

# Philippine Sanitation Alliance

## Annual Report October 1, 2007- September 30, 2008

Prepared by AECOM International Development for USAID/Philippines under Cooperative Agreement No. 492-A-00-07-00023-00

### **I. Summary**

The United States Agency for International Development (USAID) Philippine Sanitation Alliance (PSA) seeks to tackle the difficult task of improving household and commercial sector sewage collection and treatment throughout the Philippines. Over a three-year timeframe, the PSA aims to provide more than 900,000 Filipinos with access to basic sanitation services to reduce public health risks, protect biodiversity and promote increased productivity by developing and implementing stakeholder-driven sanitation initiatives. The PSA will also result in substantial private and public sector investments in sanitation, increased capacity of local governments to address sanitation challenges, and increased public awareness and demand for improved sanitation services and willingness to pay user fees.

The PSA works in collaboration with four city partners and three industry sectors to develop pilot treatment facilities and replicate best practices nationwide through national association partners, as well as in the Asian region through international partners, including donors.

The launching of the Philippine Sanitation Alliance project was held on October 20, 2007 to sign memoranda of understanding (MOUs) with partners, including local governments, private companies, national government agencies, and national associations. In its first year of implementation, PSA has generated a great deal of attention and interest from sector practitioners, cities and private enterprises.

Davao City, which originally indicated its interest to join the PSA, declined membership and was replaced by Cagayan de Oro City. However, the Davao City Water District (DCWD) requested assistance to develop a septage management program, so the PSA has provided some initial support. The following chart lists the PSA's partners.

## PSA Partners

<b>Private Sector</b>		
<i>Private Companies</i>		
▪ Coca-Cola Philippines	▪ C TRADE	▪ Max's Restaurants
<i>National Associations</i>		
▪ Chamber of Real Estate and Builders' Associations (CREBA)	▪ Philippine Hospital Association	▪ Hotel and Restaurant Association of the Philippines
▪ League of Cities of the Philippines		
<b>Non-Governmental Organizations</b>		
▪ Bremen Overseas Research and Development Association (BORDA)	▪ The Blacksmith Institute	▪ Gawad Kalinga
▪ Engineers Without Borders - USA		
<b>Philippine Local Government</b>		
▪ Cagayan de Oro City	▪ Meycauayan City	▪ Santa Rosa City
▪ Zamboanga City		
<b>Other Government/Donor</b>		
▪ Japan International Cooperation Agency (JICA)	▪ World Bank Water and Sanitation Program (WSP) and Program for Sustainable Sanitation in East Asia (SuSEA)	▪ Mindanao Economic Development Council (MEDCo)
▪ Philippine Department of Natural Resources (DENR)	▪ Philippine Department of Health (DOH)	▪ Housing and Urban Development Coordination Council (HUDCC)

The PSA conducted several trainings and workshops for its partner cities as well as for private sector service providers and commercial wastewater dischargers. In 2008 PSA conducted four city stakeholders' consultation and planning workshops in Zamboanga City, Santa Rosa City, Cagayan de Oro City and Meycauayan City. All workshops were well attended and well received by the participants. In addition, the PSA conducted an in-depth training program for private service providers to enhance local capacity to provide engineering and design services to commercial wastewater dischargers. PSA staff also supported a water, sanitation and hygiene (WASH) Day event in Cebu City.

The PSA also provided limited technical assistance to the six Local Initiatives for Affordable Wastewater Treatment (LINAW) cities on development and completion of short-term projects and sharing of information with nearby municipalities. Manjuyog, a municipality near Dumaguete City, replicated the wastewater treatment plant for their public market, a project that cost P1.7 million and was designed by PSA partner Basic Needs Services/Bremen Overseas Research and Development Association (BNS/BORDA). Calbayog City constructed sanitation systems in its new housing resettlement site and health clinic with help from the PSA and the US Naval Construction Regiment.

2008 was also the International Year of Sanitation (IYS) and PSA participated in the national launch in Mandaluyong City. The event, held in February, was also attended by PSA alliance partners. The IYS

launch kicked off a year of national and local events spearheaded and organized by members of the Philippine Ecological Sanitation Network, which is lead by the Department of Health (DOH).

Over its first year of implementation, PSA has met or exceeded its program targets and is on track to meet the targets set out for Year 2. Work during Year 1 was focused on start up activities such as stakeholder workshops and developing action plans, whereas Year 2 will focus more on wastewater treatment facility development. The program also has a renewed focus on health and biodiversity as they relate to sanitation.

