Regional Inspector General for Audit
Manila

AUDIT OF THE UNITED STATES ASIA ENVIRONMENTAL PARTNERSHIP PROGRAM

Audit Report No. 5-398-00-001-P
March 24, 2000

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Ramon Magsaysay Center Building
1680 Roxas Boulevard, Malate 1004
Manila, Philippines

Fax Nos.: 632-521-524
632-521-481
Tel. No. 632-522-441

March 24, 2000

MEMORANDUM FOR EXECUTIVE DIRECTOR, US-AEP, PETER KIMM

FROM: Acting RIG/Manila, Nathan S. Lokos

SUBJECT: Audit of the United States Asia Environmental Partnership Program, Report No. 5-398-00-001-P

This is the final report on the subject audit. We reviewed your comments to the draft report and included them in their entirety as Appendix II. This report contains eight recommendations. Based on your comments, a management decision has been reached on all eight recommendations. Information related to closing the recommendations should be provided to USAID's Office of Management Planning and Innovation, with a copy to us.

I appreciate the outstanding cooperation and courtesies extended to my staff during the audit.

EXECUTIVE SUMMARY

Background

Nowhere are the effects of pollution more visible than in developing countries in Asia. This environmental deterioration, caused by rapid Asian industrialization and urbanization, threatens human health, economies, and even entire ecosystems. To help address this problem, the U.S. federal government formed the United States Asia Environmental Partnership (US-AEP) in 1992.

Led by the U.S. Agency for International Development (USAID), US-AEP attempts to address environmental degradation in Asia by mobilizing U.S. environmental experience, technology, and services. US-AEP relies on commercial strategy and financial support from the U.S. Department of Commerce and environmental expertise from the U.S. Environmental Protection Agency. The US-AEP seeks to build long-term relationships among American and Asian private businesses, government agencies and nonprofit organizations.

US-AEP works primarily in five USAID presence countries (Bangladesh, India, Indonesia, the Philippines, and Sri Lanka) and seven non-presence countries (Malaysia, Singapore, South Korea, Taiwan, Thailand, Vietnam, and also Hong Kong). US-AEP is headed by a Secretariat located within USAID's Asia and Near East (ANE) Bureau in Washington, D.C.

Audit Objectives

As part of its Fiscal Year 2000 Audit Plan, the Office of the Regional Inspector General, Manila audited the US-AEP program to answer the following objectives:

- How were US-AEP funds expended?
- How is the US-AEP organized and managed?
- Have US-AEP activities progressed toward their stated objectives?
- Have US-AEP activities been coordinated with USAID mission environmental activities and other regional activities?

Results of Audit

The US-AEP expends funds on a broad range of activities using a vast number of partners and funding mechanisms. US-AEP's cumulative expenditures through December 31, 1998 total $103.4 million. The countries with the largest US-AEP activities and expenditures are Indonesia, the Philippines and India, respectively. (page 3)

The US-AEP program is headed by a Secretariat that has overall responsibility for the program. The US-AEP Secretariat has recently instituted a more formal structure to its program by (1) adopting four program management areas in March 1999, and (2) requiring country work plans starting fiscal year 1999. (page 6)

The audit found that for the activities tested, US-AEP activities were generally making progress toward their stated objectives. However, in some cases, it was questionable or too early to tell whether the activities would result in lasting progress and/or desired results (i.e., sustainable partnerships, U.S. sales, and reduction in pollution). (page 12)

US-AEP activities have generally been coordinated with USAID mission environmental activities and other regional activities where applicable. The form and extent of coordination varies with the other parties ranging from good/strong coordination to "loose" or "coincidental" coordination. (page 21)

Nevertheless, the audit found several areas needing attention, of which the more significant areas are highlighted as follows:

- A good internal control environment requires an organization to clearly define authorities and responsibilities among its units/individuals. The US-AEP program has approximately 50 individuals in 12 Asian countries, all working on various activities. The US-AEP program does not have comprehensive formal policies and procedures that clearly define authorities, roles and responsibilities among the various parties, including who has lead authorities and responsibilities in the field. As a result, individuals and partners are sometimes unclear of their and others' authorities, roles and responsibilities. Furthermore, this lack of clear authorities, roles and responsibilities could lead to duplication of effort, inefficiencies, and lost synergies. (page 7)

- In implementing major U.S. legislation on performance measurement and reporting, i.e., the Government Performance and Results Act, the U.S. Congress is stressing that agencies need to measure and report the direct results of their programs. Although US-AEP collects data on US-AEP-assisted sales, which we consider a very direct measure of program impact, US-AEP does not use this measure in its formal results

framework/reporting system. Instead, US-AEP uses a measure that goes well beyond what can be reasonably attributed to the US-AEP program, i.e., total sales and investments in U.S. environmental goods and services to Asia. (page 16)

- The US-AEP program does not have definitive guidelines on cost sharing that participants or their organizations must pay for an exchange activity, e.g., sending Asians to the United States to learn about U.S. technologies or sending Americans to Asia to pursue trade possibilities. Rather, US-AEP determines the amount of cost sharing on a case-by-case basis. As a result, cost sharing among the participants fluctuates widely, e.g., from not paying any costs to paying as much as 73 percent of the costs. (page 18)

- Several US-AEP program documents envisioned substantial contributions from other U.S. government agencies, private sector concerns and Asian governments as well as privatization of all or part of the program's functions. Although the program has had some success in leveraging funds, the amount of contributions from others is substantially below what was initially envisioned and no privatization of the program's functions have occurred. (page 20)

- US-AEP's coordination with other entities (e.g., USAID missions) takes many forms. In some cases, US-AEP has a general Memorandum of Understanding. In other cases, US-AEP uses a joint work plan that details the specific joint activities and funding commitments by both parties. In yet other cases, the coordination is performed during US-AEP's annual country work plan exercise. We believe that US-AEP should review its methods for coordination and develop a standardized method that maximizes coordination with the other parties. (page 24)

Audit Recommendations

This report contains recommendations related to the above areas that are intended to strengthen the US-AEP program. Specifically, they call for the US-AEP Secretariat to:

- Develop a US-AEP policies and procedures handbook/guidebook that (1) clearly defines authorities, roles and responsibilities among the various parties, including who has lead authorities and responsibilities in the field, and (2) specifies policies, procedures and responsibilities for each of its main processes and systems (page 7);

- Establish Regional and/or Country Coordinators in the field to oversee US-AEP activities (page 7);

- Include US-AEP-assisted sales rather than all U.S. environmental sales to Asia as a performance measure in its formal results framework/reporting system to measure the direct impact of the program (page 17);

- Establish more definitive guidelines on cost sharing that would require minimum cost sharing standards (excluding salaries) for all exchange participants (page 19);

- In coordination with the Department of Commerce, develop a strategy, with detailed action plans, targets and timeframes, to become more self-sustaining (by charging additional user fees, by leveraging more funds, and/or by privatizing program areas) (page 20); and

- Develop a standardized method for coordination with USAID Missions, Global Bureau's Environmental Offices, and other regional entities that would, to the extent possible, include detailed funding commitments from both parties for joint activities (page 25).

Management Comments and Our Evaluation

In response to our draft report, the US-AEP Secretariat submitted written comments that are included in their entirety as Appendix II. The US-AEP Secretariat concurred with the report's recommendations and believes implementing the recommendations will strengthen the management of the program. In particular, the US-AEP Secretariat plans to prepare a US-AEP policies and procedures handbook by April 2001, establish regional or country coordinators in Asia, and propose to the ANE Bureau that it accept US-AEP-assisted sales as a new performance measure in its formal results framework/reporting system. Based upon its comments, we consider a management decision has been made on all eight recommendations. The recommendations can be closed when the US-AEP Secretariat provides evidence to USAID's Office of Management Planning and Innovation that it has implemented its planned actions.

Office of the Inspector General
March 24, 2000

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INTRODUCTION

Background

Nowhere are the effects of pollution more visible than in developing countries in Asia. This environmental deterioration, caused by rapid Asian industrialization and urbanization, threatens human health, economies, and even entire ecosystems. To help address this problem, the U.S. federal government formed the United States Asia Environmental Partnership (US-AEP) in 1992.

The US-AEP brings together a variety of U.S. private and public sector experiences with Asian countries trying to solve serious and growing environmental problems. Led by the U.S. Agency for International Development (USAID), US-AEP attempts to address environmental degradation in Asia by mobilizing U.S. environmental experience, technology, and services. As an inter-agency program, US-AEP relies on commercial strategy and financial support from the U.S. Department of Commerce (DOC) and environmental expertise from the U.S. Environmental Protection Agency (EPA). As a public-private program, US-AEP seeks to build long-term relationships among American and Asian private businesses, government agencies, and nonprofit organizations.

US-AEP has its own goals and reports its progress toward its goals annually in the results review and resource request (R4). US-AEP's overall goal is to have a "clean revolution" in Asia by impacting on key drivers of the clean revolution.[1] US-AEP's sub-objectives, called intermediate results, are to increase (1) government public sector pressure, (2) corporate and private sector pressure, (3) regional pressure, (4) international institutional partnership, and (5) trade and transfer of clean technology.

US-AEP works primarily in five USAID presence countries (Bangladesh, India, Indonesia, the Philippines, and Sri Lanka) and seven non-presence countries (Hong Kong, Malaysia, Singapore, South Korea, Taiwan, Thailand, and Vietnam). US-AEP is headed by a Secretariat located within USAID's Asia and Near East (ANE) Bureau in Washington, D.C.

[1] A review of US-AEP's R4 by the Asia and Near East Bureau in July 1998 mentioned that US-AEP's overall goal and sub-objectives were somewhat vague and did not clearly express the direction or degree of results expected.

Audit Objectives

As part of its Fiscal Year 2000 Audit Plan, the Office of the Regional Inspector General, Manila (RIG/M) audited the US-AEP program to answer the following objectives:

(1) How were US-AEP funds expended?

(2) How is the US-AEP organized and managed?

(3) Have US-AEP activities progressed toward their stated objectives?

(4) Have US-AEP activities been coordinated with USAID mission environmental activities and other regional activities?

Appendix I contains the scope and methodology for this audit.

Acknowledgements

RIG/M greatly appreciates the outstanding cooperation and assistance provided by the US-AEP Secretariat and its partners during the audit. Their assistance demonstrates their dedication to the US-AEP program and their willingness to continue to improve the program. Several of the findings and recommendations in the report were the result of suggestions made by or input received from various US-AEP individuals. A special thanks to Mr. Richard Sheppard, US-AEP Deputy Executive Director, who was the primary contact person for the audit.

