



PROMOTING ENVIRONMENTAL TECHNOLOGIES

U.S. firms possess technologies that offer competitive solutions to environmental issues in developing countries. The U.S. Trade and Development Agency (USTDA) is helping to connect these firms with overseas project sponsors, to achieve important objectives in areas such as water treatment, air quality and hazardous waste management.

In fiscal year 2007, USTDA invested in 30 new environmental projects around the world. In addition to water, wastewater and air projects, USTDA has supported numerous power plant conversions from coal to gas, technology upgrades to lower emissions, rail transport projects to reduce road congestion and many other environmentally beneficial initiatives.

Recent USTDA projects in the environmental sector include:

East Asia

China Shanxi Continuous Emissions Monitoring System – USTDA is providing \$186,400 to Shanxi Provincial Environmental Protection Bureau (EPB) to partially fund analysis on continuous emissions monitoring systems in coal-fired power plants and industrial facilities across Shanxi. The study will assess the improvements mandated by environmental regulations, and will provide information on U.S. technologies for CEMS installation and operation. Thermo Electron is conducting the study.

Shandong Flue Gas Desulphurization - A \$515,300 grant is assisting the Shandong Provincial EPB in planning the installation of flue gas desulphurization and particulate control technologies in eight coal-fired power plants. The study aims to assist China in adopting more stringent standards and regulations concerning sulfur dioxide emissions and other particulate matters. PA Government Services is conducting the study.

Han River Non-Point Source Monitoring System and Improvement - USTDA is providing \$532,692 to the Changjiang (Yangtze) Water Resources Commission for a study on the creation of an integrated water quality monitoring system in the Han River basin of the Yangtze River. This study is being conducted by the MapTech, Inc., and will provide technical, financial and economic analyses; a pilot demonstration of pollution tracking technology; and develop an implementation plan for system deployment.

Europe and Eurasia

Romania Siret River Basin WATFRAME Project - USTDA provided a \$562,080 grant to the Romanian Ministry of Environment and Water Management (MEWM) for a study on a potential pilot project to improve existing and/or develop

new drinking water and wastewater treatment facilities for four municipalities in the Siret River Basin region in Romania. Camp Dresser and McKee International of Boston, MA, is conducting the study.

Black Sea Coastal Erosion Control Program Phase I – A \$385,772 grant to the Romanian Ministry of Environment and Sustainable Development helping to set up an Integrated Coastal Zone Modeling System (ICZMS), which will develop analytical tools to assess erosion control measures along Romania's Black Sea coast. This technical assistance activity represents the first of four phases in the Ministry's Coastal Erosion Control Program.

Europe and Eurasia Regional Solid and Hazardous Waste Treatment Orientation Visit – USTDA approved \$126,686 for an orientation visit that brought Turkish and Bulgarian delegates to the U.S. for exposure to state-of-the-art equipment, technologies and business practices in the field of waste management. The visit also provided an opportunity for the delegation to learn about the establishment, management and benefits of public-private partnerships.

Latin America and the Caribbean

Brazil COPASA Water Re-Use Project - A \$164,920 grant to the Companhia de Saneamento de Minas Gerais (COPASA) helping to plan a water re-use project at the Arrudas Wastewater Treatment Plant. The project will involve adding tertiary treatment capacity to produce an effluent that meets water quality requirements for urban residential, commercial and industrial water needs. Successful implementation of the water re-use project will improve the quality of water treated at the plant, thereby diminishing public health and environmental risks related to unsafe wastewater disposal.

Colombia Ecopetrol Pipeline Safety and Security Project - A \$500,000 grant to Ecopetrol S.A. is improving the safety, security, and integrity of Colombia's hydrocarbon pipeline system. Ecopetrol requested a detailed assessment of the system to deploy technological and management solutions to reduce losses and environmental hazards.

Mexico CFE Environmental Management Project – USTDA is providing a \$640,500 grant to assist the Comisión Federal de Electricidad (CFE) in developing an environmental remediation program for its decommissioned facilities. The objective of the technical assistance is to support CFE in determining environmental, health, and safety guidelines for decommissioning, dismantling, and retrofitting closed power plants and substations.

Mexico Valsequillo Watershed Clean-up Project - A \$797,000 grant is assisting the Secretariat for Urban Development and

Public Works of the State of Puebla in carrying out a study of the Valsequillo Watershed Clean-Up Project. The objective is to reverse the ecological degradation of the Valsequillo region and to promote the economic development of the zone.

