



# US-AEP Philippines FY 2003 Workplan



Drafted By:

Team Philippines

January 6, 2003

**US-AEP/PHILIPPINES WORKPLAN FY2003**

**Table of Contents**

<b>FY03 US-AEP Philippines Country Strategy</b>	<b>3</b>
<b>US-AEP Strategic Framework</b>	<b>8</b>
<b>Program Descriptions</b>	
• Program 1 – Promoting effective implementation of environmental regulations through access to US and Asian best practices and technology solutions	<b>9</b>
• Program 2 – Promoting improved enforcement and compliance mechanisms through national dialogue	<b>12</b>
• Program 3 – Promoting greening the supply chain and cleaner production	<b>14</b>
• Program 4 – Supporting local implementation of community-based and integrated environmental action planning to improve water resources	<b>16</b>
• Program 5 – Strengthening local government associations	<b>19</b>
<b>Annex: Success Stories</b>	<b>21</b>

## **FY03 US-AEP PHILIPPINES COUNTRY STRATEGY**

### **I. Development Context**

Five years after the start of the Asian financial crisis, the Philippines' economy continues to revive while overall the country still suffers environmentally. The rapid pace of population growth, urbanization, and industrialization is intensifying environmental problems in every sector. Wastes are not adequately treated and are either illegally discarded in channels or disposed in open dumps. Air pollution from mobile vehicle and industrial sources continues to be a major public health concern and is exacerbated by increasing traffic, improperly managed inspection and certification programs and lack of pollution controls. In the water sector, almost one-half of the Philippines' 400 rivers are characterized as biologically dead due to contamination from industrial and residential run-off and inadequate sewerage and drainage infrastructure. Additionally, the lack of a central hazardous waste treatment facility is a major obstacle in properly disposing of toxic and hazardous waste.

Limited government resources, particularly staff, makes improving this situation difficult. Public institutions currently lack the capacity to effectively enforce regulations, and fines for violations are often too low to induce compliance. Meanwhile, over ten years after the passage of the Local Government Code, most local government units (LGUs) lack appropriate structures, management systems, resources, leadership and technical competence to meet the complex requirements of decentralization. With more stringent environmental standards brought on by recent environmental legislation and with more responsibilities likely to be devolved to local governments, most of the country's nearly 100 cities and approximately 1,500 municipalities will require significant assistance.

Despite this gloomy picture, there is reason for hope. Over the last four years, the Government of the Republic of the Philippines (GRP) has achieved a number of environmental policy milestones and is now in the process of discussing ways to improve enforcement and decentralize environmental management. In addition, hundreds of communities in the Philippines have participated in various community-based environmental management projects, and have thus equipped themselves with the knowledge and skills necessary to identify and prioritize their needs and problems, to harness their resources, and to take collective action.

### **II. US-AEP Philippines and USAID Mission Collaboration**

For the past decade, the US-AEP Program in the Philippines, in close collaboration with the U.S. Agency for International Development (USAID) Mission in the Philippines, has worked to facilitate long-term U.S. and Asian partnerships between governments, non-governmental organizations (NGOs), academia, and the private sector to assist in developing and implementing environmental policies, improving urban and industrial environmental management, and introducing environmental technologies to solve specific environmental problems. In the process, US-AEP Philippines has engaged key decision-makers to affect environmental and economic changes in the country.

An important strategic framework for US-AEP Philippines' environmental assistance activities is the Framework for Bilateral Cooperation in the Environment and Public Health between the U.S. Government (USG) and the GRP. Signed in July 2000 and reinforced in July 2002, this Framework includes a number of USG agencies to cooperate in environmental activities with the Philippines, including hazardous and toxic materials and wastes management. US-AEP will continue to implement activities that support and complement this agreement. For example, US-AEP, U.S. Environmental Protection Agency (USEPA), and the U.S. Department of Defense (USDOD) are collaborating to ensure substantive results occur. Through such activities, US-AEP Philippines will support the achievement of the overall Embassy goal to "Revitalize our Partnership."

US-AEP Philippines' activities will also support and complement the USAID Mission's goal of "Sustainable Economic Growth Accelerated and Poverty Reduced" through its Strategic Objective of "Productive, Life-Sustaining Natural Resources Protected."

Pursuant to a recent Memorandum of Understanding between the USG, acting through USAID, and the GRP, acting through the National Economic and Development Authority (NEDA), US-AEP activities will be consistent with the following broad results: (1) legal and administrative policy framework for environmental protection and economic growth strengthened; (2) local government, judicial and other stakeholders' capacity for environmental management and enforcement improved; and (3) public and private sector support for enhanced environmental management and enforcement increased and harnessed. Areas of potential collaboration with the USAID Mission (in no order of priority) may include:

- Building the capacity of local government units in solid waste management, a focal point under USAID's EcoGovernance program;
- Increasing the use of clean and renewable fuels and introducing cleaner technologies to reduce vehicular emissions;
- Supporting the active participation of communities in developing off-grid, renewable energy systems; and
- Finding technology and policy solutions to the country's toxic and hazardous waste management problems.

Also, with Mission request and/or concurrence, US-AEP will invite Mindanao participants to any US-AEP organized workshops and conferences when appropriate.

In addition, US-AEP Philippines will seek opportunities when appropriate to leverage the environmental programs of multilateral and bilateral agencies, including the Asian Development Bank (ADB), United Nations (UN) agencies, the Overseas Economic Cooperation Fund of Japan (OECF), and the World Bank (WB). US-AEP Philippines will provide focused short-term inputs (i.e. exchanges, workshops) to complement selected donor projects.

### **III. Strategic Environmental Drivers for US-AEP Philippines**

The staff from US-AEP Philippines and the USAID Mission discussed approaching strategic interventions based upon environmental drivers for change in the Philippines. Two major cross-cutting drivers were identified, with five integrated programs that are structured to achieve results. The value to this approach is the elimination of "stove piped" and one-time events in favor of a results-oriented systems approach to programming.

#### **PROGRAM DRIVER 1: Environmental Legislation, Regulations and Market-Based Incentives**

*Objective: Enhance the implementation and enforcement of environmental policies and regulations, and promote market-based incentives to achieve pollution reduction goals.*

This is a major program driver for change in the Philippines via new and pending laws and regulations in air, water, solid waste, and toxic/hazardous waste. Additionally, more of an incentive than a driver is an increasing interest of Philippine companies to practice cleaner production and the increased number of multi-nationals that are working with their suppliers to green their supply chains. The following three programs will address this program driver.

**Program 1: Promoting effective implementation of environmental regulations through access to U.S. and Asian best practices and technology solutions**

The following environmental legislation has set the foundation for broad environmental improvement in the Philippines and opened opportunities for sharing U.S. experience and technology solutions:

- Clean Air Act of 1999
- Ecological Solid Waste Management Act of 2001
- Pending Clean Water Act
- Toxic and Hazardous Waste Management Act - currently under revision
- National Environmental Management Authority - bill filed in 2002

In addition, with US-AEP and USEPA support, the Philippines has been a leader in Asia in addressing Persistent Organic Pollutants (POPs). The Department of Environment and Natural Resources (DENR) has been given a mandate and \$500,000 from the Global Environment Fund (GEF) facility to implement a national program on POPs to fulfill the country's responsibilities under the Stockholm Convention.

Building on these significant developments, the US-AEP Philippines will assist in the successful implementation of new environmental regulations by (1) facilitating access to appropriate environmental technologies to decision-makers from the public and private sector and (2) promoting workshops for skills development of technicians to apply/comply with environmental regulations. In doing so, US-AEP Philippines will strive to work through Philippine professional associations and will leverage the reach and catalytic effect of our partnerships by leveraging the environmental programs of multilateral and bilateral agencies. Activities will focus on four areas:

- Toxic and Hazardous Waste: US-AEP Philippines, in cooperation with the USEPA, will address toxic and hazardous waste management in response to the Toxic and Hazardous Waste Act, the aforementioned Framework for Bilateral Cooperation in the Environment and Public Health, and the Philippines' initiative on POPs implementation. This work will complement the Mission's interest in technology and policy solutions to the country's toxic and hazardous waste management problems.
- Local Government Environment Management: US-AEP Philippines will complement the Mission's interest in building the capacity of local government units, particularly under USAID's EcoGovernance Project. The Ecological Solid Waste Management Act has produced an increased demand for solid waste management technology, services, and equipment by local governments, which are now required to manage and finance solid waste operations.
- Clean Air: In the air sector, the Clean Air Act has already led to an increased demand for air pollution control and monitoring equipment and will also tighten pollution standards and monitoring requirements for motor vehicle emissions. In this sector, US-AEP Philippines will explore opportunities to complement the Mission's interest in mobile source pollution.
- Clean Water: The final passage of the Clean Water Act will lead to improved water and wastewater management in the country, and US-AEP will support integrated and community-based solutions to improving water resources management.

**Program 2: Promoting improved enforcement and compliance mechanisms through national dialogue**

Promoting improved enforcement mechanisms is at the heart of on-going efforts to strengthen the Philippines' environmental regulatory system. US-AEP will work with the Philippines Congress Committee on Ecology, its Technical Working Group, DENR, and all relevant stakeholders to identify

strategies for strengthening enforcement via strategic linkages with U.S. agencies and organizations. In partnering with the Committee, US-AEP will help coordinate linkages with other stakeholders to create a core working group aimed at identifying and establishing national enforcement priorities.

In particular, building on a recent WB-funded analysis of the monitoring and compliance program of the Environmental Management Bureau (EMB) and on an ADB-funded assessment of the Philippines Adjudication Board (PAB), US-AEP will work closely with EMB and the PAB to identify strategies with all stakeholders to improve institutional capacity. In identifying potential reform strategies, US-AEP will also draw on regional and local best practices developed at Laguna Lake, Cebu-Mandaue, and Batangas Bay, three regions that have enjoyed some success in local environmental enforcement.

**Program 3: Promoting greening the supply chain and cleaner production**

Building on emerging, cooperative relationships in the field of industrial purchasing and supply, US-AEP Philippines has successfully promoted the concept of greening the supply chain (GSC). The GSC process allows buyer companies to require specific levels of environmental performance from their manufacturing partners and vendors, inducing a large number of SMEs to engage in cleaner production, adopt clean technologies and implement environmental management systems.

Based on past successful GSC efforts, US-AEP Philippines will institutionalize a GSC and Cleaner Production program in the Philippines in three regions - Luzon, Visayas and Mindanao - by working through an NGO, the Philippines Business for Social Progress (PBSP). US-AEP Philippines will work with PBSP on three fronts: (1) promoting a GSC program with selected buyers and suppliers; (2) providing enabling local environments for improved corporate environmental responsibility; and (3) promoting regional initiatives in cleaner production and pollution prevention.