## II. Year 1 Results

The project has successfully met and surpassed the expected targets for the first year of program implementation for all six program indicators. Despite delays due to start up tasks, FY2008 activities were completed as planned.

### A. Summary of Results

Program Indicator	FY08 Target	FY08 Results	Final Project Target
1. Number of people in target areas with access to improved sanitation facilities as a result of USG assistance (disaggregated by gender)	10,000	5,641 men 11,525 women 17,166 total	900,000
2. Number of feasibility and special studies/plans prepared	4	4	10
3. Amount of non-USAID financing mobilized for sanitation projects and facilities	\$150,000	\$407,365	\$2,400,000
4. Number of people trained in environmental law, enforcement, public participation, and cleaner production policies, strategies, skills and techniques, disaggregated by gender	200	737 men 300 women 1037 total	420
5. Number of sanitation and hygiene promotion events conducted (WASH campaigns)	1	1	5
6. Number of pollution and urban environment policies, laws, agreements or regulations implemented	2	2	10

### B. Details of Results

#### *Number of people with improved access to sanitation:*

PSA surpassed its target for improved access to sanitation for 10,000 people, adding an additional 7,166 individuals under this indicator. These numbers have been achieved through multiple programs, including: Manjuyod public market wastewater treatment facility (WTF), Calbayog City public slaughterhouse WTF, Calbayog Greenland Subdivision WTF, Calbayog public health clinic WTF,

Calbayog commercial establishments, Zamboanga City public market WTF, and the Santa Cruz public slaughterhouse WTF.

***Number of feasibility and special studies/plans prepared:***

Four city action plans were prepared by: Cagayan de Oro City, Meycauayan City, Santa Rosa City, and Zamboanga City.

***Amount of non-USAID funding mobilized:***

PSA enabled the mobilization of external funding from several sources, such as LGUs and the private sector.

<b>FY2008 Annual non-USAID Funding</b>			
Private Sector	\$70,002	Cash	\$389,311
Public Sector	\$337,363	In Kind	\$18,054
Total	\$407,365	Total	\$407,365

***Number of people trained:***

Over the course of the year, the PSA trained more than 1,037 people, 29% of which were women. Trainings included stakeholders from the public and private sectors.

Stakeholders' consultation and planning workshops produced, for each partner city, an action plan with short, medium and long-term projects that will provide the development blueprint for wastewater management at the local level. Technical working group (TWG) meetings were held after the workshops to fine-tune the outputs and submit them for approval. Many of PSA's workshops were covered by local and print media. Workshops where training was conducted included the following:

- Technology and Finance Workshop for the Housing Sector
- Technology and Finance Workshop for the Hospital Sector
- Santa Rosa Stakeholder Workshop
- Cagayan de Oro Stakeholder Workshop
- Meycauayan Stakeholder Workshop
- Zamboanga Stakeholder Workshop (with a record turnout of 100 participants)
- Zamboanga Septage Management Workshop
- Zamboanga Promotions Workshop
- Cebu Promotions Workshop
- National Wastewater Treatment Workshop for Sanitation Engineers (attended by 130 sanitary engineers)

***Number of sanitation and hygiene promotion events conducted:***

The PSA participated in the planning and implementation of the launch of the 2008 International Year of Sanitation, which focused on hygiene promotion and included WASH campaign activities. PSA's first WASH day was implemented with children and women community leaders of three barangays in Cebu City.

***Number of environmental policies implemented:***

Policies implemented by PSA partners in FY2008 include: the Clean Water Act, which was implemented by many city partners that developed wastewater treatment facilities for their public markets, slaughterhouses and public hospitals (Calbayog City, Manjuyod Municipality, Santa Cruz Municipality, and Zamboanga City) and the Muntinlupa City water pollution ordinance. Muntinlupa City reported that they are considering revising the ordinance next year to reflect provisions in the Clean Water Act.

**III. Activity Highlights**

This section highlights some of the main achievements of the PSA in 2008. The success stories listed below include information on lessons learned and represent possibilities for future replication. The PSA's work has encompassed many projects. This section, however, will highlight two main components of enabling greater access to improved sanitation in the Philippines: Health and Infrastructure.