Middle East and North Africa

Jordan Wastewater Treatment - USTDA is funding a \$450,000 grant to the Jordanian Ministry of Planning and International Cooperation, acting through the Water Authority of Jordan, to fund early investment analysis on the construction of a wastewater treatment plant to serve the towns west of Salt City in the Balqa'a governorate of Jordan. The study will analyze wastewater collection, treatment and effluent reuse from a number of communities in the project area in order to determine the most appropriate technical solution for a wastewater collection and treatment system.

Yemen Taiz Wastewater Treatment – A \$492,000 grant to the Taiz Water and Sanitation Local Corporation funded a study on a wastewater collection, disposal, and treatment project. The study analyzed the proposed installation of a new wastewater modernization system that will allow the government to meet the current and future water needs of the City. B&E Engineers conducted the study.

Morocco Olive Oil Waste Treatment – USTDA awarded a \$322,000 grant to fund early investment analysis on a proposed wastewater treatment facility for Moroccan olive oil factories. The study is being performed in an effort to increase the potable water supply in rural communities and to allow Morocco to comply with international environmental regulations. Contractor selection is currently in progress.

South and Southeast Asia

Thailand Wetlands Restoration – USTDA provided \$569,944 to the Office of Natural Resources and Environmental Policy and Planning (ONEP) under the Ministry of Natural Resources and Environment (MoNRE) to fund a study on the implementation of an Integrated River and Wetlands Management System (IRWMS) for the Pak Phanang River Basin. This project will help improve wetlands restoration and management in Southern Thailand. URS Corporation is the contractor for this project.

Vietnam Son La Environmental & Management - This \$126,000 orientation visit brought 10 officials from Electricity of Vietnam to the United States to familiarize them with U.S. project management and environmental engineering services. The visit helped EVN develop its Son La Hydropower Project with minimal environmental impact, and worked to build trade capacity through the promotion of environmental standards and physical infrastructure planning. Global Marketing & Communications coordinated the visit.

India Diesel Retrofit Project – USTDA provided a \$296,000 grant to Pune Mahanagar Parivahan Mahamandal Limited to fund technical assistance in retrofitting a subset of local diesel buses with cleaner fuel and innovative emissions control technology. The technical assistance will include training on

the operation and maintenance of the retrofit devices, emissions testing, and quantitative information on costs and emissions reductions of retrofit technologies. Southwest Research Institute is the contractor, and the U.S. Environmental Protection Agency and India's National Environmental Engineering Research Institute are technical collaborators in the project.

Sri Lanka Sewerage Infrastructure – A \$491,000 grant to the Ministry of Urban Development and Water Supply is funding a study on a proposed piped sewerage and sanitation system in coastal cities affected by the tsunami. The study will develop a preliminary conceptual design for a network with various treatment options. B&E Engineers of Arcadia, CA, is performing the study.

Sub-Saharan Africa

Botswana Water Well Rehabilitation Project – USTDA approved a \$500,000 grant to partially fund technical assistance to the Ministry of Finance and Development Planning on a borehole rehabilitation project. The technical assistance includes the rehabilitation of at least 35 wells, training of the Department of Water Affairs personnel, and setting the foundation of a system-wide well rehabilitation master plan. The study is being carried out by Roscoe Moss Company of Los Angeles, CA.

South Africa Rand Water Services New Technology Implementation - USTDA is partially funding a strategic orientation visit on water system technology for five representatives of Rand Water Systems (Pty) Ltd. (RWS) of South Africa. The visit, scheduled June 7-14, 2008, will lead the RWS delegation to Atlanta, GA and Las Vegas, NV to assist RWS in identifying and evaluating the most appropriate U.S. technologies and applications for the water services sector in Southern Africa.

Senegal Corniche West Wastewater Treatment - A \$418,908 USTDA grant is funding a study on the wastewater collection and treatment facilities for the Corniche West sector in the City of Dakar. The results of this study are aimed at improving sanitation conditions in the City of Dakar. The study will also encourage U.S. firms to enter the steadily growing environmental sector market in West Africa. The contractor will be selected competitively.

Uganda Jinja-Njeru Public-Private Partnership Water and Wastewater Project - USTDA funded a \$414,128 grant for early investment analysis on public-private partnership options for water and wastewater treatment in the Jinja and Njeru municipalities in Uganda. The project may serve as a model for other similar projects throughout the region. The project sponsor is Uganda's Ministry of Water, Lands, and Environment. B & E Engineers was selected to conduct the study.