Through this initiative, US-AEP Philippines will help reach the management of SMEs that are suppliers/contractors of selected buyer companies. No supplier will ignore a request from an important buyer who wants to know about the supplier's environmental performance, and such requests demonstrate to suppliers that there is a serious market reason to achieve improved environmental performance.

**PROGRAM DRIVER 2: Decentralization of national authority to local government units (LGUs)**

*Objective: Strengthen the capacity of local governments to provide environmental services and enforce environmental laws.*

As the Philippines grapples with the impact of decentralizing environmental management, the country must find a way to ensure that environmental services are delivered and laws are enforced on the local level. Many powers, functions, and resources have been transferred from national government agencies to local government units (i.e., provinces, cities, municipalities, and local communities). US-AEP Philippines will work with appropriate local government units to improve their management systems, resources, leadership, and technical competence.

**Program 4: Supporting local implementation of community-based and integrated environmental action planning to improve water resources**

To build upon the work of the USAID Mission in promoting Integrated Water Resource Management, US-AEP Philippines will assist one region in implementing a community-based and integrated environmental action planning around water resources. US-AEP Philippines has chosen the region of Cebu/Mandaue in the Visayas because of its progressive local leadership, its significant environmental problems due to increased industrialization, and its existing collaborative efforts

among industry, government, NGOs, academia and religious organizations. US-AEP Philippines, with the collaboration of U.S.-based partners, will conduct a program aimed at reducing the pollution into the Mactan Channel and, in the process, help improve the water quality in the Channel (as measured by its official classification), lessen negative impacts on the health of residents, and improve the habitat for aquatic plants and animals. In the process, US-AEP also hopes to help create a potential model for community-based water resource planning that can be shared and replicated in other Philippine cities.

The largest part of this program will entail US-AEP Philippines providing assistance to a non-profit multi-sectoral coalition – the Mactan Channel Multi-Sectoral Management Council Inc. – to improve community-based environmental monitoring, establishing the needed legal arrangements with local governments and national agencies, and undertaking river basin planning for the seven highly-polluted rivers that flow into the Channel. This assistance will take the form of study tours, policy exchanges, and grant assistance. US-AEP Philippines will also draw on the assistance and expertise of public and private sector partners from two model regions in the Philippines – Batangas Bay and the Laguna Lake Development Authority (LLDA) – and also successful U.S. models, such as the Chesapeake Bay.

#### **Program 5: Strengthening local government associations**

Local government leagues in the Philippines, such as the League of Municipalities of the Philippines (LMP), the League of Cities of the Philippines (LCP), and the League of Provinces of the Philippines (LPP), were institutionalized in 1991 with the passage and the signing into law of the Local Government Code. Of these organizations, the LCP, which counts all of the Philippines' roughly 90 cities as its members, has been the most active in the area of environmental management. Because the LCP has regularly served as a platform for a number of donor programs targeting local governments, it is poised to serve as an effective center for information exchange between institutions, governments, private business, and local governments.

US-AEP Philippines will assist the LCP to further enhance its capabilities to share local environmental best practices, facilitate LGU networking, and replicate environmental programs on the local level, and in the process enhance the LCP's ability to provide focused, mission-driven, and fee-based services to its members. In tandem with this effort, US-AEP Philippines will, as much as possible, work through the LCP as a key partner in enhancing environmental activities with cities, including solid waste management, toxic and hazardous waste management, air quality improvement, and water resource management.

# US-AEP STRATEGIC FRAMEWORK

## US-AEP Philippines FY 2003 Activities and their contribution to USAID/Philippines and US-AEP SOs and IRs

US-AEP/Philippines FY 2003 Programs and Activities	US-AEP Strategic Objective 1: Sustained impact on the key people, institutions, and forces that drive the movement to a clean revolution in Asia	USAID/Philippines Strategic Objective 4: Productive, life-sustaining natural resources protected	
	US-AEP Intermediate Result(s) and Sub-Intermediate Result(s) under SO1	USAID/Philippines Sub-Intermediate Result(s) under SO4	USAID Philippines Intermediate Result(s) under SO4
<b>Program 1: Promoting effective implementation of environmental regulations through access to US and Asian best practices and technology solutions</b>			
1. Establish a toxic and hazardous waste (THW) certificate program with the University of the Philippines (UP)	IR 1.1 Improved public policy and environmental regulations IR 1.2 Improved urban environmental management (IR 1.2.1 Improved urban policies and information flow)	IR 4.2.1 Capacity to manage hazardous and toxic wastes improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
2. Prepare THW guidelines through UP case study			
3. Assist DENR in implementing persistent organic pollutants (POPs) program	IR 1.4 Increased transfer of U.S. environmental technology, expertise, and practices to Asia through trade and investment	IR 4.2.2 Local capacity to manage solid waste improved	IR 4.3 Reduced energy costs IR 4.4 expanded use of renewables IR 4.5 Reduced vehicle emissions
4. Introduce THW technology solutions to environmental service providers			
5. Prepare technical manual for architects and developers on meeting solid waste management (SWM) regulations in the design of new buildings	IR 1.2 Improved urban environmental management (IR 1.2.3 Increased local capacity to implement sustainable urban environmental improvements)	IR 4.2.3 Local capacity to reduce pollution of water resources improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
6. Send representatives to the Solid Waste Association of North America (SWANA) Solid Waste Exposition and Solid Waste Management Association of the Philippines (SWAPP) annual conference			
7. Send representatives to the annual Water Environment Federation (WEF) Conference	IR 1.2 Improved urban environmental management (IR 1.2.3 Increased local capacity to implement sustainable urban environmental improvements) IR 1.4 Increased transfer of U.S. environmental technology, expertise, and practices to Asia through trade and investment	Crosscutting IRs: Capacity of cities to reduce air pollution increased	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
8. Send representatives to the annual Air and Waste Management Association (AWMA) Conference			
9. Support the use of new and renewable energy (NRE) technologies	IR 1.2 Improved urban environmental management (IR 1.2.3 Increased local capacity to implement sustainable urban environmental improvements)	IR 4.2.1 Capacity to manage hazardous and toxic wastes improved IR 4.2.2 Local capacity to manage solid waste improved IR 4.2.3 Local capacity to reduce pollution of water resources improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
10. Send representatives to APEC International Clean Energy Business Development Conference			
11. Sponsor participants to activities and workshops under the Clean Air Initiative	IR 1.2 Improved urban environmental management (IR 1.2.3 Increased local capacity to implement sustainable urban environmental improvements) IR 1.4 Increased transfer of U.S. environmental technology, expertise, and practices to Asia through trade and investment	IR 4.2.1 Capacity to manage hazardous and toxic wastes improved IR 4.2.2 Local capacity to manage solid waste improved IR 4.2.3 Local capacity to reduce pollution of water resources improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
12. Support Philippine involvement in the Clean Air Training Network for Asia			
13. Identify specific opportunities to help advance projects eligible for donor funding at the project preparation stage			
<b>Program 2: Promoting improved enforcement and compliance mechanisms through national dialogue</b>			
1. Set priorities for strengthening enforcement in the context of a newly filed bill establishing a new national level enforcement agency	IR 1.1 Improved public policy and environmental regulations IR 1.2 Improved urban environmental management (IR 1.2.2 Improved municipal technical and financial management systems)	IR 4.2.3 Local capacity to reduce pollution of water resources improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
<b>Program 3: Promoting greening the supply chain and cleaner production</b>			
1. Support business associations in implementing "greening the supply chain" programs with industry	IR 1.3 Improved industrial environmental performance (all sub-IRs)	IR 4.2.1 Capacity to manage hazardous and toxic wastes improved IR 4.2.2 Local capacity to manage solid waste improved IR 4.2.3 Local capacity to reduce pollution of water resources improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
2. Promote Global Reporting Initiative in Philippines	IR 1.3 Improved industrial environmental performance (IR 1.3.1 Increased corporate commitment to cleaner production; and IR 1.3.3 Enabling environment for improved corporate environmental performance created)		
<b>Program 4: Supporting local implementation of community-based and integrated environmental action planning to improve water resources</b>			
1. Improve capacity of multi-sectoral groups (e.g. Laguna, Batangas, Cebu) to develop and implement community-based action plans around the improvement of water bodies, i.e. rivers, bays, and channels	IR 1.2 Improved urban environmental management (all sub-IRs)	IR 4.2.3 Local capacity to reduce pollution of water resources improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways
<b>Program 5: Strengthening local government associations</b>			
1. Strengthen League of Cities of the Philippines in facilitating information exchange between institutions, governments, private business, and local governments	IR 1.2 Improved urban environmental management (IR 1.2.1 Improved urban policies and information flow)	IR 4.2.2 Local capacity to manage solid waste improved	IR 4.2 Local government units to solve waste management problems in environmentally sound ways



## PROGRAM DESCRIPTIONS

**Title (Program 1):** Promoting effective implementation of environmental regulations through access to U.S. and Asian best practices and technology solutions

**Primary Program Area:** Technology Transfer and Policy

**Secondary Program Area:** Industry and Urban

**U.S. Partners:** U.S. Environmental Protection Agency (USEPA); U.S. Toxic and Hazardous Waste (THW) Technology Providers; Department of Defense (DoD); American Institute of Architects; Environmental Professional Associations, i.e. Solid Waste Association of North America (SWANA); Seattle Public Utilities

**Asian Partners:** Department of Environment and Natural Resources (DENR); Department of Science and Technology (DOST); Department of National Defense (DND); University of the Philippines (UP); Philippines Business for the Environment (PBE); THW Environmental Service Providers; Energy Distribution Utilities (i.e. Meralco, NEA); Environmental Professional Associations; Manila Corinthian Chapter of the United Architects Association (MCC-UAP); Ayala Foundation Inc (AFI); Metropolitan Waterworks and Sewerage System (MWSS)

**Other Partners:** World Bank (WB); Asian Development Bank (ADB); United Nations Development Program (UNDP); Organization for Economic Cooperation and Development (OECD); Bi-lateral donors (e.g., Deutsche Gesellschaft für Technische Zusammenarbeit [GTZ], Canadian International Development Agency [CIDA], Japan International Cooperation Agency [JICA])

### Description:

To assist in the successful implementation of new environmental regulations in the Philippines, US-AEP Philippines will facilitate access to appropriate environmental technologies to decision-makers from the public and private sector and promote workshops for human resource development of technicians to apply/comply with environmental regulations. In this effort, US-AEP Philippines will employ three main approaches in four environmental media areas (components 1-4):

#### Approaches:

- 1) Collaborate with key U.S. and Asian partners to complement the environmental projects of the USAID Mission in the Philippines, especially those being implemented under the Mission's Strategic Objective entitled: *Productive, Life Sustaining Natural Resources Protected*.
- 2) Work through Philippine professional associations, such as the Air and Waste Management Association-Philippines Section (A&WMA-PS), the Water Environment Association of the Philippines (WEAP), and the Solid Waste Management Association of the Philippines (SWAPP) along with their U.S. counterparts to enhance compliance practices.
- 3) Leverage the reach and catalytic effect of our partnerships by leveraging the environmental programs of multilateral and bilateral agencies, including the ADB, United Nations agencies, the Overseas Economic Cooperation Fund of Japan (OECF), and the World Bank. US-AEP Philippines will provide focused short-term inputs (i.e. exchanges) to utilize selected donor programs.