**A. Health**

**PSA Launches International Year of Sanitation in the Philippines**

PSA joined Philippine government agencies, other international organizations, NGOs, businesses and the media in launching the International Year of Sanitation (IYS) in the Philippines on February 18, 2008. The Mayor of Mandaluyong City, who is also the President of the League of Cities of the Philippines, Honorable Benjamin Abalos, Jr., hosted the event. He welcomed more than 200 participants into the City Hall Atrium Lobby for several presentations and turnover of sanitation documents and then led the group in a motorcade through the city to a public school for a hand-washing ceremony witnessed by hundreds of students. A highlight of the launching was DOH Secretary Francisco Duque's declaration that the country has increased its Millennium Development Goal target to 91 percent coverage for access to safe sanitation and 99 percent for potable water supply by 2015. He joined Joy Jochico of USAID/Philippines and Almud Weitz of the World Bank Water and Sanitation Program (WSP) in handing over the following documents to the League of Cities and League of Provinces of the Philippines: "Operations Manual on the Rules and Regulations Governing Domestic Sludge and Septage," published by DOH with support from ECO-Asia; "Economic Impacts of Sanitation in the Philippines" published by the World Bank Water and Sanitation Program (WSP) with co-funding from ECO-Asia; "Universal Sanitation in East Asia," a joint WSP-WHO-UNICEF publication; and "Sanitation Technology Information Kit" prepared by PSA. The event was covered widely on national radio, television, and newspapers. In recognition of the 2008 IYS, a series of activities will be conducted throughout the year, including a sanitation summit in Makati City, a Visayas-Mindanao sanitation summit, a second national sanitation summit and several technical training programs and workshops.

**Wash Day Held in Cebu with US Ambassador Kenney**

The Philippine Water Revolving Fund Support Program (PWRF-SP) and PSA jointly organized an event with Ambassador Kristie Kenney in Cebu City on April 10, 2008. The event featured the turnover of the PWRF-SP and PSA assisted Septage Management Feasibility Study for Metro-Cebu Water District (MCWD), and a hand washing and hygiene campaign with children and women community leaders of three barangays in Cebu City. The event was also attended by the Cebu City Vice-Mayor, city officials, MCWD board members and top management. Ambassador Kenney lauded the efforts of the water district and the city to improve sanitation services and thereby improve the health and environmental conditions of the people.

### Calbayog City Develops Sanitation Systems for Relocation Site and Health Clinic

PSA staff assisted the US Naval Construction Regiment and Calbayog City to develop proper sanitation systems for two new construction projects. PSA sanitation experts Dave Robbins and Lito Santos visited Calbayog City twice in May to provide technical assistance to the 30<sup>th</sup> Naval Construction Regiment, which built a wastewater system that can serve 240 homes at the Greenland relocation site. The wastewater treatment system includes an anaerobic baffled reactor that will reduce about 70% of the pollution from the sewage and a secondary treatment system, which utilizes cocopeat as a filtration medium. The wastewater is collected through an innovative condominium sewer system, which utilizes shared sewer laterals to minimize the installation cost and operational requirements. The PSA team also provided assistance for a similar wastewater treatment system for the new Calbayog City Health Clinic, which will serve the residents of the subdivision and other residents of the city. The construction was a joint military project between the US and the Philippines in which the US military provided personnel and construction materials worth about \$48,000. Calbayog was a pilot city during the USAID Local Initiatives for Affordable Wastewater Treatment project from 2005-2007, and is now part of the PSA.

### Dumaguete City Moves Forward with Final Public Hearing for Septage Treatment Facility

Dumaguete City is the first local government to enact a septage management ordinance, which is cited as a model ordinance in the recently published Operations Manual for the Management of Sludge and Septage released by the DOH with support from USAID. In compliance with the ordinance, Dumaguete will construct a septage treatment facility (STF), with desludging trucks, for an estimated P17 million.

The planned septage management program brings the city closer to its aspiration of a “swimmable boulevard bay” and a healthier citizenry. Because this is the first local government-led and planned city-wide septage management program in the country, the city has conducted extensive information campaigns and public hearings as part of project implementation. To further inform and educate the Barangay Camanjac officials and residents living near the STF site, three orientation and discussion meetings were conducted in April and May of this year. Three medical doctors, namely: Dr. Ma. Lourdes Ursos, M.D. MPH, Dr. Walden Ursos, Epidemiologist, and Dr. Gamaliel Garcia, Infectious Disease Specialist, attended one of the meetings. Dr. Garcia pointed out that the possibility of aerial transmission of disease from the facility is very remote because there must be direct contact between a pathogen and any person or potential host for infection to occur. Dr. Walden Ursos stated that the risk of being contaminated with common diseases like TB, pneumonia, or getting sick from smoking and air pollution is much higher than the health risks from a septage treatment plant. In addition, Dr. Lulu Ursos, a medical doctor at Silliman Medical Center specializing in public health, made a presentation to address any concerns that the local residents may have about the facility.