REPORT OF AUDIT FINDINGS

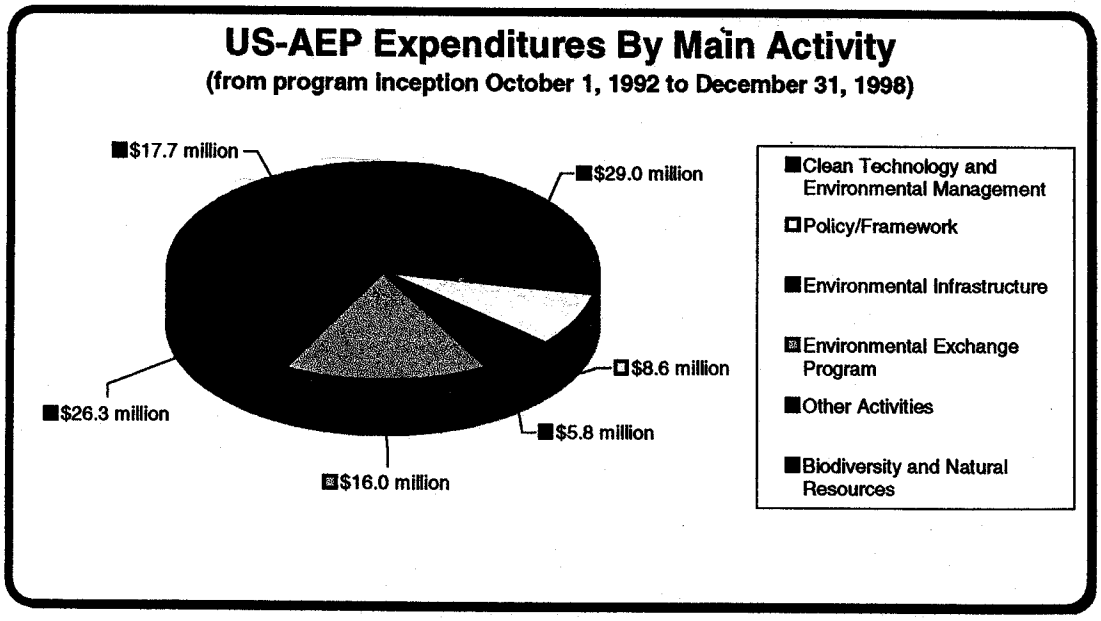
Objective 1: How were US-AEP funds expended?

The US-AEP program works primarily in 12 countries in Asia and expends funds on a broad range of activities using a vast number of partners and funding mechanisms. Discussions of how US-AEP funds are expended—first by type of activity, then by country, and finally by funding component (i.e., contract, agreement)—follow.

Funds Expended by Type of Activity

A US-AEP activity can range from setting up and financing an exchange, e.g., sending a group of Indian municipal leaders to the United States to learn about waste management techniques, to supporting national environmental policy agendas in Asia.

US-AEP's cumulative expenditures through December 31, 1998, total $103.4 million. As shown in the following chart, US-AEP's financial records breakdown this total into six main program activities.[2]



[2] Amounts in chart are unaudited.

In an effort to better coordinate and manage the various program activities and components, the US-AEP Secretariat adopted four program management areas in March 1999 as follows:

- Improved Corporate Environmental Management[3] – These activities seek to improve the environmental performance of Asian industry. An example of an activity is developing national accreditation bodies in Asia to certify that industrial sites have instituted environmental management systems that meet international standards.

- Increased Technology Transfer – US-AEP technology transfer activities attempt to match Asia's environmental needs with U.S. products and services. Examples of technology transfer activities include (a) identifying and disseminating trade leads to U.S. businesses exporting environmental products, (b) arranging business exchanges for product promotion, and (c) awarding grants.

- Improved Public Policy and Regulation – US-AEP's policy activities support an industrial and urban transformation in Asia. An example is promoting financial institutions to practice financial due diligence by incorporating environmental factors in their lending criteria.

- Improved Urban Environmental Management – US-AEP's Urban Program is designed to help Asian cities transform their management systems to ensure sustainable urban environments. Some sub-activities are reaching out to key government decision-makers and promoting best practices in urban policy and environmental management.

Funding Expended by Country

The US-AEP program began tracking US-AEP expenditures by country from the third quarter of fiscal year 1993. The relative percentage of expenditures for each country through December 31, 1998, is depicted in the chart on the next page.[4]

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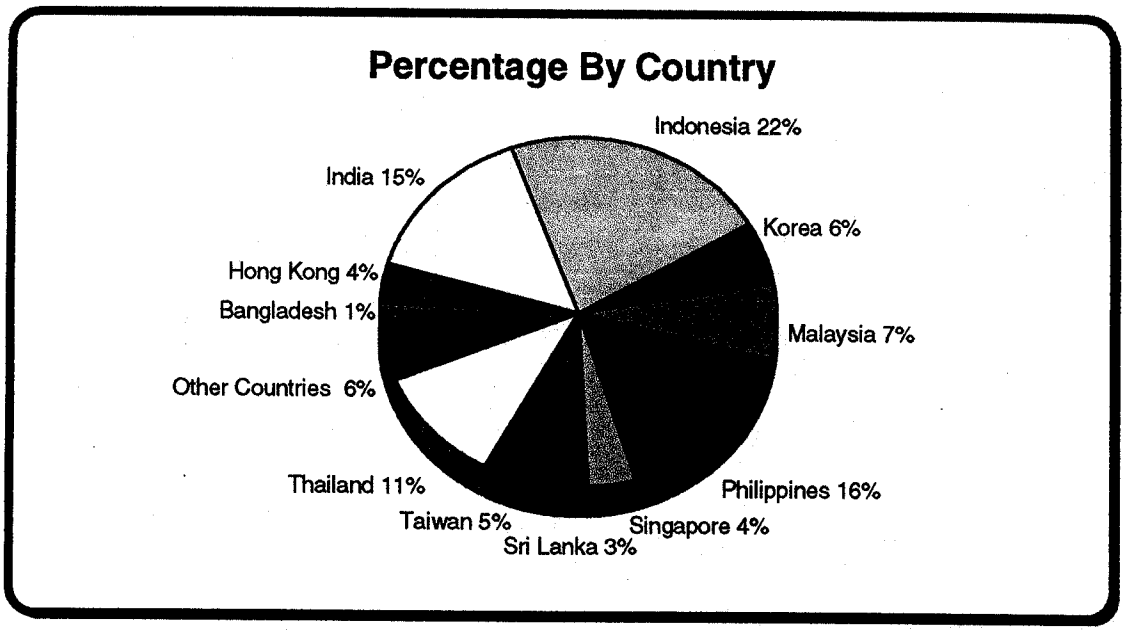
[3] This is also sometimes referred to as Clean Technology and Environmental Management (CTEM).

[4] Amounts unaudited.



As one can see from the chart, the countries with the largest US-AEP activities and expenditures are Indonesia, the Philippines and India, respectively.

Funding Expended by Component

The US-AEP program has a multitude of components. The program has three main contractors: (1) International Resources Group (IRG), which is the Technical Support Services Contractor (TSSC) and performs many administrative duties of the program, (2) Louis Berger International, Inc., which performs many of the activities related to promoting environment management systems with Asian industries, and (3) Institute of International Education (IIE), which handles US-AEP's environmental exchange program, e.g., business exchanges and training.

There are also inter-agency agreements with U.S. Government agencies such as the Department of Commerce (DOC) and the Environmental Protection Agency (EPA). For example, under the agreement with DOC, USAID and the United States Foreign Commercial Service (FCS) jointly fund environmental and commercial specialists, called technology representatives, in eleven Asian countries. As will be discussed later in this report, these technology representatives play an important role under the program.

The US-AEP also has partnership arrangements with U.S. state agencies–such as the National Association of State Development Agencies (NASDA)–to provide grants to Asians and Americans for facility tours, product demonstrations, business meetings, and

trade shows.

A more complete listing of US-AEP components and partners are at Appendix III.

Need to Adjust Financial Records to Reflect the New Program Categories

U.S. legislation and regulations[5] require agencies to associate funding/costs with program results to measure the efficiency and effectiveness of their programs. As mentioned above, US-AEP adopted four program management areas in March 1999. However, these new program categories of Corporate Environmental Management, Technology Transfer, Public Policy and Regulation, and Urban Environmental Management are different from the main program activities presented in US-AEP's financial records. For example, as shown above, US-AEP's financial records through December 31, 1998[6] list the Environmental Exchange Program as a main program activity. The Environmental Exchange Program is not listed as a separate category under the new program management structure, but rather it supports one or more of the new program areas. To facilitate managing by the new program areas, e.g., associating program results with funding/costs to determine the efficiency and effectiveness of US-AEP programs, we recommend the following:

> **Recommendation No. 1: We recommend that the US-AEP program adjust its financial reporting to reflect the new program categories.**

Objective 2: How is the US-AEP organized and managed?

The US-AEP program is headed by a Secretariat that has overall responsibility for the program. The Secretariat is located within the ANE Bureau in Washington and has nine individuals, including the Executive Director. The Executive Director reports to the Assistant Administrator for the ANE Bureau.

The US-AEP Secretariat has recently instituted a more formal structure to its program. In addition to adopting the four program areas in March 1999, it began requiring country work plans starting fiscal year 1999. Also, in its annual meeting in October 1999, US-AEP reviewed its draft country work plans for fiscal year 2000. These draft work plans are an improvement over the previous year's work plans in that they include all activities planned in the countries by all partners for the year and were the result of a more collaborative effort among the partners. Also, for each activity, they designate the lead partner and support partners.

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[5] The Government Performance and Results Act and the Government Management and Reform Act's implementing regulations.

[6] At the time of the audit, US-AEP had not yet prepared its financial statements for 1999.

Although the recent changes to the program are positive steps, we believe more needs to be done to strengthen US-AEP's organizational and management structure. As mentioned in the previous audit objective, the US-AEP program has a multitude of components and implementing partners, which makes it difficult to manage. A more detailed discussion follows on the organization and management structure of the program, including some problems noted in clearly defining roles, responsibilities and authorities among the parties.

Need for Formal Policies and Procedures That Clearly Delineate Authorities, Roles and Responsibilities

A good internal control environment requires an organization to clearly define authorities and responsibilities among its units/individuals. The US-AEP program has many individuals and partners both in Asia and in Washington working on various activities. Nevertheless, the program does not have comprehensive formal policies and procedures that (1) clearly define authorities, roles and responsibilities among the various parties, including who has lead authorities and responsibilities in the field, and (2) specify each of its main processes and systems. US-AEP Secretariat officials stated that they had contemplated preparing a US-AEP policies and procedures handbook, but that due to other pressing priorities, they did not prepare one. As a result, individuals and partners are sometimes unclear about their and others' authorities, roles and responsibilities. Furthermore, this lack of clear authorities, roles and responsibilities could lead to duplication of effort, inefficiencies, and lost synergies.