Under the third approach and cutting across all four areas described below, US-AEP Philippines will send environmental project sponsors to the Asia Infrastructure Matchmaking (AIM) event that will take place concurrently with the 36<sup>th</sup> ADB Annual Meeting in Istanbul. This event will seek to bring together Asian government officials and U.S. companies to discuss Asia's environmental, energy, and infrastructure development projects that may be eligible for ADB financing.

Media Components:

**Component 1: Toxic and Hazardous Waste Management.** In FY2003, US-AEP Philippines, USEPA, and the U.S. Department of Defense will collaborate to improve toxic and hazardous waste (THW) management in an effort to address the public health and environmental issues resulting from industry's stockpiled toxic and hazardous wastes. Activities may include the following:

- US-AEP Philippines will provide assistance to the University of the Philippines to implement a certificate program based on five international training modules developed by the USEPA. With USEPA technical assistance, the courses will be modified by UP staff and faculty to meet the DENR's management and technical needs. US-AEP and USEPA will also help incorporate Philippines-specific case studies into the training program.
- With USEPA collaboration, US-AEP Philippines will provide the DENR with technical assistance to meet their responsibilities under the Stockholm Convention on persistent organic pollutants (POPs). A September 2002 workshop brought together relevant stakeholders to discuss the national inventory of POPs and to identify a course of action for DENR. More specific activities will be developed. One possibility is to assist the DENR in preparing the national implementation plan (NIP) and holding public meetings with key stakeholders, such as utility companies and manufacturers, to describe the Stockholm Convention and the importance and process of an inventory and the NIP.
- Through US study tours and/or exchanges, US-AEP Philippines will help introduce technology solutions to improve THW and/or POPs management. These activities will promote private investments in treatment, storage and disposal facilities.

**Component 2: Solid Waste Management.** US-AEP Philippines will build off previous successful activities in promoting improved solid waste management. Most significantly, US-AEP's continued support to SWAPP has enabled it to strengthen the capacity of more than 70 LGUs through training, stakeholder consultations and technical assistance in developing municipal SWM plans. The recently passed Ecological Solid Waste Management Act has already produced an increased demand for solid waste management technology, services, and equipment by local governments, which are now required to manage and finance solid waste operations. US-AEP Philippines activities in FY 2003 will complement the Mission's interest in building the capacity of local government units (i.e., USAID's EcoGovernance Project).

- US-AEP Philippines will support a partnership between the MCC-UAP, SWAPP, and the Ayala Foundation to prepare and publish a technical design manual that will guide architects, developers, and local governments in complying with new regulations that require buildings to be equipped to separate waste at the source. This activity will include a study tour to the U.S. to showcase building designs that are applicable to local conditions, and workshops, roundtables, and consultation meetings between the designers and users of the manual.
- To support local governments in finding technical solutions to manage solid waste, US-AEP Philippines will provide cost-share support to send a number of local officials to the SWANA's Solid Waste Exposition (WASTECON) in Long Beach, California. We will also provide cost-share support for 15 officials to SWAPP's annual conference in Davao in November.

**Component 3: Air Quality Improvement.** US-AEP Philippines will build on past activities in improving air quality, which include helping facilitate dialogue to increase industry's understanding of the Clean Air Act and helping create and strengthen the Partnership for Clean Air, a diverse group of

private sector, NGO and government players that coordinated public awareness on air issues. In FY 2003, US-AEP Philippines will undertake the following activities:

- Explore opportunities for complementing the Mission-supported Innovative Environmental Strategy project that promotes the health benefits of integrated air pollution and greenhouse gas reduction technology interventions. This project is being managed by USEPA with technical support from the National Renewable Energy Laboratory.
- Continue to promote proven technical solutions to address air quality and waste management problems by sending participants to the annual A&WMA Conference on a cost-share basis.
- Facilitate Philippine participation in events of the Clean Air Initiative (CAI), a joint initiative of the World Bank and ADB that promotes and demonstrates innovative ways to improve the air quality of Asian cities through partnerships and sharing experiences. The major events in FY2003 will be the Better Air Quality in Asia and Pacific Rim Cities (BAQ) Conference and the Air Training Network for Asia (CATNet-Asia) in Hongkong in December.
- Undertake activities that add value to the ADB's Metro Manila Air Quality Improvement Project, which seeks to create legislation, strengthen implementation and enforcement, and reduce mobile and stationary emissions.

**Component 4: Water Resources Management.** In FY 2002, US-AEP organized an observational program to the U.S. to strengthen the understanding of the Committee on Ecology in water pollution control law at the U.S. federal, state, and local levels with an emphasis on the Clean Water Act and its legal and institutional framework, standards, technology solutions, enforcement, and compliance programs. In FY2003, US-AEP Philippines will continue to support the activities of the Committee on Ecology for the passage of the Philippine Clean Water Act. Likewise, US-AEP will focus its efforts on developing community-based action plans (see Program 4 for more details) and promoting proven technical solutions to address water quality and wastewater management by sending participants to the annual Water Environment Federation Technical Exhibition and Conference (WEFTEC) on a cost-share basis.

US-AEP Philippines will also assist Manila's Metropolitan Waterworks and Sewerage System (MWSS), which is tasked with supplying water to over 10 million users, to review the terms of reference and contract for an ADB technical assistance and loan package to develop four new water sources. US-AEP Philippines will bring together MWSS with the Seattle Public Utilities (SPU) to share American experience in structuring contracts and risk and asset assessments.

**Expected Results:**

- Establishment of a first-of-its-kind national certification course on toxic and hazardous waste management by the University of the Philippines.
- DENR and relevant government agencies will have an increased understanding of toxic and hazardous waste management with emphasis on the development of chemical control guidelines for toxic substances.
- Assist DENR in finalizing the national POPs inventory and in the preparation of the NIP.
- Architects and developers using SWM technical design manual guidelines in the design of new buildings, with the long-term goal of getting guidelines into the National Building Code.
- Delegates from the public and private sectors will have an increased understanding of technology options for solid waste management, air and water quality improvement, and toxic and hazardous waste management by participating in WASTECON, WEFTEC, A&WMA Conference and other U.S. technology exchanges.
- Seattle Public Utilities will conduct a peer review of the Terms of Reference for an ADB TA and loan to the Metropolitan Waterworks and Sewage System.

**Title (Program 2):** Assessing Implementation of the Draft Clean Water Act

**Primary Program Areas:** Policy

**Secondary Program Areas:** Urban

**U.S. Partners:** Environmental Protection Agency (EPA); Maryland Department of the Environment; Natural Resource Defense Council; George Washington University Law School

**Asian Partners:** Philippines Congress Committee on Ecology and Technical Working Group; Environmental Management Bureau (EMB); Laguna Lake Development Authority (LLDA)

**Description:**

The Clean Water Act (CWA) is likely to be passed this legislative session. Though the law has been developed with stakeholder input, there are issues related to its implementability, especially given resource and capability limitations at the Department of Environment and Natural Resources (DENR) and other implementing agencies. Implementation of the Clean Air Act illustrates this challenge.

US-AEP will work with the Philippines Congress Committee on Ecology, its Technical Working Group (TWG) and other stakeholders (e.g., DENR and Laguna Lake Development Authority (LLDA)) to assess CWA implementation challenges before enactment through focused discussions on core requirements of the draft law. Core focus areas could include community-based planning, environmental user fees, enforcement, water quality classification, public participation, and institutional arrangements.

With this stakeholder working group, US-AEP will organize a sequence of linked international activities – information exchange, video-conference, study tour and workshop – in combination with discussions on implementation challenges and specific regulatory requirements identified in the draft. The output would be a series of recommendations for strengthening implementation, which would point to amendments in the draft law or identification of specific capacity limitations.

The World Bank would support this effort by completing a cost assessment of CWA implementation for publication in its new Monitor on the water, and US-AEP would also look to gain inputs from the Asia Foundation and UNDP.

**Linkage to Mission Program**

Working on the CWA would link to the Mission program under the Improved Environmental Governance IR, which focuses on the management of coastal resources, forests and solid waste. Once enacted, the CWA would have a direct or indirect impact on these programs. The lead agency for the CWA is DENR, the Mission's implementing partner in a number of programs. In addition, many functional responsibilities under the Act will be devolved directly to LGUs, which are strong partners in Mission programs.

On an operational level, US-AEP will work with the Mission to link this activity with some on-going Mission programs. One example is the Integrated Water Resource Alliance (IWRA) program, which will pilot integrated planning and water resource management activities. Under the draft law, LGUs must assist in the formulation of water quality management action plans (Sec. 7 & 8) and support

DENR and other agencies in water quality improvement efforts (Sec. 9. Work in Iloilo City and Naga City under IWRA could be highlighted during discussions on implementation.

Other opportunities for linkages between Mission programs and dialogue on CWA implementation include: solid waste and water quality linkages (EcoGovernance), enforcement and conflict resolution (Legal Services for Communities and Coastal Law Enforcement Alliance), public participation (EcoGovernance, Coral Reef Conservation Initiative, Coastal Resources Management Project). In addition, during the dialogue, US-AEP will suggest new approaches or policies in line with the overall Mission program, such as natural resources user fees.

**Component 1: Information exchange and video-conference.** During the first and second quarters, US-AEP will provide the Committee on Ecology and the working group with information on U.S. and Asian best practices, and will facilitate linkages with U.S. counterpart organizations and agencies.

**Component 2: Observational program to U.S.** During the third quarter, US-AEP will organize a cost-shared observational program to the U.S. for key stakeholders, including the Committee on Ecology, EMB and LLDA, to initiate more focused exchange with U.S. officials at the federal, state and local levels, as well as with civil society and industry.

**Component 3: Conference/workshop.** In the last quarter, US-AEP, the Committee on Ecology and TWG will co-organize a national conference and workshop to discuss proposed implementation strategies in key areas proposed by the working group. The conference will provide an opportunity to showcase other Mission and US-AEP programs and activities.

