, remain contamination hotspots posing significant health and environmental risks to the local population.

Initiative

Vietnam's Ministry of Natural Resources and Environment (MoNRE) is working to develop policies, practices and tools to strengthen its soil contamination management capabilities, including soil contamination monitoring. In 2006, MoNRE established procedures and a handbook on monitoring and soil analysis. In 2009, MoNRE put forward draft regulations of soil monitoring, though these regulations have not been formally approved. Building on the existing MOU between MoNRE and the Korea Ministry of Environment (KMOE), ECO-Asia through support from the Asian Environmental Compliance and Enforcement Network (AECEN), facilitated a twinning partnership between the two countries to assist Vietnam to improve its policy framework and technical capabilities to promote effective contaminated soil monitoring.

Results

Through technical exchanges and observational programs in both Vietnam and Korea, the working group organized under the auspices of MoNRE's Office 33 developed a new draft guideline for monitoring contaminated soil based on experience from Korea. Senior officials from Vietnam also expanded their knowledge and skills base on available policy and technology solutions.

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CASE STUDY

Thailand Develops New Framework for Community Watershed Management

Partnership with New Zealand key to addressing pollution in Tha Chin River Basin

Photo by Watcharee Limanon.

Senior officials and community leaders from the Waikato and Tha Chin river basins share experience on community participation in watershed management.

"Our partnership with New Zealand has been invaluable in helping Thailand to strengthen and consolidate our understanding of the role of communities in river basin management. Our new framework for cooperation will set the stage for increased cooperation, and drive new partner support."

— *Suwan Nanthasarut, Director, Regional Environment Office 5, Ministry of Natural Resources and Environment, Thailand*

Challenge

According to the *2009 Annual Report on Water Quality Management* prepared by Thailand's Pollution Control Department (PCD), over the last 10 years the water quality in Thailand's waterways has continued to worsen. To address this situation, PCD's Water Quality Management Bureau works with local stakeholder organizations to develop action plans to improve water quality in the target river basins of the Chao Praya, Tha Chin, Bang Pakong, Lam Takong and Songkhla. Action plans include components on community and public participation in water quality management.

Initiative

In September 2010, the New Zealand Ministry for the Environment (MfE) and Thailand's Ministry of Natural Resources and Environment (MoNRE) signed an MOU linked to a bilateral trade agreement. Building on this MOU, ECO-Asia, through support from the Asian Environmental Compliance and Enforcement Network (AECEN), facilitated a twinning partnership between MoNRE and MfE to develop new tools and capabilities in public participation and pollution control in the Tha Chin River Basin. With technical leadership from New Zealand's Waikato Regional Council (WRC), MoNRE and MfE implemented a series of partnership activities with counterpart community groups.

Results

As a result of the AECEN twinning partnership, Thailand developed a new community participation framework that both consolidates past efforts in the Tha Chin River, and builds on New Zealand's experience. The framework identifies effective mechanisms and tools related to community engagement in policy formulation, awareness raising, watershed restoration and monitoring. Practitioners from New Zealand also developed and delivered training programs for community leaders and government officials based on New Zealand's successful work on LandCare.

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CASE STUDY

Indonesia to Certify Environmental Judges

Indonesia Supreme Court partners with Philippine counterpart to strengthen environmental adjudication

Photo by Milag Ballesteros

Members of the Indonesian working group on the certification program visited the Philippine Supreme Court to share ideas and experience.

"Sharing experience with the Philippines and learning from approaches of other courts within the region will help in understanding what environmental judicial activism could mean for Indonesia…"

-Justice Paulus Effendi Lotulung, Vice Chief Justice, Supreme Court, Indonesia

Challenge

Over the last decade, court systems across Asia have been working to strengthen institutional arrangements and to build capacity to cope with the increasing number of environmental cases. In Indonesia, the Supreme Court and the Ministry of Environment signed a Memorandum of Understanding (MOU) in June 2009 outlining broad cooperation between the two institutions to work towards developing a mechanism for certifying environmental judges and strengthening the capacity of the judiciary.

Initiative

With facilitation and funding support from USAID's ECO-Asia program, the Supreme Court of Indonesia and the Supreme Court of the Philippines engaged in a twinning partnership under the auspices of the Asian Environmental Compliance and Enforcement Network (AECEN). Focus areas of the partnership included guidelines for handling environmental cases, as well as a curriculum for training judges under the environmental certification program. The Philippine Supreme Court shared their experience in developing their own Rules of Procedure for Environmental Cases, and the Philippine Judicial Academy shared training materials and enabled Indonesian counterparts to observe actual conduct of environmental training for judges in the Philippines. In addition, the U.S. Environmental Protection Agency shared guidance documents (penalty policies, natural resource damage calculation policies, etc.) and engaged in the dialogues between the courts and partners.

Results

Building on experience from the Philippines, the Supreme Court of Indonesia drafted a training program for judges in handling environmental cases and a framework for the judicial certification program on the environment. The Court conducted a pilot training in Jakarta in December 2011, and is planning a Trainers Convention for early 2012 to further strengthen the curriculum. The Supreme Court will finalize the guidelines and commence implementation of the certification program in 2012.

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CASE STUDY

Report Informs Policy Dialogue on Mekong Water Resources Planning

Report supports improved analyses for Basin Development Plan at Mekong River Commission

Photo by ECO-Asia

Lower Mekong Basin countries are planning new hydropower projects that have significant potential impacts for the environment and economic development

"We have been using the study's findings in our arguments related to the risks of building the Xayaburi and other mainstream dams."

- Ame Trandem, SE Asia Program Director International Rivers

Challenge

Water resources planning in the Lower Mekong Basin (LMB) is complex. In developing the basin's water resources, LMB governments face decisions that involve trade-offs between economic, environmental and social costs and benefits related to ongoing and proposed developments in multiple sectors. As an advisory body to LMB governments, the Mekong River Commission (MRC) was mandated by its 1995 agreement to develop a Basin Development Plan (BDP) to promote the coordinated water resources development at the basin level using the principles of integrated water resources management (IWRM). The BDP is among key planning tools to support LMB policy makers in reaching balanced decisions. While these tools have provided valuable inputs to the ongoing policy dialogue, analyses can be strengthened in several key areas, including sensitivity analysis of cost-benefit analysis (CBA), ecosystem services valuation, and social impacts assessment.

Initiative

In February 2011, ECO-Asia commissioned Portland State University's Institute for Sustainable Solutions, in collaboration with Mae Fah Luang University in Thailand, to produce a report entitled, *"Planning Approaches for Water Resources Development in the Lower Mekong Basin."* The report demonstrates relevant analytical approaches to better integrate risk and uncertainty and ecosystem services valuation in a cost-benefit analysis for water resources planning. The report also provides recommendations on how MRC planning efforts can incorporate new approaches to be more integrated in future versions.

Results

Since its release in July 2011, the report has been widely quoted by organizations and practitioners, making an impact in the policy debate especially on hydropower development in LMB. Apart from raising awareness of staff, the report also generates an interest at the MRC to further collaborate with USAID on innovative approaches for scenarios assessment and integrated planning. In May 2012, USAID will organize a follow-on capacity workshop on these subjects at the MRC in collaboration with the U.S. Army Corp of Engineers.