> **Recommendation No. 2: We recommend that the US-AEP Secretariat develop a US-AEP policies and procedures handbook/guidebook that (1) clearly defines authorities, roles and responsibilities among the various parties, including who has lead authorities and responsibilities in the field and in Washington, D.C.; and (2) specifies policies, procedures and responsibilities for each of its main processes and systems (e.g., exchanges, international travel, obtaining country clearance, country workplans, reporting, entering and following up on trade leads, reporting and validating assisted sales, any procedures related to intellectual property rights). This handbook/guidebook should then be disseminated to all individuals/partners.**

> **Recommendation No. 3: We recommend that the US-AEP Secretariat establish Regional and/or Country Coordinators in the field to oversee US-AEP activities.**

The U.S. General Accounting Office's *Standards for Internal Control in the Federal Government* require that an organization clearly define authorities and responsibilities among its units/individuals. Although the US-AEP issues ad hoc memos or e-mails describing a certain policy, procedure or responsibility, it does not have comprehensive

formal policies and procedures that clearly delineate authorities, roles and responsibilities among the various parties both in the field and in Washington.

Who Leads Whom in the Field?

The program has approximately 50 individuals in 12 Asian countries, all working on various components of the program. There are:

Technology Representatives

USAID and the DOC/FCS jointly fund 14 technology representatives along with their assistants in 11 countries. These technology representatives are personal services contractors and are supervised by and report directly to their respective senior commercial officer of the FCS in the particular country. These technology representatives appear to be the focal point in the field. They are heavy contributors to the technology transfer effort and are also tasked to support other partners' work.

In interviews with various individuals/partners, including some technology representatives, they mentioned that the technology representatives are often placed in a difficult position of balancing the interests of all parties. Some of this difficulty derives from the technology representatives having to balance the interests of several bosses, including the US-AEP Secretariat and DOC/FCS. According to some individuals, the DOC/FCS is naturally more interested in commercial activities, e.g., pursuing trade, over development activities, such as institutional building. For example, one partner mentioned that it has to request country clearance from the technology representatives who have different agendas and priorities (often related to commercial activities) and who may not be knowledgeable about the development activities.

Moreover, some individuals, including several technology representatives, believe that the technology representatives are sometimes tasked to do too much and are overburdened. As stated above, they are the primary individuals responsible for the technology transfer program, but are also tasked to assist other partners in implementing the three other program management areas. Because the technology representatives are located in the field, partners often contact them (sometimes on short notice) and expect them to help. However, since the technology representatives do not have official authority to oversee the partners coming to the field, they are sometimes not contacted or not aware of other partners' work in the country.

Another difficulty facing the technology representatives is that the US-AEP Secretariat controls the program funds and the DOC/FCS controls the operating/administrative funds. The technology representatives are responsible for implementing US-AEP program activities where the program budget is controlled by the US-AEP Secretariat. However, the technology representatives' means for implementing the US-AEP program, e.g., travel

funds, telephone, e-mail/internet connections, hiring of assistants, other office costs, are controlled by the FCS. One technology representative noted problems with obtaining basic tools to perform his job effectively and efficiently. The senior commercial officer overseeing this technology representative indicated that as of January 21, 2000, the FCS office still had not received the US-AEP fiscal year 2000 budget allocation.

Representatives from the Three Main Contractors

Each of the three main contractors (IRG, Louis Berger, and IIE) has several representatives in Asia working on their respective components. No one in the field monitors the contractors. Also, one of the contractors in the field stated that the country clearance process for visitors to the country was unclear, in terms of both the procedures for (1) requesting and obtaining country clearance, and (2) ensuring that all partners are notified of visitors coming to the country.

US-AEP Regional Representative in Manila

The US-AEP has a regional representative in Manila, the Philippines. Although this regional representative, a personal services contractor, performs many important tasks (e.g., strategy development, new initiatives, and performing market analyses), he indicated that he has not performed (nor has been required to perform) day-to-day management over the field contractors or the technology representatives and does not directly manage anyone.[7] Several individuals/partners mentioned that they were unclear of the regional representative's authorities, roles and responsibilities. For example, one partner was unclear on the regional representative's role in reviewing country work plans, i.e., a formal role of reviewing the plans to modify, add or delete activities from the plans versus a more restrictive role of merely providing input/advice on the plans.

Urban Environmental Infrastructure Representatives

US-AEP jointly funds urban environmental infrastructure representatives (UEIR) with USAID's Regional Urban Development Office (RUDO) at the USAID missions in India and Indonesia. UEIRs report directly to the head of the RUDO office in the respective countries. In addition, the US-AEP program used to have an UEIR in the Philippines within the Foreign Commercial Office. Several of the individuals/partners believed they were already involved in infrastructure/urban activities and were unclear on how these representatives fit in to the program.

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[7] Based on concerns from the U.S. Embassy, Manila, on who was overseeing US-AEP activities in the Philippines, the US-AEP Secretariat issued an e-mail in September 1999 that designated the Regional Representative as the Field Coordinator for the Philippines through December 31, 1999.

Other Partners in the Field

The US-AEP program funds a commercial environmental specialist located in Manila, the Philippines, to target environmental opportunities and partnerships through the Asian Development Bank (ADB). Various others individuals/teams perform work in the field from time-to-time including EPA representatives and U.S. State organizations such as the National Association of State Development Agencies (NASDA) and the Council of State Governments. No one in the field is charged with overseeing the work of these partners.

Responsibilities among Individuals/Partners in Washington, D.C.

Certain individuals within the Secretariat are designated as the official technical representative, called COTR, for the respective contracts and agreements. In addition, these individuals are responsible for certain countries and certain program areas (e.g., technology transfer). Several partners indicated that it was not always clear who within the Secretariat should take the lead, approve or be notified of the various activities. For example, if a corporate environmental management activity is to take place in Indonesia and involve an international exchange, it would involve three individuals from the Secretariat: one individual who is responsible for Indonesia, another who is the COTR for the CTEM contract, and yet another who is the COTR for the international exchange contract.

The head offices for the three main contractors under the program are located in Washington, D.C. In addition to providing oversight and support to the field, they respond to requests from the Secretariat. IRG is the technical support services contractor for the program. The senior IRG individual in Washington, D.C., stated that being a contractor, he does not believe IRG can direct or issue guidance to other partners, unless it comes directly from the Secretariat.

Conclusion

The above discussions demonstrate the need for a more formal structure with well-defined authorities, roles and responsibilities among the various partners, including designating lead authorities/responsibilities in the field. No one in the field has overall responsibility to oversee the various activities in the respective Asian countries to ensure that duplication of effort does not occur and to take advantage of any possible synergies.

A recent evaluation of the program by a consultant[8] recommended that there be four full-time US-AEP Regional Coordinators (each covering several countries) based in Manila, Bangkok, Jakarta and New Delhi to oversee the various activities in the field. We believe that this recommendation has merit and, if implemented, could improve US-AEP's management structure in the field as well as reduce the burden and tension on the

[8] *Final Report on Evaluations of the United States-Asia Environmental Partnership (US-AEP)* by Mr. Fred C. Fischer, dated June 4, 1999.

technology representatives. Therefore, we included a recommendation to establish Regional and/or Country Coordinators in the report on page 7. Regional and/or Country Coordinators would also facilitate coordinating/representing the US-AEP program with/to other entities, e.g., USAID mission, U.S. Embassy, host country institutions, and could facilitate focusing US-AEP activities in the country/region.

The US-AEP Secretariat has recently instituted some positive changes to its program such as country work plans. The Secretariat should further enhance its organization/management of its partnership by developing a US-AEP policies and procedures handbook/guidebook that (1) clearly delineates the authorities, roles and responsibilities among the partners, including designating lead authorities/responsibilities in the field, and (2) specifies policies, procedures and responsibilities for each of its main processes and systems (e.g., exchanges, international travel, obtaining country clearance, country work plans, reporting, entering and following up on trade leads, reporting and validating assisted sales, any procedures related to intellectual property rights).

Establish a Formal Training/Education Program for Technology Representatives

A good internal control environment requires organizations to provide needed training to its employees that allows them to accomplish their assigned duties.[9] As discussed previously, the technology representatives play a crucial role in the US-AEP program and would continue to play an important role even if the program establishes regional and/or country coordinators. Some of the technology representatives' duties include providing business counseling to both Americans and Asians, locating/entering trade leads into a network system, and identifying, initiating and supporting activities that provide solutions to environmental problems. However, no formal training/education program exists for these representatives. Several technology representatives indicated that they need periodic training to keep abreast of the latest technologies in the various sectors, e.g., hazardous waste and wastewater treatment. Furthermore, the Managing Director for Environment Trade under the US-AEP program believes that the technology representatives need to increase their knowledge and skill levels in order to possess and maintain a level of technical competence and that they need more training in the various environmental sectors.

> **Recommendation No. 4: We recommend that the US-AEP Secretariat, in coordination with the Department of Commerce, Foreign Commercial Service, develop a formal training/education program for the technology representatives.**

[9] The U.S. General Accounting Office's *Standards for Internal Control in the Federal Government*, dated November 1999.