**Expected Results:**

- Recommendations for strengthening implementation of CWA
- Identification of specific capacity limitations related to implementation of CWA
- Linkages between Philippines and U.S. and Asian counterparts

**Title (Program 3):** Promoting greening the supply chain and cleaner production

**Primary Program Area:** Industry

**Secondary Program Area:** Policy and Technology Transfer

**U.S. Partners:** Global Reporting Initiative (GRI)

**Asian Partners:** Philippines Business for Social Progress (PBSP); Management Association of the Philippines (MAP); Philippine Purchasers Association (PPA); Department of Trade and Industry (DTI); Bureau of Small and Medium Enterprises; Philippine Companies and Multi-nationals; Small and Medium Enterprises (SMEs); Asia-Pacific Roundtable for Cleaner Production (APRCP)

**Description:**

**Background:** Small and medium enterprises (SMEs), which constitute more than 95% of the business sector in the Philippines, play a significant role in the country's development, yet represent one of the most persistent and unregulated polluter groups in Philippines industry. For the past seven years, US-AEP has achieved notable successes working with multi-national corporations to help their SME suppliers reduce pollution and remain competitive and prosperous through a Greening the Supply (GSC) Initiative. The GSC process allows buyer companies to require specific levels of environmental performance from their manufacturing partners and vendors. This program works directly with both CEOs and procurement executives in the adoption of environmental standards for their suppliers. The GSC process has assisted corporations in addressing concerns about compliance with environmental regulations, productivity improvement, competitive advantage, and resource management. In the Philippines, US-AEP worked with Nestle, Philippines Inc. to promote GSC, delivering training programs and technical assistance to Nestle suppliers, many of whom are reporting reductions in energy & water consumption and improvements in efficiency.

**Activities:** US-AEP Philippines will institutionalize a GSC and Cleaner Production program in the Philippines in three regions - Luzon, Visayas and Mindanao - by working through a business support organization, the Philippines Business for Social Progress (PBSP).<sup>1</sup> US-AEP Philippines will work with PBSP on three fronts:

**Component 1: Promoting Greening the Supply Chain:** Funded through a FY 2002 TAF grant, US-AEP Philippines will assist PBSP in providing two types of training: to their member companies in methods to promote GSC to their suppliers; and to SME suppliers in environmental improvement measures. This program will build upon the knowledge and expertise gained from US-AEP Philippines' earlier initiatives on GSC. US-AEP's past approach, and one it will share with PBSP, has focused on three important elements that helped induce corporations to adopt GSC guidelines in order to improve their market competitiveness:

- increasing awareness of the strategic importance of purchasing;
- developing a new focus on cooperative buyer-seller relationships; and
- forming a connection between purchasing decisions and environmental performance.

In this effort, US-AEP and PBSP will also work closely with the Management Association of the Philippines (MAP), whose members represent a cross-section of chief executive officers (CEOs), chief operating officers (COOs) and other top executives from the local and multinational companies

---

<sup>1</sup> PBSP is a corporate foundation that has been in existence for more than three decades and whose 162 member corporations set aside some of their pre-tax earnings to assist industries in social and environmental responsibility. The Center for Corporate Citizenship (CCC) under PBSP will serve as an ideal partner for this activity. Their normal practice is to develop leading-edge corporate citizenship programs to provide tested models and benchmarks for replication, and they already have an ongoing Environmental Stewardship program with SMEs.

in the Philippines. Other partners will include the Department of Trade & Industry (DTI), the Bureau of Small and Medium Enterprises (which sits under DTI), and the Philippines Purchasers Association (PPA). The former can assist in promoting the GSC concept to more companies, while the latter can help sell the idea of considering environmental criteria in procurement.

At the end of FY 2003, US-AEP will host a regional GSC forum to be held in Manila or Bangkok to engage multinationals, local corporations, government representatives, and NGOs. The purpose of this forum will be to provide a venue by which multinationals can share best practices in GSC across industries and to form a more active GSC network. This will be an opportunity for PBSP to gather Philippine GSC champions to share their experiences and reach out to others who have expressed interest in joining the initiative.

**Component 2: Providing enabling local environment for improved corporate environmental responsibility.** Through a grant from ICMA, US-AEP Philippines will assist PBSP to add an environmental component to their ongoing “LGUs as Corporate Social Responsibility (CSR) Enablers” Program. The program will assist LGUs in developing their own environmental management systems and fostering the enabling environment through the development of favorable policies, appropriate programs and administrative structures for businesses to comply with laws and adopt CSR practices in the area of environmental management. PBSP will provide training, produce training manuals, and will develop monitoring and evaluation tools to participating cities.

**Component 3: Promote GRI and regional CP/P2 Initiatives.** Additionally, US-AEP Philippines will encourage new partnerships through economic incentives and public recognition by promoting such regional initiatives as the Global Reporting Initiative (GRI) and the Asia-Pacific Roundtable for Cleaner Production (APRCP). Regarding the former, US-AEP Philippines sent a delegation of business, NGO and government representatives to the GRI regional meeting in Malaysia in 2002. With this core group, US-AEP Philippines and PBSP will lead and coordinate the effort of GRI promotion in the Philippines in FY 2003. Two corporate champions of GRI – Mirant and Shell – will also contribute to this effort.

**Expected Results:**

- Transfer knowledge to PBSP on a replicable and sustainable GSC and Cleaner Production (CP) program in the Philippines. Deliverables will include an operations manual, a training manual, and an evaluation tool.
- Adoption of GSC by at least 5 multinational corporations, with the near-term result that 10 suppliers will adopt and institutionalize a CP program as indicated by: Environment Policy; Programs on Environmental Management; Environmental Management Systems (EMS); and Measurement & Reporting strategies and tools
- Create awareness and knowledge of CP and EMS as tools for environmental compliance and protection among 5 Philippine cities.

**Title (Program 4):** Supporting local implementation of community-based and integrated environmental action planning to improve the quality of water resources

**Primary Program Area:** Urban and Industry

**Secondary Program Area:** Policy and Technology Transfer

**U.S. Partners:** Alliance for the Chesapeake Bay; Friends of the Rappahannock; Chesapeake Bay Foundation; US Environmental Protection Agency (USEPA); River Basin Council in U.S.; International City/County Management Association (ICMA)

**Asian Partners:** Philippine Business for Social Progress (PBSP); League of Cities of the Philippines (LCP); Mactan Channel Multi-Sectoral Management Council Inc. (MCMC Inc.); Laguna Lake Development Authority (LLDA) and Federation of River Basin Councils; Batangas Bay Council for Integrated Coastal Management (BBCICM); Provincial Governors & Councils; City Mayors & Councils; Environment Management Bureau (EMB) regional offices; Sentro para sa Ikauunlad ng Katutubong Agham at Teknolohiya (SIKAT)

**Description:**

**Background:** The increase in business and economic activity in metropolitan Cebu, a city in the Visayas region, has fueled a significant rise in industrialization. Consequently, the water quality of rivers and coastal areas in the region is rapidly deteriorating due to solid waste and wastewater discharges from industries, commercial establishments, and households. The water quality of the Mactan Channel, located between the neighboring cities of Cebu and Mandaue and the resort Island of Mactan, is severely degraded. In an effort to clean up the Mactan Channel, a multi-sectoral group composed of representatives from industry, government, NGOs, academic and religious organizations, joined forces to form the Mactan Channel Multi-Sectoral Management Council, Inc. in late 2000.

**Activities:** US-AEP Philippines, in collaboration with US-based partners, will conduct a program aimed at reducing pollution in the Mactan Channel, leading to improved water quality (as measured by its official classification), reduced negative impacts on residents' health, and improved habitat for aquatic plants and animals. In the process, US-AEP will also create a potential model for community-based water resource planning that can be shared and replicated in other Philippine cities. The program will have three components:

**Component 1: Improve water resource management in Cebu region.** US-AEP Philippines will facilitate a cooperative and multi-faceted effort with a diverse group of partners on the national, provincial, and local levels (e.g., local government, NGOs, industry, national government agencies) to improve management of water resources around the Mactan Channel. To accomplish this, US-AEP Philippines will assist the Mactan Channel Multi-Sectoral Management Council Inc. (MCMC)<sup>2</sup> through a grant, study tours, and policy exchanges, in improving community-based environmental

---

<sup>2</sup> The MCMC was organized in late 2000 with the assistance of USAID's *Assistance for Resource Monitoring Information (ARMI)* Project. MCMC is a Securities and Exchange Commission (SEC) registered, volunteer, non-profit multi-sectoral coalition dedicated to promoting participatory, sustainable, and community-based restoration and protection around the Mactan Channel. During its short existence, the Council has made remarkable progress in its efforts to form collaborative partnerships and a constructive dialogue between academe, NGOs, LGUs, government agencies, people's organizations, youth, religious organizations, and industry.



monitoring, establishing the needed legal arrangements with local governments and national agencies, and undertaking river basin planning for the seven highly-polluted rivers that flow into the Channel. In addition, as part of another US-AEP program focused on improving industrial environmental management in the country (see Program 3), US-AEP, along with our partner the Philippines Business for Social Progress (PBSP), will promote cleaner production with a number of industries in the Mactan Channel area.

US-AEP Philippines will also draw on the assistance and expertise of public and private sector partners from two model regions in the Philippines – Batangas Bay and the Laguna Lake Development Authority – and also successful U.S. models, such as the Chesapeake Bay. In the case of Batangas Bay, the provincial legislation council created a multi-sectoral organization to help protect the Bay, and, largely as a result of their successes, some central DENR functions were devolved to their Provincial Government-Environment and Natural Resources Office (PG-ENRO). Meanwhile, the LLDA – a regional environmental management and economic development agency that has jurisdiction over Laguna Lake – is the recognized leader in Asia in economic instruments and community-based environmental management. With US-AEP assistance, they have catalyzed the development and growth of 18 river basin councils.

**Component 2: Promote successful models to other Philippine cities.** US-AEP Philippines will help promote the models developed by the Cebu-Mandaue region, Batangas Bay, LLDA, and other cities/regions. As part of both the activities described above, US-AEP Philippines will invite select cities to observe the Mactan Channel activity, with the goal of raising awareness and knowledge in other cities and facilitating information-sharing and networking. In this effort, US-AEP will closely coordinate with the USAID/Philippines Integrated Water Resources Alliance activity, which is demonstrating model approaches for integrated water resources management (IWRM) around two cities – Naga and Iloilo – and replicating these approaches to other municipalities and watersheds. In the latter city, US-AEP provided a FY2002 TAF grant to the Iloilo Business Club to undertake an Iloilo River Development Master Plan and Urban Design, an activity that will build on the aforementioned IWRM activity in that city.

At the end of FY03, US-AEP Philippines will facilitate a national conference to showcase these models to other Philippine cities, as well as to government agencies such as DENR. The dual objectives will be to (1) share best practices, encourage networking among LGUs and promote replication and (2) demonstrate to national environmental agencies how local governments can successfully manage their environments and enforce environmental regulations. This event may be coordinated with US-AEP/Philippines' work to help develop environmental enforcement priorities and establish an appropriate role for local and regional authorities (see Program 2).