### Hospitals Develop Action Plans to Treat Wastewater

Hospital administrators, presidents and owners, together with other stakeholders, developed action plans for treating their wastewater during the Appropriate Technologies and Financing Options for Hospital Wastewater Management Workshop on August 12 in Pasig City. During the workshop more than 100 people learned about the requirements of the Clean Water Act (CWA) of 2004, technology and financing options that are available for the proper treatment of hospital wastewater, with a focus on sewage treatment rather than infectious and hazardous waste. The workshop was opened by USAID’s Acting Deputy Director Aye Aye Thwin and DOH Secretary Francisco Duque III. The workshop featured two case studies from Iloilo Doctor’s Hospital and St. Luke’s Medical Center. During the break-out group discussions, the participants identified the top three issues as: the need for an information campaign on technologies and the Clean Water Act, technologies appropriate for small spaces, and funding

prioritization of local governments and hospitals. During the workshop, several companies offering engineering design and construction services had exhibit booths set up to showcase their capabilities. On August 13, two site visits were conducted to St. Luke's Medical Center and the University of Sto. Tomas Hospital, which both have wastewater treatment systems.

## **B. Infrastructure**

### **Manjuyod Replicates Dumaguete Market Treatment System**

The Municipality of Manjuyod, with funding support from the Provincial Government of Oriental Negros, has built a decentralized wastewater treatment system (DEWATS) for their new public market. PSA partner Bremen Overseas Research and Development Association - Basic Needs Services (BORDA-BNS) designed and supervised the construction of the P1.725 million facility. The DEWATS facility will benefit about 60 to 70 stall owners and an estimated 200-300 ambulant vendors and customers of the market a day. The new market is projected to generate about 40 m<sup>3</sup> of wastewater a day. The new DEWATS and public market is a replication of the DEWATS constructed by Dumaguete City for its public market, also designed by BORDA-BNS. A paper on this local development was presented during the VisMin Sanitation Summit held on April 2-3, 2008 in Dumaguete City and sponsored by the Department of Interior and Local Government (DILG), Oriental Negros Provincial Government, and German Technical Cooperation (GTZ) Water and Sanitation Program.

BORDA-BNS is currently completing preliminary proposals for market DEWATS for Guihulngan City, slaughterhouse DEWATS for the Municipality of Zamboangita, and hospital DEWATS for the Provincial Negros Oriental Hospital, all located in the Province of Oriental Negros. BORDA-BNS has been a partner of USAID since 2003 under the LINAW project.

### **Santa Rosa City Breaks Ground for New Hospital Treatment Plant**

In simple groundbreaking rites, Mayor Arlene Arcillas-Nazareno of Santa Rosa City led the symbolic launch of the new wastewater treatment facility for the Santa Rosa Community Hospital on July 30. In her speech, she underscored the importance of not just focusing on the need to clean up each individual house but also taking care of the overall environment as it affects everyone. She thanked USAID for being a strong partner of the city in its drive to protect the environment and prevent widespread pollution and stated her support for the objectives of the project and her commitment to ensure the proper implementation of the Clean Water Act in Santa Rosa.

The highlight of the event was the ceremonial lowering of the time capsule. It was witnessed by heads and staff of the City departments, officers and staff of the Santa Rosa Community Hospital, USAID PSA representatives, members of the Santa Rosa Medical Society, and nearby residents. Dr. Parnell Patacsil, Medical Director of the Santa Rosa Community Hospital, expressed his great appreciation for the project especially since his was the only hospital in the district which has no proper sewage treatment facility.

### **Ateneo de Manila Campus Wastewater Treatment Planning**

In response to a request for assistance, PSA presented several options to Ateneo for treating the wastewater generated by their Quezon City campus on March 13. The proposed treatment system will benefit some 18,000 people coming from the Grade School Department, High School Department, College Complex, Affiliated Organizations, Church of Gesu, faculty housing and new dormitories. The proposed wastewater treatment system for Ateneo will feature wastewater re-use and dual piping in the planned central library and eventually will be incorporated in all of their buildings. According to PPC

Director Miralao, Ateneo wants to make a stand on the critical importance of preserving our limited water supply as resources are dwindling and demand is increasing. They have agreed to be a learning site for PSA and USAID partners once the facilities are up and running.