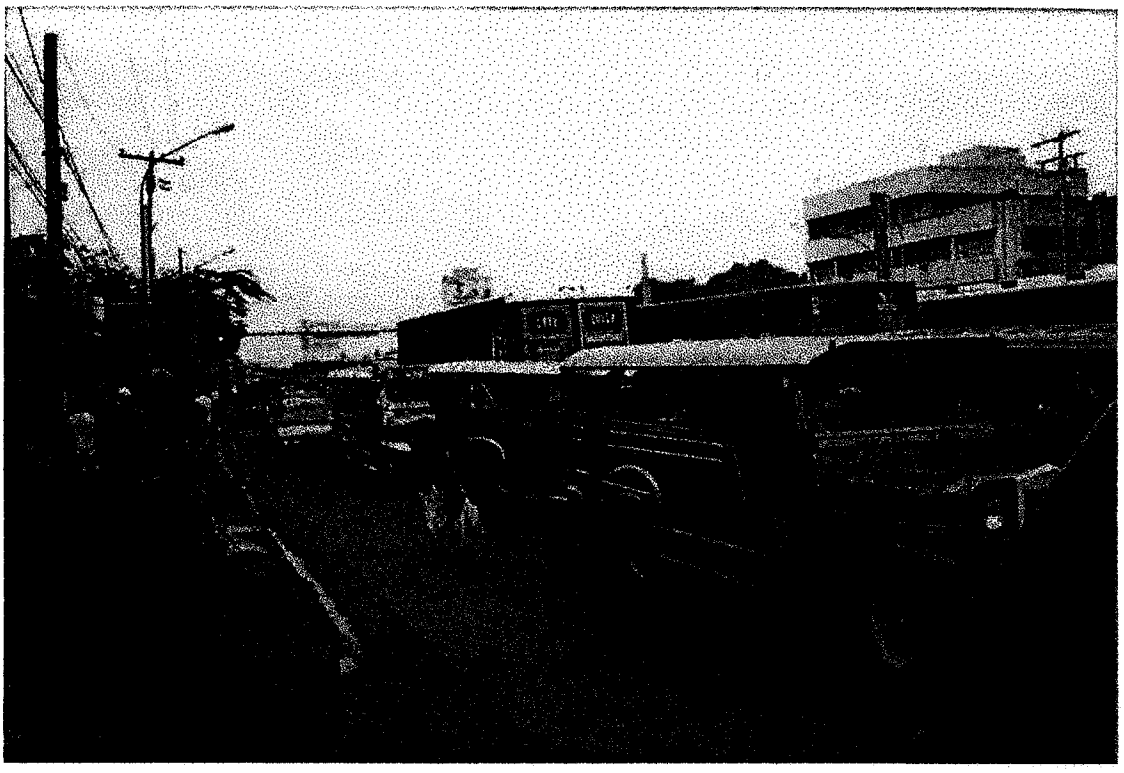
Objective 3: Have US-AEP activities progressed toward their stated objectives?

For the activities tested, US-AEP activities were generally making progress toward their stated objectives. The audit found that some activities had made better progress and produced more positive results than other activities. In some cases, it was questionable or too early to tell whether the activities would result in lasting progress and/or desired results (i.e., sustainable partnerships, U.S. sales, and reduction in pollution).

Summaries of several activities reviewed follow. (Additional summaries of other activities reviewed are at Appendix V.) Subsequent to these summaries are three findings with recommendations addressed to the US-AEP Secretariat to: (1) include US-AEP-assisted sales as a performance measure in its R4 reporting, (2) develop more definitive guidelines on cost sharing that participants or their organizations must contribute for an exchange, and (3) develop a strategy, with targets and timeframes, to become more self-sustaining.

Activity to Assist the Philippines' Environmental Management Bureau

US-AEP funded two specialists in fuel-related issues from the California Air Resources Board (CARB) to perform work in the Philippines. The purpose was to help identify components of an air quality improvement program for Metro Manila. Metro Manila experiences a very severe particulate air quality problem that is caused in large part by fuel combustion. The following photograph shows one view of traffic in Manila.



A view of the traffic on Epifanio Delos Santos Avenue (EDSA), a main street in Metro Manila. (Manila, the Philippines, November 1999)

The Government of the Philippines' (GOP) Environmental Management Bureau (EMB) and the Asian Development Bank (ADB) requested the specialists to (1) design a regulation to implement the required phase out of lead in gasoline, (2) identify other strategies to establish fuel specifications to reduce air pollution, and (3) design a system to collect fees from pollution sources to support the activities of the EMB. The work occurred in December 1997. US-AEP's cost for the trip was about $7,000.

Progress/Results: The two specialists from CARB prepared a detailed report with recommendations entitled: *An Assessment of Options to Deal with Fuel-Related Air Quality Problems*, which covered the three areas mentioned above. The recommendations helped define portions of the Metro Manila Clean Air Act passed in mid-1999. The Clean Air Act calls for a phase-out of leaded gas by 2001 and a reduction of the sulfur content of diesel fuel in later years. The report also contributed in the GOP's preparation for signing the ADB-funded Air Quality Loan. According to an EMB official, the report will be one of the guides used to prepare the Implementing Rules and Regulations to implement the Act.

Council of State Governments Activity

In partnership with the Council of State Governments (CSG), a grant was given to the Arizona Environmental Delegation to develop a partnership between Arizona and the Philippines in the area of water conservation consisting of technical writing, information sharing, technology transfer and business partnerships. The focus of the activity was to rehabilitate Palico Creek, which has applications to other water related issues throughout the Philippines. US-AEP provided approximately $124,000 and the CSG provided about $134,000.

The main sub-activities consisted of (1) a reverse trade mission, i.e., sending nine Arizona companies on a trade mission to the Philippines and then sending several individuals from the Philippines to Arizona to learn about environmental technologies that would fit their needs, and (2) an initial assessment of Palico Creek. These activities took place during 1998.

Progress/Results: These activities had several positive results, including establishing business contacts, exposing individuals from the Philippines to environmental technologies, and assisting Arizona firms in learning about and entering the Philippines' market. For example, the President of one Arizona firm stated that he gained insight into the Philippines' market as it relates to his firm's products/technologies. Further, he stated that the contacts established thus far have resulted in several sales, one of which was for $8,000. While individuals from U.S. firms and Philippine firms/organizations were grateful for US-AEP's assistance, some questioned whether the partnerships could be sustained.

Also, in a spin-off visit to Arizona from another US-AEP activity, a Philippine firm learned about a technology using microwaves to disinfect medical waste. After more research, the firm has decided to make a large purchase of a medical waste-processing machine from a U.S. manufacturer located in New Jersey.

Although the activity had some positive results as mentioned above, the activity has made only marginal progress in rehabilitating Palico Creek as follows. During the visit to Arizona, the Executive Director of a Philippine Foundation, Muntinlupa Development Foundation, was exposed to the wetland technology, a nature-like process of cleansing rivers and creeks. The Executive Director has been interested in cleaning up Palico Creek,[10] a primary tributary to Laguna Lake. Laguna Lake is the largest lake in the Philippines and is an important economic resource (commercial fishing and water supply for neighboring communities).

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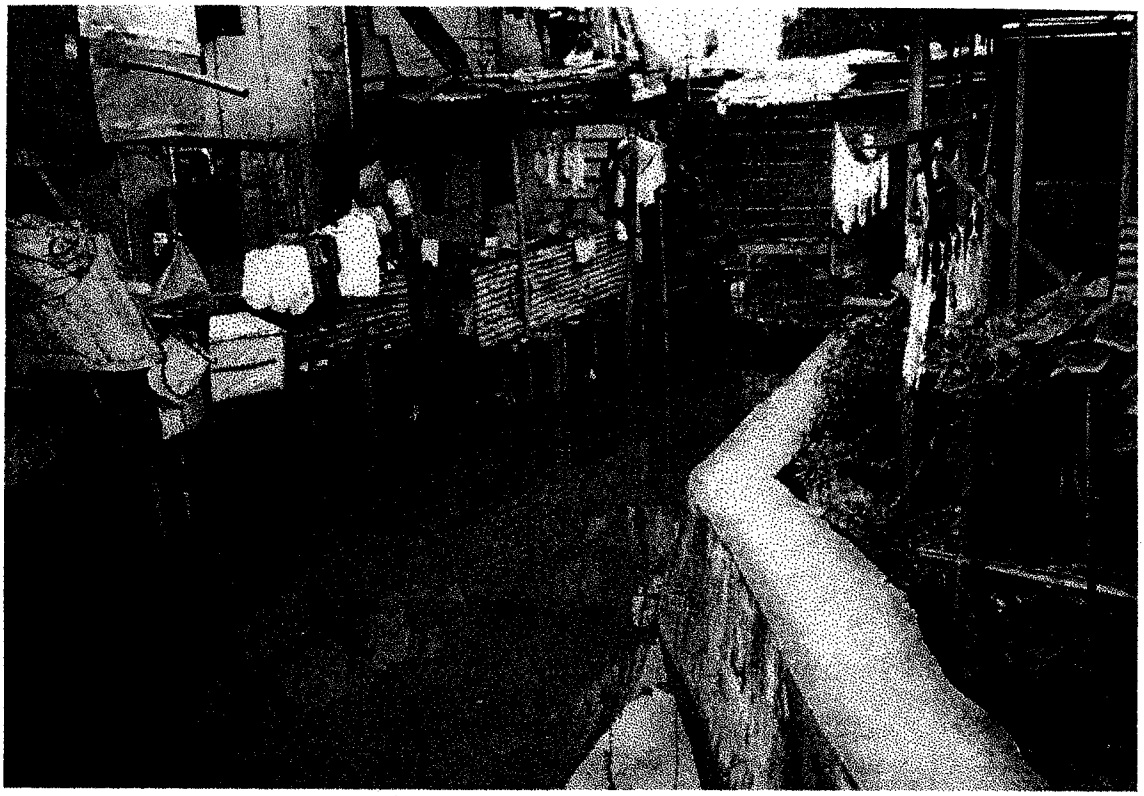
[10] With assistance from the World Bank's Brown Fund, the Muntinlupa Development Foundation is promoting the clean up of Palico Creek. For example, this Foundation organizes the local communities, local government and local industries to have trash pick up drives every quarter.

The activity paid for an Arizona firm to perform an initial assessment of installing a wetland treatment system where Palico Creek merges with Laguna Lake. The assessment, performed in September 1998, indicated that significant pollution is occurring in the Creek and that the wetland technology would be appropriate. The estimated cost for the wetland system was about $250,000. The following photograph depicts one view of the Creek.



The assessment performed indicated that Palico Creek, shown above, appears to be polluted from residential squatters and may also be polluted from the nearby industrial area. (Muntinlupa, the Philippines, November 1999)

The Executive Director of the Muntinlupa Development Foundation would like to pursue the wetland technology for Palico Creek. However, she said that it is a question of funding and that no one was taking the lead on this. The Executive Director said that another Philippine foundation was supposed to have a more detailed study done on the feasibility of installing the wetland technology at the Creek. However, as of December 1999, this had not happened. Further, she stated that although the activity helped to increase environmental awareness and consciousness among the local communities, local government and industries, the activity has not yet resulted in much trade with industries located next to the Creek. The Executive Director was aware of equipment sales to only one firm located at the Creek, and the sale, totaling $8,000, was used for an off-site warehouse not located at the Creek.