A key partner in this sharing and replication will be the League of Cities of the Philippines (LCP). US-AEP Philippines will provide assistance through ICMA to LCP in facilitating information sharing to local governments on effective practices in environmental management and enforcement, using the models from LLDA, Mactan, and Batangas. This activity will be a component of a broader US-AEP program that will seek to strengthen the LCP in capacitating LGUs to adopt socially and environmentally responsible programs and to better engage community stakeholders in undertaking local development projects (see Program 5). Networking efforts will be enhanced by sending elected officials and staff from participating cities to the Mayors' Asia-Pacific Environmental Summit (MAPES) in Honolulu.

**Component 3: Transfer of appropriate technologies to support to Laguna Lake Development Authority:** Building on our successful work with LLDA over the last year, US-AEP Philippines will provide a grant through The Asia Foundation to the Federation of River Basin Councils in Laguna Lake that was established by LLDA to support implementation of their newly-created Community-

based Environmental Management Action Plan and strengthen linkages with the Chesapeake Bay. This activity will build on a FY2002 TAF grant activity (to the Philippine NGO Institute of Philippine Culture) that will help identify and then apply appropriate technologies in pollution control in small to medium-sized low-income communities in the Laguna Lake region.

**Expected Results:**

- Local governments, i.e. Cebu City, Mandau, Iloilo, and Batangas, will undertake improved environmental management around water bodies (i.e. rivers, bays, and channels) and, in the process, implement broader best practices, including community-based planning, improved environmental enforcement, and creating enabling environments for businesses to practice corporate social responsibility.
- Reduction of pollution in 2-3 focus rivers discharging to the Mactan Channel by helping organize 2-3 river councils with concrete plans to reduce pollution to sustain future operations.
- Creating awareness and transferring knowledge about river council type organizations as a tool for enforcement and environmental protection among 80 percent of Philippine cities located along water bodies.
- By showcasing successful local environmental management and enforcement models, promote the devolution of environmental functions to the local level.

**Title (Program 5):** Strengthening local government associations

**Primary Program Area:** Urban

**Secondary Program Area:** Policy

**U.S. Partners:** International City/County Management Association (ICMA)

**Asian Partners:** League of Cities of the Philippines (LCP), City Management Association of Gujarat (CMAG)

**Description:**

**Background:** Local government leagues in the Philippines, such as the League of Municipalities of the Philippines (LMP), the League of Cities of the Philippines (LCP), and the League of Provinces of the Philippines (LPP), were institutionalized in 1991 with the passage and the signing into law of the Local Government Code. Of these organizations, the LCP, which counts all of the Philippines' roughly 90 cities as its members, has been the most active in the area of environmental management. Because the LCP has regularly served as a platform for a number of donor programs targeting local governments, it is poised to serve as an effective center for information exchange between institutions, governments, private business, and local government themselves.

**Activities:** US-AEP Philippines will assist the LCP to further enhance its capabilities to share local environmental best practices, facilitate LGU networking, and replicate environmental programs on the local level, and in the process enhance the LCP's ability to provide focused, mission-driven, and fee-based services to its members. In tandem with this effort, US-AEP Philippines will work through the LCP as a key partner in enhancing environmental activities with cities, including solid waste management, toxic and hazardous waste management, air quality improvement, and water resource management (see Program 4). Led by ICMA, US-AE /Philippines will provide assistance to the LCP on the following activities in FY 2003:

**Component 1: Help structure an LCP Environmental Unit.** Based on a request from LCP, US-AEP Philippines will explore creating an Environmental Unit within the League on a cost share basis that will house all environmental related programs and will operate independent of donor funding. US-AEP will provide technical assistance for structuring the unit, determining responsibilities, staffing, and hardware and software requirements. Grant funds may be used to fund the purchase of hardware and software and the salary of an Environmental Unit Manager for one year, after which this position will be internally funded. US-AEP Philippines will also assist LCP in establishing a fund account to allow for *fee-for-service* programs to be established. Within the Environmental Unit, assistance in setting up a Local Government Environmental Assistance Network (modeled after the ICMA [www.lgean.org](http://www.lgean.org)) may also be provided, which will serve as a central point of information exchange for all US-AEP related activities and between environmental associations, offices, departments and institutions of the Philippines.

**Component 2: Develop LGU Best Practices Transfer Program.** Based on the model provided by the City Management Association of Gujarat (CMAG) Best Practices Transfer Program, US-AEP Philippines proposes to work with the LCP to: 1) establish criteria for determining what constitutes a 'best practice'; 2) create an independent steering committee to evaluate best practice candidates; 3) select and document best practices; 4) formally recognize best practices through an awards program; and 5) share information and disseminate through multiple channels. The project will be a subcomponent of both the LCP's Information Management Office and the newly formed Environmental Center.

**Expected Results:**

- Lay the foundation for developing a performance measurement/best practices center within the League of Cities Philippines that allows for information sharing and networking with other local government associations in Asia.
- A fully-functioning and sustainable (i.e. free of donor assistance) Environmental Unit that is critically involved in coordinating environmental programs of LCP, in documenting and disseminating best practices to LCP-member cities and in developing / implementing environmental plans for LCP and its member cities.
- An increased number of local government units implementing improved environmental policies and practices as a result of the services provided by a strengthened LCP.

## **ANNEX 1: SUCCESS STORIES OF FY2002**

1. WEAP technical sessions: water and wastewater management
2. DENR Greening Program
3. Strengthening DOST's capability to control dioxin, furan, and dioxin-like compounds in the Philippines Improving health care waste management in the Philippines
4. Improving health care waste management in the Philippines
5. Environmental management system for Philippine cities
6. The greening of Iloilo City
7. PBE's waste exchange program goes nationwide
8. Community-based environmental management for Laguna de Bay
9. Improvement of water and sanitation conditions in Philippine cities
10. Tapping the local currency bond markets
11. Plastic lovers
12. US-AEP and SWAPP: Advocates of RA 9003
13. Vancouver Prepcom meeting
14. Environmental compliance inspection training workshop
15. Cleaner air for the Filipinos
16. Sharing experiences towards drafting the Philippines' Clean Water Act
17. Greening the Supply Chain - Nestle's Experience

## 1. WEAP TECHNICAL SESSIONS: WATER AND WASTEWATER MANAGEMENT

US-AEP through the NASDA grant helped strengthen the Water Environment Association of the Philippines (WEAP), a pioneer organization on waste and wastewater management in the Philippines. WEAP, with support from the Water Environment Federation (WEF) organized training workshops for water and wastewater professionals in the Philippines, established the WEAP technical resource library, and promoted technical exchange programs in the Philippines and in the United States.

Through the NASDA grant, WEAP seeks to: (i) reduce the negative environmental impacts of poorly trained or inexperienced wastewater treatment plant (WTP) personnel by publicizing successful and applied innovations in WTP operations, (ii) strengthen the relationships among WEAP, Indiana Water Pollution Control Association (IWPCA), and WEF, (iii) conduct specialized technical training to secure WEAP's position as a leader in disseminating training in wastewater treatment operations, (iv) obtain visibility from the technical workshops to increase WEAP memberships and strengthen WEAP as an environmental professional association, and (v) obtain visibility from the technical workshops to assist WEAP in its task of bringing wastewater treatment and water quality issues to the attention of the Philippine government.

WEAP conducted five technical seminars in FY 2002:

- Seminar on Wastewater Treatment Technologies and Updates on Environmental Rules and Regulation (January 31, 2002, Pasig City)
- Alternative Technologies for Water Purification Processes and Wastewater Treatment Methods and Safety Concerns (April 18-19, 2002, Baguio City)
- Domestic Wastewater Treatment Technologies and Updates on Relevant Environment Regulations (June 19, 2002, Manila)
- Equipment Selection and Operators Training Course for Wastewater Treatment Processes (September 3, 2002, Metro Manila/September 5, 2002, Cebu)
- Best Practices in Wastewater Treatment Processes (October 25, 2002)

WEAP conducted a workshop entitled "Technical Seminar on Alternative Technologies for Water Purification and Wastewater Treatment Processes and Safety Concerns" from April 18 to 19, 2002 in Baguio City. Through this workshop, treatment plant operators and personnel gained important information for improving operations. The skills, knowledge, and abilities of wastewater treatment plant operators often are significant environmental issues in countries with little experience in this sector. Operators lack information on how to improve, optimize, or upgrade their operations.

The WEAP Technical Session 3 focused on domestic wastewater treatment technologies and updates on relevant environment regulations. The session sponsored by WEAP, WEF-USA, US-AEP, and the Chamber of Real Estate and Builders Association (CREBA) was held June 19, 2002 at the Holiday Inn Manila. The session informed the 69 participants with updates on the clean water act, EIA, Engineering Geological and Geohazard Assessment (EGGA), and domestic wastewater treatment technologies.

## 2. DENR GREENING PROGRAM

The Department of Environment and Natural Resources (DENR) has embarked on a Greening Program aimed to integrate environmental concerns into DENR operations. DENR will not only set the tone and embrace a proactive approach in environmental management and consistently aim for

a sound and improved environmental performance but will also lead and influence other government agencies to embrace a similar advocacy.

The DENR Greening Program is an offshoot of a US-AEP/CTEM and DENR project on greening the supply chain in FY 1999-2000. US-AEP/CTEM helped DENR design and develop a phased program on green procurement or supply chain environmental management for DENR suppliers and contractors. With the integration of environment concerns into DENR's purchasing and supply system, the DENR is set to institutionalize the green program into its whole operations.

To disseminate the idea within the DENR system, a DENR Greening Program Workshop was held in Subic, Pampanga last December 5 to 7, 2001. During the workshop, the central office shared its plans and guidelines with the regional offices and attached bureaus and agencies. US-AEP assisted the program by funding a resource speaker who provided insights to U.S.-based green operations. The workshop resulted in the creation of action plans for the greening of the central, regional offices, and attached bureaus and agencies focusing on water and energy conservation, paper and materials conservation, solid waste management, air pollution management (anti-smoke belching), and emergency preparedness.

### **3. STRENGTHENING DOST's CAPABILITY TO CONTROL DIOXIN, FURAN, AND DIOXIN-LIKE COMPOUNDS IN THE PHILIPPINES**

With the signing of the Persistent Organic Pollutants (POPs) Treaty at Stockholm, Sweden for the proper management, reduction, and elimination of twelve POPs, the Philippines has to effectively comply with the provisions of the treaty. However, the Philippines' capability building for dioxin, furan, and dioxin-like compounds management is just in the process of starting. Unlike neighboring countries with inventory data, the Philippines is still in the process of starting an inventory for dioxin releases nationwide.