### Max's Restaurants Explores Treatment Options

Max's restaurant chain is exploring lower-cost alternatives for their existing branches as well as for those that will be built in the future. AECOM staff is enabling the sharing of best practices by Max's restaurants among members of the Quick Service Restaurant Association in an effort to get the small industrial users to come into compliance with discharge standards outlined in the Clean Water Act. In some areas it may be best for several adjacent outlets to share one treatment facility and AECOM is currently developing potential scenarios for cluster treatment, as well as information on best practices for grease collection that will be shared with Max's and other restaurants.

### Cultural Center of the Philippines Requests PSA Assistance

PSA Senior Sanitation Advisor Dave Robbins met with staff of the Cultural Center of the Philippines (CCP) to initiate a process for exploring wastewater treatment options for their Roxas Boulevard complex. There are unique challenges for the CCP in terms of wastewater planning, mostly relating to the high variability of flow. However, there are opportunities as well. The abundance of open space at the site along with the great potential for cost recovery by realizing the added value of reclaiming the treated effluent for landscape irrigation provide additional infrastructure options not available at typical sites in Metro Manila. To effectively account for all of the costs and benefits associated with this project, the initial effort will be to develop a long-term wastewater infrastructure plan. This will consider both centralized and decentralized options along with various technologies ranging from simple on-site non-mechanical systems like constructed wetlands for individual buildings, to mechanical systems such as the sequencing batch reactors (SBR) that could be used for building clusters. A cost/benefit analysis outlining both options was presented to the CCP board.

## **IV. Management and Finance**

The project is on track in terms of overall management and expenditures. Implementation to date is on track with the scope of work and first year work plan. However, the demand for assistance from the partners has been higher than anticipated; resulting in an opportunity to expand the program and its positive impacts on people and the environment of the Philippines. AECOM recently submitted a request for program extension to USAID. With this addition, total leveraged funds for the PSA project is expected to be over \$3.4 million, with an overall leveraging ratio of 2:1.

No major delays or problems due to security were encountered during FY08.

## **V. Prospects for Next Year's Performance and New Opportunities for Expansion**

### **A. Current PSA Programming**

The PSA will continue to focus on increasing access to improved sanitation. The program staff is encouraged by the results of FY2008 and seeks to improve upon the knowledge and best practices already underway in several member cities. Having completed the stakeholder workshops for the four cities and three industry sectors, the project staff will work with these partners to implement the action plans and recommendations developed.

In the up-coming year, PSA staff will focus on preparing pilot projects with private housing developers that can be replicated in other areas of the country in the future. PSA will also continue to support the six former LINAW cities in developing and completing their planned pilot projects, with a focus on implementation of septage management programs.

No major problems or delays are anticipated in FY2009. Minor problems may include lack of funds for projects due to the financial crisis if it affects the Philippines during the year, and delays due to weak political will from the mayor and the city council to implement projects. Security could become an issue in Zamboanga City if the peace process continues to unravel or if there is a major attack by the rebels operating in the southern Philippines.

## **B. Expanded PSA Programming**

AECOM has submitted a proposal to USAID to expand the program by adding funding and extending the end date to September 30, 2011. The goal of the expanded PSA would be to protect biodiversity in Key Biodiversity Areas (KBAs) and reduce public health risks by promoting proper hygiene and providing more than 1.2 million Filipinos with access to improved sanitation services that substantially reduce the amount of pollution discharged into the environment.

With the expansion of the PSA, AECOM will add two additional objectives:

- Provide technical assistance to national associations, such as Local Water Utilities Administration (LWUA) and the League of Cities of the Philippines (LCP), to replicate the PSA approach throughout the country and to establish the institutional capacity for continuing this assistance; and
- Strengthen governance to reduce threats to biodiversity.

Current PSA partners, as well as the Metro Cebu Water District and Davao City Water District, will contribute to the protection of KBAs, including trigger species such as humpback whales, whale sharks, mangroves, sea birds, sea turtles, sea snakes, reef fishes and corals.

The PSA aims to reduce the threats to biodiversity by (1) assisting private sector partners to build wastewater treatment facilities to reduce the amount of pollution entering water bodies that flow into KBAs; (2) assisting cities to develop city-wide action plans with short, medium and long term actions that, once fully implemented, will significantly reduce the amount of pollution entering water bodies that flow into KBAs; and (3) scaling up both private and public pilots to a nationwide scale through national associations to have a larger impact on biodiversity and health throughout the country.

AECOM is excited about the opportunity to not only use the lessons learned from the first year of PSA activities to extend similar services to new partners, but also to expand the reach of its resources to work on important issues like health and biodiversity protection, which are strongly related to sanitation and its impact on the environment.