Noyyal River Clean-Up Activity

Hundreds of textile knitwear enterprises in Tirupur,[11] India, are discharging wastewater into the Noyyal river and its tributaries. The water has become unfit not only for drinking and cooking, but also for washing clothes and cleaning vessels. The Supreme Court of India has ordered the enterprises to set up wastewater treatment plants, or face closure. The US-AEP program brought six textile executives and a representative from the Tamil Nadu Pollution Control Board (TNPCB) to the United States to view treatment technologies for textile dye wastes. The group participating in the exchange is in a position to make decisions on the acquisition of suitable technologies. US-AEP estimated potential sales of approximately $2 million. The cost of this exchange for US-AEP was about $14,000. The exchange took place in March 1999.

Progress/Results: As a result of US-AEP's efforts and follow-up, a U.S. firm located in Illinois teamed up with a Chennai-based company and implemented a pilot project at one of the Tirupur textile enterprises. This pilot project along with the exchange helped to demonstrate that U.S. technology could address the problem. The US-AEP Technology Representative, Chennai, understands that the U.S. firm is now in dialogue with the textile enterprise for a bigger full-scale treatment plant. One of the textile executives who participated in the exchange stated that because each textile enterprise is different, a detailed feasibility study and more pilot projects are needed in Tirupur so that the U.S. technologies can be proved suitable for local conditions.

Although the activity has helped to expose U.S. technologies to the textile enterprises and the TNPCB, the Technology Representative is not aware of any actual U.S. sales to date. The TNPCB Chairman stated that his state is very serious about pollution control. However, the TNPCB has not given the textile enterprises a deadline for installing pollution control equipment. Furthermore, the Technology Representative is concerned that the textile enterprises might acquire the needed environmental equipment from European or other competitors and therefore, US-AEP needs to be vigilant in following-up with the enterprises and the TNPCB.

US-AEP Should Include Assisted Sales As a Performance Measure in its R4

In implementing major U.S. legislation on performance measurement and reporting, i.e., the Government Performance and Results Act, the U.S. Congress is stressing that agencies need to measure and report the direct results of their programs.[12] Although US-

[11] A city 250 miles Southwest of Chennai and located in the Indian State of Tamil Nadu.

[12] Memo from the U.S. House of Representatives' Committee on International Relations to the USAID Administrator, dated April 23, 1998.

AEP collects data on US-AEP-assisted sales, which we consider a very direct measure of program impact, US-AEP does not use this measure in its formal results framework/reporting system.[13] Instead, US-AEP uses a measure that goes well beyond what can be reasonably attributed to the US-AEP program, i.e., total sales and investments in U.S. environmental goods and services to Asia. To facilitate a more accurate assessment of the impact of the program on the transfer of U.S. environmental technology to Asia, we recommend the following:

> **Recommendation No. 5: We recommend that the US-AEP Secretariat (1) review the validation procedures to ensure that only valid US-AEP-assisted sales are reported, and (2) include US-AEP-assisted sales as a performance measure in its formal results framework/reporting system to measure the direct impact of the program on sales of U.S. environmental goods and services to Asia.**

Included in US-AEP's results review and resource request[14] (R4) is an intermediate result of "*increased flow and adoption of environmental and cleaner industrial and infrastructure technologies, with emphasis on U.S. practice and technologies.*" To measure the attainment of this intermediate result, US-AEP includes the indicator "*increased export of U.S. environmental technology to Asia*" with targets and timeframes. However, this indicator measures the total sales and investments in U.S. environmental goods and services to Asia. This goes well beyond what can be reasonably attributed to the US-AEP program. The data source is the U.S. Bureau of the Census' 64 Standard Industry Codes for "dual use" environmental commodities, and it includes all U.S. environmental sales to Asia, many of which are not at all related to the program.

US-AEP does maintain an internal reporting system to track US-AEP-assisted sales. This system provides the most direct information available on the impact of the US-AEP program on sales/transfer of U.S. environmental technology to Asian countries. US-AEP's institutional contractor maintains this system, which includes validating the sales with U.S. firms as a result of a specific US-AEP activity, e.g., trade mission. The US-AEP-assisted sales reported under this system are substantially below the total U.S. sales reported under the intermediate result. For example, as shown in the following chart,[15] US-AEP reported $1.478 billion in U.S. environmental sales to Asia under the intermediate result as opposed to $64 million in assisted sales for 1997.

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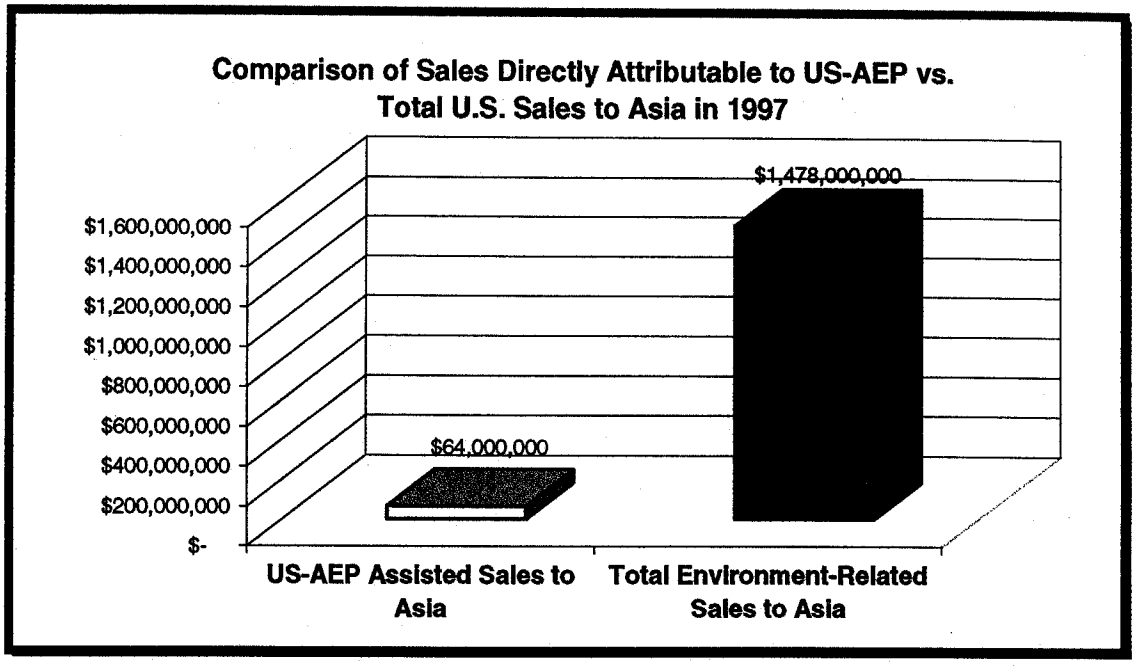
[13] US-AEP has used the assisted-sales system to report sales in the Activity Data Sheet of the Fiscal Year 2000 Congressional Presentation and as part of one sentence in the narrative section of US-AEP's Fiscal Year 2001 R4.

[14] US-AEP Fiscal Year 2001 R4, dated March 31,1999.

[15] Amount for total U.S. sales to Asia is unaudited. The amount for US-AEP-assisted sales was tested on a limited basis.



Based on limited testing of the US-AEP-assisted sales reporting system, the sales reported were reasonably accurate. In a few cases a sale was recorded in the system even though the individual from the U.S. firm contacted stated that the sale was pending or that he had no knowledge of US-AEP involvement of the sale. The assisted-sales system reports sales totaling over $1.1 billion from 1993 to 1999. This amount is in itself impressive. However, the amount of confirmed sales has been down over the last several years with sales declining from $64 million in 1997 to $18 million and $20 million in 1998 and 1999, respectively. According to US-AEP officials, this reduction in sales is largely due to the Asian financial crisis.

To facilitate an accurate assessment of the impact of the program on the transfer of U.S. environmental technology to Asia, we believe that US-AEP should include only US-AEP-assisted sales in its formal results framework/reporting system.

Need for More Definitive Guidelines on Cost-Sharing

Although US-AEP considers cost sharing that participants or their organizations must pay for an exchange activity to be an important factor for the program, the US-AEP program does not have definitive guidelines on cost sharing. Rather, US-AEP determines the amount of cost sharing on a case-by-case basis. As a result, cost sharing among the participants fluctuates widely, e.g., from not paying any costs to paying as much as 73 percent of the costs. To prevent hosting institutions, participants, and/or the participants' organizations from obtaining special deals and to maximize the amount of cost sharing collected, we recommend the following:

Recommendation No. 6: We recommend that the US-AEP Secretariat establish more definitive guidelines on cost sharing that would require minimum cost sharing standards (excluding salaries) for all exchange participants.

A contractor, the Institute of International Education (IIE), administers US-AEP's exchange program. The contract with IIE mentions that cost sharing is an important factor in the program. Further, the contract states that it is expected that either hosting institutions, candidates' home companies or agencies, or other contributors will fund salary or course participation costs and that Asian institutions which send individuals will contribute to the costs of the exchange through, at minimum, salary support, but may also be required to finance some portion of the travel or per diem costs.

According to the IIE's Chief of Party, IIE has not received any more definitive guidance than what is in the contract.[16] Therefore, IIE has been negotiating the cost share on an individual exchange by individual exchange basis. In negotiating in this way, the applicant will first request the types and estimated amounts of financial assistance sought on an application form. IIE will then sometimes request the initiator of the exchange, e.g., technology representative and USAID mission, to provide additional information or perform preliminary negotiations on cost sharing. Then various individuals within IIE will negotiate cost sharing with the participants and their organizations and attempt to get the participant/firm to pay travel/transportation, hotel, per diem, other costs or a portion of these costs. However, sometimes the initiator/hosting institution, e.g., USAID mission, stresses that it really wants an exchange to happen. IIE individuals also acknowledged that certain initiators and individuals within IIE's staff might be better negotiators than others.

In reviewing the cost share percentage for exchanges occurring between July 1998 to June 1999 relating to the Philippines, India and Indonesia, cost sharing among the participants fluctuated widely. As shown in Appendix IV, cost sharing for these exchanges ranged from participants or their organizations not paying anything to paying as much as 73 percent of the costs.[17] Of the 22 exchanges totaling 139 participants, no cost sharing was obtained for 6 exchanges totaling 19 participants. The total cost share percentages for the Philippines, India and Indonesia for the period were 24, 37, and 26 percent, respectively.

Negotiating cost sharing on a case-by-case basis could lead to the unfortunate situation of hosting institutions, participants, and/or the participants' organizations obtaining special deals. Therefore, to prevent this situation and to maximize the amount of cost sharing

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[16] He mentioned that IIE's proposal document before the award envisioned a $4 to $1 cost share, inclusive of participants' salaries, but that this document was prepared before the Asian financial crisis.