Recognizing the need for the country to develop local expertise on dioxin, furan, and dioxin-like compounds management, reduction, and elimination, the US-AEP fully funded the ITDI-DOST U.S. Study Tour on Dioxin, Furan, and Dioxin-Like Compounds. The study tour, held April 22 to 26, 2002, was an initial activity in the development of a scientific approach in the management of dioxin releases in the Philippines to include sampling, analysis, treatment, destruction, source reduction, and elimination of releases of more than 200 congeners of dioxin. The study tour aimed to address the effective enforcement of the treaty and assist the DOST to come-up with a comprehensive implementation plan for dioxin management, reduction, and elimination.

The study tour participants had practical training and site visits to different dioxin specialized industrial and service facilities, analytical laboratories, and US government agencies which introduced current management practices for the treatment, reduction, and elimination of dioxin and furan and the standard procedure and protocol for dioxin sampling and analysis adopted in the U.S. The study tour likewise provided opportunities for the establishment and strengthening of linkages with U.S. organizations, industries, and government agencies on dioxin management. It is also through the study tour that ITDI-DOST has strengthened their capability for the establishment of a dioxin laboratory in the country.

Activities undertaken by ITDI-DOST on the dioxin, furan, and dioxin-like compounds include the holding of the 1<sup>st</sup> National Workshop on Dioxin, Furans, and Dioxin-like Compounds where the methodology for the source inventory of these by-products were introduced and the conduct of source inventory of dioxins and furans nationwide. Future activities include the establishment of a

dioxin laboratory and the holding of the 2<sup>nd</sup> National Workshop on Dioxin, Furans, and Dioxin-like Compounds.

#### **4. IMPROVING HEALTH CARE WASTE MANAGEMENT IN THE PHILIPPINES**

With US-AEP's support, four representatives of the Philippines Department of Health (DOH) participated in a U.S. study tour on Health Care Waste management in April 2002. The study tour was conducted in response to the Philippines Clean Air Act, which stipulates that medical institutions and hospitals must phase out their use of medical waste incinerators by July 2003. The tour to California, New Jersey, and New York was designed to introduce viable alternative technologies to treat medical waste and provide information on policies and infrastructure needed to manage medical waste.

The participants saw first hand demonstrations of autoclave and microwave technology, the two most widely used non-burn technologies. They also gathered information on various medical waste management technologies. DOH expects to replace their current technologies based on the knowledge gained from this study tour.

The DOH also calls for the establishment of common waste management facilities for hospitals within clusters. US-AEP's assistance in coordinating visits to Stanford University Medical Center and Kaiser Permanente Hospital enabled delegates to learn about the formulation of regulations and practices governing the transport, packaging, and handling of medical wastes at these clusters. Stanford University Medical Center served as a good model for the Philippines because it illustrates that a single facility can cost-effectively service a cluster of hospitals, clinics or laboratories.

Meetings with the California Department of Health Services, New Jersey Department of Environmental Protection and EPA Region 2 provided an understanding of legislation, enforcement, and monitoring. Exposure to U.S. laws and regulations governing medical waste management both at the federal and state level will help the DOH revise their health care waste management manual. The revised manual should be completed in June 2003 and will be distributed nationwide.

#### **5. ENVIRONMENTAL MANAGEMENT SYSTEM IN PHILIPPINE CITIES**

US-AEP has promoted the adoption and implementation of an ISO 14001 based environmental management system (EMS) to 3 pilot cities namely Iloilo, Mandaue, and Tagaytay in FY 2001 and 2002. US-AEP/TSSC Manila provided a series of training programs on EMS for the pilot cities which consisted of a 7-day, 3 segment EMS training. The first 3-day session was an EMS awareness training where participants were introduced to EMS concepts and applications. Initial Environmental Reviews (IERs) were conducted for the chosen fenceline of the cities. The succeeding two sessions were working sessions where participants developed the EMS that fit their specific fencelines. Tagaytay City chose the public market and slaughterhouse, Mandaue City considered the public market and city hall, while Iloilo City chose the public market as fencelines for their IERs.

The goal of the US-AEP project is to provide a comprehensive framework that will sustain the environmental initiatives that have been started by the 3 cities. The EMS will serve as the framework for the management of air and water pollution, solid waste generation and disposal, and hazardous waste generation and disposal of the pilot cities. The EMS training provided by the US-AEP has resulted in the development of a Level 1 document for Mandaue and Tagaytay while Iloilo City had already developed its Level II document. The training not only promoted environmental awareness to the LGU participants but included the various stakeholders in their respective fencelines.



US-AEP developed and provided an EMS model for cities based on the experiences of the 3 pilot cities that can be used by other cities and municipalities in the Philippines.

## **6. THE GREENING OF ILOILO CITY**

Under the leadership of Mayor Jerry Treñas, Iloilo City is slowly emerging as the new green city in the Philippines. He volunteered his city to be a pilot city to the Mayors' Commitment Program, Pilot Phase launched in August 2001. The program under the initiative of Mayor Harris of Honolulu, Hawaii is tied with the Mayor's Asia-Pacific Environmental Summit (MAPES) to help mayors understand water and wastewater issues in their respective cities.

Under the auspices of the US-AEP, 5 local chief executives and representatives of 3 mayors were sent to the Asia-Pacific Urban Institute (APUI) Executive Seminar on Integrated Water Resources Management. With Mayor Treñas were the Mayors from Naga, Cebu, and Cabanatuan, the Provincial Governor of Palawan, and the representatives of the mayors of Calocan, Mandaluyong, and Muntinlupa. In this forum, the Philippine mayors along with other Asian counterparts formulated a plan of action for the management of water and sanitation in their respective municipalities. Mayor Treñas promised to come up with a sustainable development program for the rehabilitation of Iloilo River and the establishment of an effective water supply and drainage system for the City of Iloilo. He committed to: (i) establish a structural framework that would institutionalize the project through enactment and enforcement of local ordinances that would enhance its early implementation, (ii) promote a multi-sectoral arrangement for the protection and sustained development of the projects; (iii) provide adequate and quality water for the city's sustainable growth; and (iv) provide for an adequate drainage system.

Mayor Treñas' commitment and plan of action include working with a multi-sectoral group to establish a master plan. Baseline data will be collected for the river implementation program and drainage system during the first year, an integrated improvement and development plan will be formulated in the second year, and in the second year to the fifth year the master plan will be formulated. He is also set to establish an additional water supply facility for the first one and a half years and the expansion of its conveyance system to cover areas with no or inadequate supply for the next two years. Areas to be covered are three subdivisions in the Northeastern portion of the City and three depressed areas in central Iloilo City.

The immediate improvement of the Iloilo River is currently one of the most important environmental management concerns of the Iloilo City Government. This concern is embodied in the city's 1998-2010 Comprehensive Land Use Plan where policies and strategies on river rehabilitation, protection, and development have been defined through the environment sector. With its limited logistics and resources, the city government managed to pursue its initial preparation for river improvement planning with the creation of ad-hoc work structures. The city has already established the City Environment and Natural Resources Office by virtue of Regulation Ordinance No. 16 s-2000. The city has also managed to introduce development measures that included the partial relocation of informal settlers around the river, enforcement of protective zoning, organization of Barangay Fisheries and Aquatic Resources Management Councils, construction of the promenade, and the finalization of the City Environment Code which partly deals with waste management and pollution control along the critical water resource. IEC campaigns, dredging activities, annual river clean-ups, and removal of sunken debris, fish corrals and other obstructions have also been made to arrest the deterioration of the river and its immediate environs.

The city has recently organized a multi-sectoral council that would help oversee the planning and management of initiatives for the Iloilo River. Through Executive Order No. 34 s-2002 approved in May 29, 2002, the Iloilo River Development Council together with the Iloilo Business Club were mandated to prepare a Master Plan. All short term and long term initiatives relative to the river's immediate protection, rehabilitation, and development will be coordinated and carefully implemented. US-AEP through a TAF grant will help facilitate the preparation of the Iloilo River Development Master Plan and Urban Design.

## **7. PBE's WASTE EXCHANGE PROGRAM GOES NATIONWIDE**

The Philippine Business for the Environment (PBE) waste exchange program, which was established in 1994, recently launched regional nodes to expand its industrial waste exchange (IWEX) network. The new partners include the Laguna-based industry estates and Laguna Lake Development Authority (Laguna Node), Pollution Control Association of the Philippines Region VII (Cebu Node), Davao City Chamber of Commerce (Davao Node), and the Association of PHIVIDEA Industry Estates (Cagayan de Oro Node).

The establishment of regional nodes is an outcome of a US-AEP-funded Industrial Waste Exchange Study Tour held on October 29-November 7, 2001. Participants in the tour, designed to familiarize the PBE and its IWEX partners with practices on waste exchange, resource recovery and recycling programs, included Ms. Lisa Antonio, Executive Director of PBE and Mr. Jose Cariño of the LLDA.

From this experience, the PBE, with support from the Ayala Foundation and Ayala Center, then organized a recyclables collection event to coincide with the Earth Day Celebration in late April. At the same time, the LLDA /Laguna Industry Estates set up their collection stations at the Light Industry and Science Park I in Cabuyao, Laguna. The Davao City Chamber of Commerce held its event at the Victoria Plaza in Davao City. The focus was on the collection of recyclables generated by industrial facilities, hotels, government agencies, and schools. Buying stations were setup to redeem recyclables such as paper, old computers, electronic equipment, used lead car batteries, aluminum cans, and plastic polyethylene terephthalate (PET) bottles for cash.

The PBE reported that the recyclables collection event was able to collect 243.7 tons of recyclables to include paper, used lead-acid batteries, aluminum cans, PET bottles, and polystyrene. The 3-day event thus diverted about 5,321 m<sup>3</sup> of recyclable waste from the landfills and helped to prevent 168 tons of toxic substances from being released to the environment.

## **8. COMMUNITY-BASED ENVIRONMENTAL MANAGEMENT FOR LAGUNA DE BAY**

Located east of Metro Manila, Laguna de Bay is the largest fresh water lake in the Philippines with 21 tributaries flowing through six provinces, ten cities, and 66 municipalities. Over sixteen million people use the resources of the lake including residents, farmers, fishermen, industries, and businesses. Rapid industrialization, urbanization, and population pressure in the Laguna de Bay region had led to the serious degradation of aquatic and forest resources of the lake and its watershed.

Laguna Lake Development Authority (LLDA) is a regional regulatory authority that has jurisdiction over water pollution control, flooding, rapid population expansion, and conflicts over jurisdiction and control of the lake. In carrying out this mandate, LLDA has implemented innovative policies that served as important models for environmental management in the Philippines.

Since 1989, LLDA has organized River Councils based on a watershed planning approach to mobilize citizens and communities in promoting restoration of the lake, learned on a US-AEP study tour to the U.S. Of the 24 sub-basins around the lake, 18 have independent River Councils with separate charters and missions aimed at promoting awareness and undertaking clean-up and other activities in their communities. In addition, these councils have now come together to create a Federation of River Councils and established an environmental army drawn from the communities and mobilized by LLDA for clean-up around the lake.