[17] The analysis excludes participant's salaries because salaries are not an additional cost for the participant's organization.

collected, we recommend that the US-AEP Secretariat establish more definitive guidelines on cost sharing that would require minimum cost sharing standards (excluding salaries) for all exchange participants.

US-AEP Should Develop a Strategy
To Become More Self-Sustaining

Several program documents envisioned substantial contributions from other U.S. government agencies, private sector concerns and Asian governments as well as privatization of all or part of the program's functions. Although the program has had some success in leveraging funds, the amount of contributions from others is substantially below what was initially envisioned and no privatization of the program's functions have occurred. To help the US-AEP program become more self-sustaining, we recommend the following:

> **Recommendation No. 7: We recommend that the US-AEP Secretariat, in coordination with the Department of Commerce, develop a strategy, with detailed action plans, targets and timeframes, to become more self-sustaining (by charging additional user fees, by leveraging more funds, and/or by privatizing program areas). The targets and subsequent reporting should segregate actual cash contributions from in-kind contributions (e.g., salaries).**

US-AEP's original program authorization document[18] envisioned that there would be substantial contributions leveraged from other U.S. government agencies, private sector concerns and Asian governments. This document envisioned these contributions would exceed USAID resources by at least a $5 to $1 margin ($100 million in USAID funding over seven years to a conservative estimate of $500 million in other funding). In addition, this document stated that "The US-AEP should not be a U.S. government initiative in perpetuity; rather, it should evolve into a private, nonprofit 'foundation', funded by a wide variety of sources."

Moreover, the US-AEP agreement with the Department of Commerce (DOC) states that both USAID and DOC will continue to collaborate on devising new financial mechanisms to help sustain the program, including the establishment of a user fee system sufficient to maintain or expand its technology program and possible privatization of selected program functions.

According to information provided by US-AEP, the actual contributions by other parties to USAID funding is $1.4[19] to $1, which is substantially less than what was initially

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[18] *United States – Asia Environmental Partnership Project, Project Paper Substitute*, signed by the Deputy Assistant Administrator for Asia on May 25, 1992.

[19] This figure includes both actual cash contributions and in-kind contributions (e.g., salaries). US-AEP does not breakdown other contributions into actual cash contributions and in-kind contributions.

envisioned. A US-AEP official mentioned that the program authorization document, which was prepared before the Asian financial crisis, had an ambitious vision of building strong financial support from non-public resources. The US-AEP/DOC technology program does charge user fees for some of its services.[20] In addition, US-AEP has occasionally made some effort to privatize selected program functions. However, these efforts have not resulted in the privatization of program functions. Furthermore, US-AEP does not have a strategy, with detailed action plans, targets and timeframes, to become more self-sustaining (by charging additional user fees, by leveraging more funds, and/or by privatizing program areas).

In discussion with US-AEP individuals and partners, it looks like there are possible opportunities to charge additional user fees, leverage more funds, etc. For example, US-AEP pays about $300,000 a year to a contractor to maintain the Environmental Technology Network for Asia[21] (ETNA). ETNA is a trade lead system whereby trade leads are disseminated to approximately 2,700 U.S. environmental technology and service firms free of charge. User fees/commissions could be charged, either to all firms, or for trade leads that result in sales.

We believe that developing a strategy, with detailed action plans, targets and timeframes, to charge additional user fees, increase leveraging/cost sharing, and/or to privatize program areas will help US-AEP become more self-sustaining.

Objective 4: Have US-AEP activities been coordinated with USAID mission environmental activities and other regional activities?

US-AEP activities have generally been coordinated with USAID mission environmental activities and other regional activities where applicable. The audit found that US-AEP coordinated its activities with USAID missions, offices within the USAID Global Bureau/Center for the Environment, and other regional organizations such as the Asian Development Bank (ADB). The form and extent of coordination varies with the other parties ranging from good/strong coordination to "loose" or "coincidental" coordination. A look at how US-AEP coordinates with some of the other parties follows.

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[20] Under the "Gold Key/Green Key" services the Foreign Commercial Service will charge $300 a day to set up one day's worth of meetings/contacts for U.S. firms.

[21] ETNA is part of the Global Technology Network (GTN) and is managed out of USAID's Global Bureau, Center for Economic Growth.

Office of Environment and Urban Programs (G/ENV/UP)

This office is part of the Global Bureau/Center for Environment. Officials from this office mentioned that there was good coordination between US-AEP and G/ENV/UP at both the Washington and field levels. They stated that US-AEP and UP jointly fund an infrastructure representative within the USAID's Regional Urban Development Office (RUDO) at the USAID missions in India and Indonesia. They indicated that this helps to develop synergies. Furthermore, they indicated that coordination has become stronger over the past several years with US-AEP's greater emphasis on urban/infrastructure activities. These officials provided examples of coordinated activities with US-AEP, two of which are listed as follows:

- UP drafted a scope of work for $75,000 of US-AEP program funds to support the City Managers Association of Gujarat (CMAG) in India. CMAG was started two years ago with financial support from RUDO/India, and the outcome of the US-AEP-funded activity is expected to lay the groundwork for future RUDO- and US-AEP-funded activities.

- US-AEP funded a continuation of a training series developed by UP on local governments and urban environmental management to be offered in Indonesia in April 2000.

Office of Energy, Environment and Technology (G/ENV/EET)

This office is part of the Global Bureau/Center for Environment. US-AEP and G/ENV/EET prepared and approved a fiscal year 1999 Energy/Global Climate Change Work Plan in March 1999. Under this work plan, US-AEP and EET agreed to jointly fund a coordinator to monitor, coordinate, and assist in the development of energy/global climate change activities within US-AEP and the EET. The work plan also contains a detailed procurement plan listing the planned joint activities along with joint funding from each party.

In meeting with an EET official, he characterized the relationship with US-AEP and his office as "loose" coordination. He said that the work plan was an attempt to work together where there is common ground. This official added that if US-AEP was going to concentrate on the commercial side, the official was not sure if there would be common ground. This official mentioned that EET would have to re-visit this agreement to see if it provided any synergy or if it would be better for each office to "do its own thing."

USAID/Philippines

US-AEP and the Mission signed a memorandum of understanding (MOU) in 1998. Under this MOU, US-AEP and the Mission agreed to reach a consensus of support with

GOP partners relating to the Mission's Municipal Coastal Environmental Initiative (MCEI) activity.[22] The MOU also called for the establishment of an Industry Environmental Working Group consisting of representatives from the Mission, the Mission's contractor, US-AEP and others. The purpose of the monthly Working Group meetings was to share information on upcoming and proposed activities, to maintain and update a rolling activity plan, and to discuss and shape activities that can be jointly implemented. In addition, the MOU stated that the Mission planned to expend about $350,000 for a buy-in to the US-AEP training contract and that US-AEP activities, which were to be implemented jointly with the Mission, would total about $750,000 per year.

USAID/Philippines' officials stated that a working group was established and it does meet monthly. However, they mentioned that the MOU was very limited and narrow and has been overtaken by events. They had been working on a draft entitled "Proposed Joint Efforts of US-AEP and USAID/Philippines" which is more comprehensive than the existing MOU. However, they were unsure whether another MOU was necessary given US-AEP's new country work plan process.

Mission officials from the USAID/Philippines' Office of Environmental Management noted that US-AEP has its own strategic objective and R4. Nevertheless, they stated that there has always been coordination, e.g., information sharing, but recently the extent of collaboration has increased and reached a new level. One of these officials also said that the relationship with US-AEP has moved from "coincidental collaboration" to "strategic collaboration." For example, this official stated that US-AEP involved the Mission when preparing its fiscal year 2000 draft work plan for the Philippines. Also, this official attended US-AEP's Annual Meeting in October 1999.

While the extent of coordination has increased, there have been few jointly funded activities to date. Also, as of December 1999, the Mission had not used any funds to buy in to the US-AEP training contract as envisioned in the MOU. It is also unclear how much US-AEP activities expended in the Philippines were implemented jointly with the Mission.

USAID/India

US-AEP's principal coordination with USAID/India relates to the Mission's Strategic Objective (SO) 4 "Increased Environmental Protection in Energy, Industry and Cities." USAID/India SO4 officials stated that the relationship with US-AEP has been good and collaborative. The SO4 team keeps apprised of the US-AEP activities to ensure that there is not much overlap. Further, the SO4 officials stated they were involved in US-AEP's country workplan process for fiscal year 2000 and provided input. They provided examples of joint activities in the areas of climate change, clean technologies, and solid waste, some of which are mentioned under Audit Objective No. 3 above.

[22] The activity is now referred to as Industrial Initiatives for Sustainable Environment.

US-AEP funds an Urban Environmental Infrastructure Representative (UEIR) who reports directly to the Regional Urban and Development Office (RUDO) within the Mission's SO4. The UEIR's main emphasis to date has been on municipal solid waste management activities. The USAID/India Director stated that the UEIR position is absolutely essential for the urban program of SO4 and she hopes this position continues.

US-AEP and USAID/India signed a memorandum of understanding (MOU) in April 1997. According to the MOU, USAID/India planned funding was $20 million over three years, which represented the Mission's entire SO4 budget. US-AEP planned funding was $10 million, consisting of $5 million direct costs and $5 million in in-kind contribution. The USAID/India Director said the MOU was a good idea at the time, but is not sure if it is needed now.

Moreover, the Director said that she has not seen US-AEP's workplan. She thinks some more strategic interaction with US-AEP should take place after the U.S. sanctions on India are lifted. She said she personally does not see US-AEP's fingerprints on the U.S. Embassy's Mission Performance Plan, either on the commercial or the environment side. She also mentioned that she is not sure to what extent the US-AEP program in India is linked to the Mission's SO4. Finally, the USAID/India Director noted that the US-AEP Country Director position for FCS has been vacant since late last year and believes the position should be filled soon to help lead the program in India.

Asian Development Bank (ADB)

As stated earlier in the report, the US-AEP program funds a commercial environmental specialist located in Manila, Philippines, to target environmental opportunities and partnerships through the ADB. This specialist reports to a senior commercial officer within the FCS. The specialist characterized US-AEP's relationship with ADB as cooperative and growing. Several activities were planned with ADB in fiscal year 2000 such as a workshop to facilitate phasing lead out of gasoline and public awareness campaign training. Both the specialist and the senior commercial officer stressed that with several activities on-going with ADB, it is crucial that other US-AEP partners use the specialist to liaise with the ADB.

US-AEP Should Standardize Its Methods/Agreements for Coordination with Other Entities

As detailed above, US-AEP's coordination with other entities takes many forms. In some cases, US-AEP has a general MOU. In other cases, US-AEP uses a joint work plan that details the specific joint activities and funding commitments by both parties. In yet other cases, the coordination is performed during US-AEP's annual country work plan exercise. We believe that US-AEP should review its methods for coordination and develop a standardized method that maximizes coordination with the other parties. Because we believe that one of the truest measures of coordination is the actual commitment of funding

for joint activities, the standardized method developed should include, to the extent possible, detailed funding commitments from both parties for joint activities.

> **Recommendation No. 8: We recommend that the US-AEP Secretariat, (1) develop a standardized method for coordination with USAID Missions, Global Bureau's Environmental Offices, and other regional entities that would, to the extent possible, include detailed funding commitments from both parties for joint activities, (2) review its existing methods/agreements and modify and/or update as appropriate, and (3) incorporate the standardized coordination procedures/methods in the US-AEP Policies and Procedures Handbook.**

Management Comments and Our Evaluation

In response to our draft report, the US-AEP Secretariat submitted written comments that are included in their entirety as Appendix II. The US-AEP Secretariat concurred with the report's recommendations and believes implementing the recommendations will strengthen the management of the program. In particular, the US-AEP Secretariat plans to prepare a US-AEP policies and procedures handbook by April 2001, establish regional or country coordinators in Asia, and propose to the ANE Bureau that it accept US-AEP-assisted sales as a new performance measure in its formal results framework/reporting system. Based upon its comments, we consider a management decision has been made on all eight recommendations. The recommendations can be closed when the US-AEP Secretariat provides evidence to USAID's Office of Management Planning and Innovation that it has implemented its planned actions.

SCOPE AND METHODOLOGY

Scope

We audited the United States Asia Environmental Partnership Program in accordance with generally accepted government auditing standards. We conducted a three-week survey in Washington, D.C. from September 20 to October 8, 1999 to determine the nature, timing and extent of our audit tests. We then performed the audit fieldwork from October 16, 1999 to January 28, 2000 in the Philippines and in India. The audit included US-AEP cumulative expenditures totaling $103.4 million, of which $20.1 million were expended for activities in the Philippines and in India.

Methodology

We reviewed a multitude of US-AEP documents and interviewed various US-AEP officials, partners, stakeholders and beneficiaries to determine (1) the objectives, goals and targets of the program, (2) the types of programs and activities, (3) the progress of the programs and activities, and (4) the coordination existing among US-AEP, USAID missions, offices within the Global Bureau/Center for Environment, and other regional entities (i.e., Asian Development Bank). We also assessed how US-AEP is organized to manage and monitor its programs and activities. Specifically, we:

- Reviewed US-AEP planning/reporting documents, including US-AEP's R4; its contracts, grants and progress reports of its partners and its agreements with other donors, including cost-sharing agreements with other U.S. Government agencies.
- Examined US-AEP financial reports.
- Interviewed key persons, such as US-AEP representatives, Department of Commerce officials, contractor/grantee and host country staff, other donor officials, as well as beneficiaries.
- Performed field visits, as necessary, to USAID, contractor/grantee, host country and beneficiary sites to observe operations and confirm results/progress.

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

March 1, 2000

MEMORANDUM

TO: RIG/Manila, Paul E. Armstrong

FROM: ANE/USAEP, Peter Kimm

SUBJECT: Draft Report, Audit of the United States Asia Environmental Partnership Program (Audit Report No. 5-398-00-00X, March xx, 2000)

We have carefully reviewed the draft report on your audit of US-AEP. We find the report to be a helpful reflection of the program, and concur with the recommendations, implementation of which we believe will strengthen the management of the program. We have the following comments on how we would proceed to address the recommendations.

Recommendation Number One: Adjust financial reporting to reflect the new program categories.

Outside of information tracked by the NMS, US-AEP's financial reporting is now centered on expenditure data furnished by grantees/contractors for each prior year. We are in the process of changing from an annual to a fiscal year basis, with 1999 as the transition year for which both annual and fiscal year numbers will be developed. The expenditure data is broken down by country, based on estimates furnished by partners.

To implement the recommendation, we will request each partner to track its expenditures in terms of the four new proposed intermediate results as well as by country. We expect to do this following Bureau review of the R-4 document which is due in March, 2000.

Recommendation Number Two: Prepare a US-AEP policies and procedures handbook.

This recommendation needs to be addressed in part by the Secretariat (policy determinations) and in part by support contractors (procedural matters). Because of the near-term transition in the support contractor mechanism, the procedural aspect will be addressed by the new support contractor as a 120-day deliverable following start-up, drawing on policy determinations from the Secretariat. We anticipate that a new policy and procedures handbook can be issued by April, 2001.

Recommendation Number Three: Establish Regional and/or Country Coordinators in the field.

We concur that there should be US-AEP Regional or Country Coordinators to assist the US-AEP Secretariat in its oversight of its field activities. We have had such a position in Jakarta, staffed from the technical support contractor, and have recently established another such position in Manila, again utilizing a technical support contract staffer. The move for expanding the number of these positions has been foreshadowed in the public notification regarding the next support contract. We will provide you with the Request for Proposals from the Commerce Business Daily for the new support contract mechanisms, which will address this recommendation in part. Further, in fulfilling recommendation two, it is our intent to clarify the roles and responsibilities of the coordinators.

Recommendation Number Four: Develop a formal training/education program for the Tech Reps in conjunction with USDOC.

US-AEP has been organizing training courses for our Tech Reps based upon their stated needs, beginning last year with trade finance training which is now available on the internet, and continuing with the training regarding utilization of the clean production database housed with USEPA. We are now planning to provide training in May 2000 to enable our Tech Reps to be certified as environmental professionals in a program sponsored by the U.S. Air and Waste Management Association. Further, Tech Reps have been participating in a variety of U.S. Department of Commerce professional training

opportunities. We will continue our collaboration with USDOC in identifying and responding to future training needs.

Recommendation Number Five: Review validation procedures for sales and include verified sales as a measure in the R-4.

Prior to the audit, the sales verification process was reviewed in the program evaluation conducted by consultant Fred Fischer and found to be sound. The audit's review of the validation process uncovered several examples of erroneous or questionable judgment regarding validation of certain sales. The amounts involved were de minimus. Intensive follow-up was performed regarding each item to correct or revalidate the record. We believe the validation procedures are sound as they stand. However, we plan to institute a further layer of quality control by engaging a third party review, which would likely operate on a sample basis and be conducted every four to six months, beginning summer 2000.

The second part of the recommendation will be addressed in the next US-AEP R-4 submission to the ANE Bureau, due March 2000. We intend to propose to the ANE Bureau that it accept verified sales as a new R-4 indicator.

Recommendation Number Six: Establish definitive guidelines on costs sharing with minimum cost sharing standards for all exchange participants.

We agree with the need for more definitive guidelines, which we will issue as part of the policy and procedures handbook. Our plan is o develop country specific guidelines for cost sharing that would apply o all exchange participants. We believe that it is necessary for us to continue to capture in-kind contributions, particularly from consultants who may perform pro bono work for US-AEP. We will, however, as suggested, maintain data in such a way as to separate the in-kind contributions represented by salaries.

We also recognize that on occasion US-AEP program imperatives might require case-by-case exceptions to such guidelines, when requiring cost sharing is not in the government's interest. The US-AEP Secretariat will review any such exceptions and make decisions based on the established guidelines.

Recommendation Number Seven: Jointly with USDOC, develop a strategy to make US-AEP more self-sustaining.

This draft recommendation recalls the original aspirations for the program which set forth an ambitious vision of building strong financial support from non-public resources.

Pursuant to draft recommendation number six, we will make requirements on cost-share standards tighter and more consistent. Other options noted, such as charging for trade leads and privatization, we believe offer limited scope. McGraw-Hill, which provides its customers with some one million leads per year, judged US-AEP's trade lead volume insufficient to be commercially viable. The idea of charging for infrastructure trade leads was attempted under US-AEP's grant to the American Consulting Engineers Council but failed to make headway. Regarding privatization, current USAID policy would appear to argue against such an approach.

In response to this draft recommendation, we will commit to a strategy for engaging foundations in support of US-AEP's programs. We are currently developing a draft Request for Applications for matching grants with a higher standard for cost share. The recent study performed for the ANE Bureau (U.S. Foundations: A Review of International Funding Priorities, by Diane E. Ray and Adrean E. Scheid) provides an encouraging analysis of the extent of foundation involvement in international assistance roles. This will be a long-term effort, but one in which we believe US-AEP can play a leading role.

Recommendation Number Eight: Develop a standardized method of coordination with all partners.

We accept this recommendation and intend to bring all current and future agreements with U.S. government entities into a common framework during the coming year as agreements are initiated or renegotiated. We note that a joint activity with a USG partner entity should not be the sine qua non of a coordinated plan. In dealing with USAID Missions, our intent is to use the US-AEP country work plan as the standard device for defining coordination and collaborative efforts.

US-AEP MAIN COMPONENTS AND PARTNERS

Air and Waste Management Association (AWMA) - AWMA works with US-AEP to establish member sections of their organization in US-AEP countries so that Asian environmental professionals can exchange information with U.S. environmental professionals through activities such as technical seminars and participation in AWMA's annual and regional meetings.

American Consulting Engineers Council (ACEC) - ACEC collects environmental infrastructure project leads from US-AEP Technology Representatives and Environmental Infrastructure Representatives, then disseminates these leads to U.S. engineering firms.

California Environmental Partnership (CEP) - In response to Technology Representative requests, CEP dispatches technical experts from California's Environmental Protection Agency and California's environmental industry to US-AEP countries in order to provide technical assistance.

Department of Commerce (DOC) - DOC promotes American business and trade, and through an inter-agency agreement with USAID, the DOC's Foreign Commercial Service operates the US-AEP Offices of Technology Cooperation (OTC) in 11 countries in Asia. The OTC's include the Technology Representatives and their assistants.

Environmental Protection Agency (EPA) - As part of our engagement in Asia, EPA provides technical assistance and training at the request of Asian governments under an inter-agency agreement with USAID.

Environmental Technology Network for Asia (ETNA) - ETNA is a clearinghouse that collects environmental trade leads from US-AEP Technology Representatives and disseminates them to U.S. environmental technology and service firms.

Institute for International Education (IIE) - IIE administers US-AEP's Environmental Exchange Program, which arranges logistics and provides financial assistance for Asians and Americans traveling between countries, enabling face-to-face discussion of environmental problems and solutions.

International Resources Group (IRG) - IRG provides technical service support to US-AEP, including program operations, communications, data management and staff support for the Policy Group.