LLDA has currently embarked on a three-year restructuring and strengthening plan that will improve its capability to manage the Laguna de Bay watershed through enhanced regulatory, technical, and management programs. The World Bank, under its Laguna de Bay Institutional Strengthening and Community Participation Project (LISCOP) will extend a Learning and Innovation Loan (LIL) to test the effectiveness of LLDA's regulatory and incentive-based tools including the promotion of an enhanced community-based environmental management program.

In support of LISCOP, US-AEP has been working with LLDA and the World Bank to expand LLDA capabilities in community-based environmental management. In 2002, under the Regulatory Dialogue, US-AEP and EPA implemented a series of integrated activities that enabled LLDA to strengthen its capabilities in community-based environmental protection through partnerships with agencies and organizations from the Chesapeake Bay. In June, six LLDA officials and representatives from river councils representing a community group, local government, and industry visited counterpart agencies and organizations from the Chesapeake Bay to exchange ideas and experience on community mobilization, action planning, funding options, grant-making, inter-governmental coordination, and watershed management.

Building on the observational program, LLDA, the Federation and US-AEP, organized a two-day international conference and workshop in August to further share experiences between Laguna Lake and Chesapeake Bay and develop an action plan for strengthening river council capabilities. Through exchange with experts from the EPA Chesapeake Bay Program, Alliance for the Chesapeake Bay, and Friends of Rappahannock, LLDA and river council representatives developed core strategies for improving interagency coordination, outreach, and sustainability.

Government counterparts from the Hanoi Department of Science, Technology and Environment, and Thailand's Pollution Control Department also attended the workshop, and will implement similar activities with the support of US-AEP in their countries. In fact, a representative from LLDA and an industry-based river council visited Thailand in September to share experience in support of the restoration of the Tha Chin River.

In addition, as a result of the workshop, the mayor of a municipality on the lake and his staff plan to visit the Friends of Rappahannock in Virginia to continue exchanges on best practices in community-based environmental management, funded completely by the LGU itself.

## **9. IMPROVEMENT OF WATER AND SANITATION CONDITIONS IN PHILIPPINE CITIES**

Under the auspices of the US-AEP, selected local chief executives and representatives of their respective water districts attended the Asia-Pacific Urban Institute (APUI) Executive Seminar on Integrated Water Resources Management in Hawaii in April 2002. The participants included mayors from Iloilo, Naga, and Cabanatuan, the Provincial Governor of Palawan, and the city administrators/engineers of Caloocan, Mandaluyong, and Muntinlupa.

The Philippine mayors, along with their Asian counterparts, formulated a plan of action for the management of water and sanitation in their respective cities. The following commitments were made:

Mayor Buenaventura Treñas, Iloilo City

- To establish a structural framework to improve and institutionalize water and sanitation projects
- To promote a multi-sectoral arrangement to develop sustainable projects
- Provide adequate and quality water for sustainable growth
- Provide an adequate drainage system.

Mayor Rey Malonzo, Caloocan City:

- To train constituents who are involved in the management of the water system and find ways to finance the proposed rehabilitation of facilities
- To free the government of additional burden in running the facilities by training consumers to manage the water system (which shall be eventually turned over to consumer cooperatives).

Mayor Julius Cesar Vergara, Cabanatuan City:

- To finish the W.B.- funded Phase One by March 2003 and Phase Two by March 2004 on the joint drainage sewerage wastewater treatment facility (dry weather flow interceptor).
- The water district will provide potable water supply to 54%-60% of the total city consumers.

Mayor Jesse Robredo, Naga City:

- To organize a Metro Naga Water Resources Council (MNWRC) as the institutional mechanism for Metro Naga Basin management
- To solicit local support
- To secure national government support for the undertaking.

Mayor Benjamin Abalos, Jr., Mandaluyong City:

- To relocate slum/illegal river settlers
- To construct medium rise dwellings with a twin pipe water system
- To develop Master plan to include parks & other viable commercial enterprises
- To convince owners of idle factory sites to follow this master development plan.

Mayor Jaime Fresnedi, Muntinlupa City:

- To provide an alternative to existing sewerage facility for at least 20% of depressed community (public toilets, twin pit toilet)
- To plant trees along the lake shore according to a completed feasibility study
- To make sustainable, management of public toilet will be turned over to a community cooperative on a user-pay basis.

## **10. TAPPING THE LOCAL CURRENCY BOND MARKETS**

A number of Philippine municipalities have undertaken successful bond projects, including Urdaneta, Boracay, Puerto Princesa City, Caloocan City, Tagaytay City, and Iloilo City. However, these projects are generally smaller revenue generating projects and floating municipal bonds for environmental infrastructure projects in the water, sanitation or solid waste sector are difficult.

To address the need for understanding and utilizing bond markets, US-AEP, PADCO, LGUGC, LCP, and USAID sponsored a February workshop "Environmental Infrastructure Finance for Local Governments: Tapping the Local Currency Bond Markets". The workshop introduced key financial

and technical principles necessary for the development of viable projects in solid waste, energy, and wastewater sectors. There were over 60 participants, representing national government, private investment banks, government financing institutions, LGUs, LGU associations from Indonesia, Thailand, and Vietnam, and other financial institutions.

Four priorities for developing domestic capital markets to support municipal bonds were discussed: (i) developing sound environmental policies, (ii) developing an institutional support structure, (iii) identifying, designing, and implementing projects, and (iv) implementing sound financial policies.

As a result of the workshop, the following activities are planned to promote the development of capital markets in the Philippines: (i) address the issue of LGU unfamiliarity and low appreciation of municipal bonds as an option for financing environmental projects, (ii) conduct detailed training/workshop on project development, feasibility study preparation, and packaging of solid waste management projects, (iii) collaborate with various capacity building projects on urban environmental management, (iv) develop technology guidebook on appropriate technologies for all types of environmental infrastructure projects, and (v) conduct an US observation tour for national government representatives, financial advisors, and other relevant players to study the US experience in order to formulate policy and institutional reforms needed to develop the bond market in the Philippines.

## **11. PLASTIC LOVERS**

With the rapid growth of the bottled water business, the volume of PET recyclables in Metro Manila has increased tremendously. In response to the Ecological Solid Waste Management Act of 2000, which identifies the development and use of biodegradable plastics and plastics recycling as Philippine government priorities, the PET Recycling Development Foundation was established in February 2000. The foundation, supported by the Department of Science and Technology (DOST) and the National Solid Waste Management Commission, plans to invest in a PET recycling plant and to establish, manufacture, and use new packaging products such as biodegradable plastics.

In support of the Foundation's plans, the US-AEP sponsored a Study Tour on Polyethylene Terephthalate (PET) Bottle Recycling and Natural Bio-Polymers in Biodegradable Plastics in March. The objectives of the tour were to assist in the establishment of a national PET recovery and recycling center, identify technologies for PET recycling, and to gain knowledge and information on new technologies that use natural-based polymers to develop biodegradable plastics.

US-AEP's assistance in coordinating visits to NAPCOR and the Georgia Recycles Coalition enabled the delegates to learn about the PET industry in the US and to develop innovative programs or educational components towards the goal of increasing recovery of PET plastics. The PET Recycling Foundation and NAPCOR signed a Memorandum of Understanding for future collaborations.

The Foundation has also formulated future plans and programs, including the development of a database on PET use and recovery; using Materials Recovery Facilities (MRFs) to increase PET recovery rates, and to maintain communications with recycling organizations to promote PET recycling. The Foundation's long-term goals include the establishment of a PET Recycling Center and the search for technical and financial assistance for laboratory equipment and analysis, suitable sorting technology, suitable washing technology, and suitable flake to pellet or flakes to finish product technology.

## 12. US-AEP AND SWAPP: ADVOCATES OF RA 9003

In November 1999, US-AEP along with the USAID-funded Governance and Local Democracy (GOLD) project assisted a number of mayors, professionals and NGOs to formally create the Solid Waste Management Association of the Philippines (SWAPP). This initiative grew from a US-AEP sponsored US Solid Waste Management Study Tour for Philippine mayors in August 1998. The mayors visited the office of the Solid Waste Association of North America and concluded that a similar organization could greatly help address solid waste management problems in the Philippines. In the three years since its creation, SWAPP has 200 members representing LGUs, professionals, NGOs, and academia.

In July 2000, Metro Manila's garbage crisis was capped by a tragedy that killed more than 150 scavengers when the Payatas dumpsite in Quezon City collapsed due to heavy rains. That event escalated the challenge among LGUs to provide a sustainable solution to the garbage problem to avoid future tragedies. Republic Act 9003, known as the Ecological Solid Waste Management Act of 2000, provided a legal and technical framework for LGUs to implement a solid waste management system. The law provides for the establishment of an integrated solid waste management system (ISWM) for all LGUs, including the closure of existing open dumpsites and shifts to controlled dumpsites and eventually to sanitary landfills. With over 1,600 municipalities and cities in the Philippines, the enactment of the law provided an opportunity for SWAPP to assist local governments in developing ISWM programs.

In order to cope with the growing demand for technical assistance from LGUs and other organizations, US-AEP through a NASDA grant supported the development of SWAPP as a resource center on SWM and related topics. Initial materials on good practices by various LGUs were already provided by the USAID funded GOLD project and SWAPP had begun compiling materials on local initiatives or good practices on SWM during the 1<sup>st</sup> and 2<sup>nd</sup> SWM National Conference. These materials were developed into a Resource Booklet for reproduction and distribution to the LGUs and other interested SWM practitioners.

The GOLD project has also donated to SWAPP 14 modules on ISWM. SWAPP, through the NASDA grant had translated the documents into a manual that will serve as a helpful guide to the LGUs and other institutions in the country. Information about the available technologies in the US will also be made available to SWAPP members by tapping the existing network and databases of US-AEP to include the ETNA, FCS, and Buy America Program. The information will be made available through the SWAPP website and SWAPP will proactively gather brochures of American technologies. SWAPP had developed a web-based database on SWM that will facilitate information exchange, inter-LGU collaboration and mutual help in SWM.

To be able to address the growing demand for trainings from the LGUs, SWAPP had expanded its existing pool of experts from 10 member volunteers to 60 trainers. US-AEP through a TSSC grant supported the conduct of 5 modules of trainers' training wherein 10 SWAPP scholars were trained per module. After the conduct of the trainers' training, the 50 scholars became part of SWAPP's pool of experts.

After the training, each SWAPP scholar was required to conduct a training seminar once every quarter for the next 5 years. Specifically, the scholars who were trained under the 5 modules (20 scholars from Luzon, 15 from the Visayas, and 15 from Mindanao) conducted training seminars at least every quarter as part of their commitment to the US-AEP/TSSC grant. They are also involved in other capability building activities of various donor agencies such as the USAID-EcoGovernance Project, CIDA-Local Government Support Program, ADB-Metro Manila Solid Waste Management Program, and UNDP-Community Based Solid Waste Program.

### 13. VANCOUVER PREPCOM MEETING

To allow local government units (LGUs) to formulate a local government “point of view” for presentation in the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, the International Council for Local Environmental Initiatives (ICLEI) organized the Vancouver PrepCom Meeting held in Vancouver, Canada last February 25 to March 2, 2002.

To support the undertaking, US-AEP sponsored 8 mayors from the Philippines, India, Indonesia, Thailand, and Sri Lanka to the meeting. Mayor Tolentino of Tagaytay City, Philippines was asked to chair a session on *Getting Out the Message in the Regions* for the Asia-Pacific Region.

US-AEP participants were able to identify and evaluate concrete, strategic opportunities for the implementation of Agenda 21 and the Rio Conventions through local level action during the next decade and to secure the support of the international community for specific strategies and mechanisms to realize these local opportunities. The participants from India have embraced what they term “SMART” Civic Administration: Simple, Moral, Accountable, Responsive, and Transparent. As evidence of the determination of city officials to implement environmental improvements throughout India, Hyderabad has allocated some 40 million rupees to the establishment of a Centre for Urban Management where officials of urban centers will receive training in subjects such as accounting, budgeting, and taxation.

The Philippine delegates expect to direct their message broadly to mayors, the media, NGOs, industry, and the urban poor towards sustainable development and devise strategies for local development. They also intend to continue environmental assessment activities already begun and advocate for the formulation of local environmental codes.

### 14. ENVIRONMENTAL COMPLIANCE INSPECTION TRAINING WORKSHOP

A regional training workshop on environmental compliance inspection was held in Manila, Philippines on May 21 – 24, 2002, as part of US-AEP’s ongoing efforts to promote capacity building through regional training and professional networking. The workshop was hosted by the Department of Environment and Natural Resources (DENR) in coordination with the USEPA and US-AEP. Participants included inspectors and investigators responsible for conducting environmental compliance inspections for these agencies: the Philippine DENR’s central and regional offices; Vietnam National Environment Agency, Ministry of Science, Technology, and Environment; Thailand Pollution Control Division, Ministry of Science and Technology; the Philippine Department of National Defense; and the US Department of Defense.

The training was designed to teach government regulatory inspectors to perform compliance evaluations and collect evidence of violations in preparation for potential legal action. Instructors consisted of a team who completed a similar training program in Malaysia in 2001. This initiative is part of an approach in which a first training will be delivered in one Asian country to include multi-country participants, and a follow-up training is to be held in a second country, to include an additional training-the-trainer component for a selected cadre of regional trainers selected from the first course.

U.S.EPA was represented by Tom Maslany, an environmental engineer/manager (30 year veteran in enforcement), Davis Jones an environmental scientist/inspector with 11 years in enforcement and inspector training, and Carolyn Barley, Philippine Program Manager. They conducted a one-day

course for facilitators on May 20 to a multi-country team of 12 people before the start of the training workshop. A manual on the key points and general instructions for facilitating served as a guide for introducing the course.

By drawing heavily on group participation, the course generated tremendous sharing of experiences particularly in collecting evidence and sampling analysis by participants from the Philippines, Vietnam, Thailand and United States. A field trip to three industrial sites at the Clark Special Economic Zone in Mabalacat, Pampanga provided the participants valuable experience in on-site compliance inspection. The class was divided into three teams for different inspections and each of the team made a presentation to the class the following day for critique and recommendations on technique.

As a result of the training workshop, the senior management of the Environmental Management Bureau of the DENR will utilize the course manual and handouts to develop a Philippine version of an Environment Compliance Inspection Manual. In addition, one of the Philippine regional directors of the DENR conducted a similar inspection training workshop for her staff.

## **15. CLEANER AIR FOR THE FILIPINOS**

In support of the Philippines' Clean Air Act, US-AEP had supported various activities to promote for a cleaner air for the Filipinos. US-AEP in coordination with the Asian Development Bank (ADB) hosted a videoconference on "Industrial Air Emissions Project Opportunities in The Philippines" on June 6, 2002. US participants in the videoconference gathered to learn about the ADB's \$25 million loan program for the purchase and installation of equipment to reduce air emissions in the Philippines. The US companies also learned about specific project opportunities and technology needs aimed at furthering compliance with the Philippine Clean Air Act.

The Philippine participants included Land Bank of the Philippines, Department of Environment and Natural Resources, Air & Waste Management Association (A&WMA) Philippine Section and various local firms. Over 25 Filipino participants attended the videoconference to meet the 6 US suppliers of state-of the-art industrial pollution emissions control equipment and other reduction technologies. As a result of the videoconference, 15 of the Filipinos and all US companies confirmed participation to another US-AEP supported activity, the A&WMA Annual Convention in Baltimore from June 24 to 26, 2002.

A total of 28 delegates from the Philippines participated in the A&WMA's 95<sup>th</sup> Annual Conference and Exhibition of Air and Waste Management in Baltimore, Maryland. All delegates utilized the US-AEP's pre-arranged one-on-one meeting service which resulted to over 100 arranged meetings between the US suppliers and the Philippine delegates. The one-on-one meetings was an effective tool in matching the Filipino's needs of air pollution control equipment, air filters, treatment for solid and hazardous wastes, and pollution control prevention technologies with US suppliers.

## **16. SHARING EXPERIENCES TOWARDS DRAFTING THE PHILIPPINES CLEAN WATER ACT**

The Committee on Ecology of the House of Representatives is presently drafting the "Philippine Clean Water Act" whose purpose is to prevent, control, and abate water pollution by applying both command and control regulatory methods with economic instruments. As drafted, the new statute provides for a water quality management system, institutional mechanisms, incentives program, and liability and penalty provisions, including citizen suits.



In June 2002, US-AEP organized an observational program to the U.S. to strengthen the understanding of the Committee on Ecology in water pollution control law at the U.S. federal, state, and local levels with an emphasis on the Clean Water Act and its legal and institutional framework, standards, technology solutions, enforcement, and compliance programs.

Based on meetings with the U.S. Congress, EPA Office of Water and Office of Enforcement, Maryland Department of Environment, Natural Resources Defense Council, George Washington University Law School and other relevant government agencies and organizations, the Committee modified their draft law to incorporate U.S. best practices applicable to Philippines pollution control regulatory system. One example of the U.S. regulatory approach adopted by the Philippines is the incorporation of TMDL (total maximum daily load), which is a regulatory strategy for ensuring that a receiving body meets water quality standards.

The Philippine Clean Water Act is expected to be passed into law by 2003.

**17. GREENING THE SUPPLY CHAIN - NESTLE’S EXPERIENCE**

US-AEP provided vital support to the GSC program of Nestle Philippines, Inc., thus becoming one of the sources of knowledge capital on EMS for Nestlé’s environmental officers and its pioneering groups of business partners. US-AEP trained Nestlé’s environmental officers and about 100 technical and management personnel of its suppliers on EMS concepts, development, and applications. US-AEP has also been significantly involved in the conduct of initial environmental reviews (IERs) in the facilities of Nestlé’s business partners. In addition, US-AEP contributes technical materials and is often a resource presenter at the company’s quarterly environmental forum. US-AEP has shared materials on waste minimization in food processing industries and energy management and conservation practices at the quarterly environmental forum, as well as updates on trends in greening the supply chain and energy auditing concepts and practices. The following table shows the specific results of Nestle’s greening the supply chain initiative.

<b>Business Partners</b>	<b>Accomplishments</b>
Aliw Alexis Farms Inc.	Conducted environment awareness training for all its employees; initiated a waste reduction program
Antonina Industrial Corporation	Instituted waste reduction and segregation program; acquired environmental compliance certificate (ECC)
Central Azucarera Don Pedro	Established environmental performance indicators (EPI); implemented solid waste segregation program; expanded waste treatment plant; on-going research & development to discover environment-friendly materials it can use in its operations
Cocoa Specialties Inc.	Acquired environmental compliance certificate (ECC); identified priority aspects and impacts; set up objectives & targets in priority areas; established supporting environmental management programs; conducted tests on its boilers to meet Clean Air Act requirements together with the fuel supplier
Cygnus Industries Inc.	Installed wastewater treatment for cylinder dechrome washings; implemented solid waste segregation and recycling programs; started using Power Management System / software- hardware set up to closely monitor operation’s energy performance on a 24-hour, 7-days-a-week basis
Design Packaging Industries	Designed & built its own wastewater treatment facility; instituted improved operational planning that resulted in fewer shutdowns and conservation of resources; implemented water conservation measures including installation

<b>Business Partners</b>	<b>Accomplishments</b>
	of metering devices in major areas; has acquired ECC.
Dowell Container & Packaging Corporation	Implemented solid waste segregation; instituted waste minimization programs that includes water and energy conservations; reduced solid wastes generation resulting in reduction of collection trips from 4 to 2 per week as a result of its solid waste management program.
Fortune Packaging Corporation	Started using diesel instead of bunker fuel for the boilers; instituted the "ISO Hour" starting Sept. 2001 where all personnel gather to discuss environmental issues such as waste segregation and waste monitoring at each department
Megapack Container Corporation	Implemented waste minimization program, recycling of used ink and improved waste water treatment operations; installed skylights in the production and warehouse areas to save on electricity; implemented solid waste segregation program; provided oil spill containment at the bunker receiving and storage areas
Pteron Corporation	Environmental aspects and impacts identified; objectives and targets set; environmental management programs developed; EMS documentation on-going; reduced solid waste generations by 2 tons per month through solid waste management program; water conservation program yielded 50% reduction in water consumption; conducted on-going smoke-belching tests on all its vehicles; provides customers with oil spill emergency response training and fuel efficiency technical services
Precision Printing Inc.	Switched to environment-friendly and food-grade ink; saved Php 100,000 per month on electric bill by installing capacitors to improve power factor
RightPak	Established partnership programs with major suppliers to address environmental and safety issues including technology transfer; achieved compliant air emissions by using magnetic fuel treatment for boilers' burner nozzles; shifted from freon to water as medium in vapor absorption chillers resulting in reduced energy usage from 106 KW down to 6 KW.
San Miguel packaging Products	Installed afterburners in the combustion of VOCs; generated cost savings from recycling / re-use of oil, paints, cullets, tin, aluminum, carton boxes as well as from water conservation program; conducted environmental training for the management committee members and rank-and-file employees.
Papercon Philippines	Installed skylight to save electricity; uses water based inks
Eastern International Plastic Packaging Corporation	Has an on-going project in maximizing use of resins
Pilipinas Shell petroleum Corporation	Reduced from 50 to 2 types of maintenance grease / chemicals after thorough review of each chemical's MSDS; conducted risk assessments of business partners on handling and storage of oil products;
Unibox Packaging Corporation	Started integrating its EMS with its QMS