Louis Berger - Provides the management, direction, strategic oversight and coordination for the Clean Technology and Environmental Management (CTEM) and Urban Unit components of US-AEP.

NASDA Grants - (a) Overseas Program Fund - Enables Asians and Americans to travel to a potential trading partner's home country. Includes participation in facility tours, product demonstrations, one-on-one business meetings, trade shows, and video conferences. (b) Environmental Technology Fund - A matching grant program to help U.S. environmental firms promote their environmentally responsible and energy-efficient technologies to prospective customers in Asia.

National Pollution Prevention Roundtable (NPPR) - NPPR provides a national forum for promoting the development, implementation, and evaluation of pollution prevention efforts in U.S. With US-AEP, NPPR works throughout Asia to foster the development of country-level and regional-level pollution prevention roundtables.

Non-Governmental Organization (NGO) Business Environmental Partnership - Administered by The Asia Foundation, this grant program allows Asian NGOs to encourage collaborative environmental improvement efforts with Asian industries.

Policy Group - Supports the appropriate national policies and regional framework necessary for achieving US-AEP's strategic objective, sustainable industrial and urban growth in Asia.

State Environmental Initiative (SEI) - A matching-grants program administered by the Council of State Governments to link American management, policy, regulatory, and technological expertise with Asian demand for environmental improvements.

Technology Representatives in Asia – These U.S. government personnel help identify appropriate and targeted solutions to environmental problems in Asia and promote access to Asian markets for U.S. environmental and clean production technology companies.

Urban Environmental Infrastructure Representatives - Specialize in helping to solve the problems of Asia's urban areas and locate appropriate U.S. solutions to address these needs. Currently, US-AEP Urban Environmental Infrastructure Representatives are located in India and Indonesia.

ANALYSIS OF COST-SHARING - PHILIPPINES

LOG #	NUMBER OF PARTICIPANTS	TOTAL COST SHARE	SALARIES	TOTAL COST SHARE EXCL. SALARIES	US-AEP SHARE	TOTA
630	11	$36,800	$14,200	$22,600	$20,362	$42,9
641	54	$264,723	$253,600	$11,123	$83,394	$94,5
683	2	$15,600	$11,000	$4,600	$1,695	$6,2
690	6	$43,000	$33,700	$9,300	$9,757	$19,0
707	9	$25,600	$25,600	$0	$40,735	$40,7
716	1	$5,083	$3,200	$1,883	$1,758	$3,6
721	1	$4,930	$4,000	$930	$1,708	$2,6
				$50,436	$159,409	$209,8

NOTE - The Institute of International Education assigns a log number for each exchange.

ANALYSIS OF COST-SHARING - INDIA

LOG #	NUMBER OF PARTICIPANTS	TOTAL COST SHARE	SALARIES	TOTAL COST SHARE EXCL. SALARIES	US-AEP SHARE	TOTA
554	1	$15,536	$12,000	$3,536	$3,385	$6,9
599	10	$59,933	$50,900	$9,033	$33,900	$42,9
655	7	$36,762	$26,000	$10,762	$13,622	$24,3
661	2	$10,515	$8,700	$1,815	$5,635	$7,4
702	4	$39,556	$28,800	$10,756	$6,871	$17,6
736	2	$9,400	$9,400	$0	$5,160	$5,1
743	1	$5,600	$5,600	$0	$3,979	$3,9
746	4	$14,200	$4,400	$9,800	$8,187	$17,9
758	8	$56,600	$44,600	$12,000	$19,456	$31,4
				$57,702	$100,195	$157,8

ANALYSIS OF COST-SHARING - INDONESIA

LOG #	NUMBER OF PARTICIPANTS	TOTAL COST SHARE	SALARIES	TOTAL COST SHARE EXCL. SALARIES	US-AEP SHARE	TOTA
581	2	$9,620	$9,600	$20	$5,446	$5,4
604	6	$70,102	$56,000	$14,102	$14,780	$28,8
610	2	$10,000	$10,000	$0	$4,109	$4,1
616	3	$21,800	$21,800	$0	$11,326	$11,3
657	1	$1,191	$800	$391	$157	$5
781	2	$8,340	$8,200	$140	$5,107	$5,2
				$14,653	$40,925	$55,5

EXAMPLES OF ACTIVITIES REVIEWED

Energy Exchange Activity to Argentina

At the request of USAID/Philippines, US-AEP paid for nine members of the Philippine Congress, Department of Energy, and National Power Company to visit Argentina in January 1999 to gain familiarization with the Argentinean power sector and its regulatory and market models. According to USAID/Philippines' officials, Argentina was a good choice because it is known for its restructuring of its power sector in a developing country context. The Philippine House Committee on Energy was studying various proposals on restructuring the electric power industry. The purpose of the study tour was to provide members of the committee with a working knowledge of the recent power-restructuring program in Argentina. This information was intended to advance privatization of the Philippine wholesale electricity market. US-AEP provided the total funding for this exchange of $41,000.

Progress/Results: Upon return, the participants prepared the required study tour report, dated February 1999, to the US-AEP. The report detailed the meetings held, sites visited, findings and conclusions. The report also listed some follow-up activities, including the continuation of Committee deliberations on the Omnibus Electric Power Industry Restructuring Bills. As of January 2000, the deliberations on the Bills were still continuing.

Information Center Activity in the Philippines

US-AEP provided support to a Philippine non-governmental organization to help it establish an environmental business center. The Center was to supply information to industries on technologies (services, products and processes) as well as financing opportunities, business advisory services, joint venture interests and trade and technology exhibits. US-AEP funded the salary of an information center specialist, EPA Industry Notebooks, computers, and furniture, totaling about $35,000 from September 1995 to November 1997.

Progress/Results: According to a US-AEP contractor, industries were not really visiting the Center much although some students were visiting the Center. The contractor stated that it is being used, but not as much as they envisioned. The Center was also receiving funds from other donors. Moreover, the Center no longer has a dedicated person to promote U.S. environmental technology. The Center does charge a minimal user fee, but they receive less than $1,000 a year from this user fee, which is, of course, not at all adequate to sustain, much less expand, the Center and its services. The contractor indicated that the location of the Center could be part of the problem because the Center is not located in Manila's central business district, and therefore,

is not as accessible to local businesses. The contractor also indicated that the Philippines has weak enforcement of environmental regulations, and therefore, industries have not been forced to pursue environmental technologies.

Climate Change Modeling Exchange Activity

US-AEP paid for two Indians from the Tata Energy Research Institute (TERI) to travel to the United States to learn more about modeling of macroeconomic policy alternatives related to the reduction of climate change impacts. This exchange was initiated by USAID/India and was to complement the Mission's work under its Clean Technology Initiative (CTI) project. Some of the objectives of the exchange were to establish institutional linkages with U.S. counterparts and to examine the MARKAL model. The MARKAL model helps industries determine best options for energy efficiency. In examining the MARKAL model, it was hoped that the participants would be better equipped to advise Indian government decision-makers and industrial leadership in those sectors and issues with high greenhouse gas impacts, such as power generation, industrial energy-efficiency and phase-out of certain input materials. The exchange took place during April-May 1999. US-AEP financed the total costs of $5,160.

Progress/Results: The two participants believed that the exchange was useful. They said that establishing contacts, e.g., meeting individuals from the Climate Change Institute, was the most useful part of the exchange. They said they learned the most recent developments regarding the MARKAL model. They thought IIE did an excellent job of arranging the travel and meetings given the short notice.

Nevertheless, they suggested that the exchange be linked to future USAID programs. They are interested in keeping their MARKAL model activity alive. They said that the previous contractor for USAID/India's CTI project planned to use TERI's technical assistance in using the MARKAL model. Subsequent to the exchange, TERI developed a scope of work/proposal that was included in the previous contractor's request for proposal. However, the previous contractor did not win the USAID/India follow-on contract. According to a USAID/India official working on the CTI project, it is unclear at this time whether the new contractor and the CTI project will continue to pursue the MARKAL model and thus use TERI's technical assistance.

Environment Information Centers Activity

US-AEP has been complementing the work done by USAID/India in establishing environment information centers within Indian institutions. Both USAID/India and US-AEP have assisted in creating environmental information centers in Delhi, Calcutta, Hyderabad, and Mumbai. They are working with the Federation of Indian Chambers of Commerce and Industry (FICCI) located in Delhi

and similar types of institutions in the other three Indian cities. The work began in 1997 and is continuing. USAID/India has obligated approximately $633,000 consisting of computer hardware/software, salaries, and technical assistance. US-AEP has provided materials (periodicals and EPA Notebooks) as well as salary support, training, workshops and technical assistance. The purpose is to give Indian industries direct access to information on U.S. environmental technologies.

Progess/Results: Both USAID/India and US-AEP helped create an internet-based capability at the centers to access U.S. technologies. The website (http://www.cleantechindia.com) provides access to technology options/sources, best practice guides, and government regulations. Although the website includes much information, it does not yet include information on renewable energy and urban sectors. US-AEP also assisted FICCI in establishing a US-AEP/India website (http://www.usaepindia) that includes a business opportunity form that Indians can use to enter environmental needs. The needs, called trade leads, are sent to the technology representative's office in Delhi.

During a visit to the FICCI center, a FICCI official stated that they still need to change the mind-set of Indian industries to use the clean technologies. Therefore, FICCI will be focusing on outreach programs. This official also stated that they have not yet started maintaining statistics on firms/individuals visiting the center, using the website, and e-mail, telephone, and fax requests received. This FICCI official stated that it is too early to start charging user fees for the center's services/information. Finally, the FICCI center does not appear conducive for firms/individuals wanting to physically visit the center. FICCI does have a small room with several computers that visitors could use. However, this room is unmarked and is located among FICCI's internal operations on the fourth floor. In addition, the room appeared cluttered with several boxes and hardcopy reference materials (EPA Notebooks and periodicals) were not located in the room, but instead, were located in a FICCI official's office not close to the room. We conveyed the results of the visit to USAID/India and suggested that FICCI maintain statistics on firms/individuals visiting the center as well as making the center more conducive for visitors.

Central Ground Water Board Activities

According to a US-AEP technology representative, ground water is rapidly being depleted in India with a growing population and growing contamination caused by increasing urbanization and industrialization. US-AEP financed several exchanges with members of the Central Ground Water Board (CGWB) during March and July 1999. CGWB is looking for technology for ground water exploration and utilization, monitoring of ground water levels, and for determining water quality.

Progress/Results: In the required report prepared by CGWB participants, they concluded that the exposures to new technology and equipment have been of immense benefit in planning the advanced

and modern technology needs pertaining to the development and management of ground water resources in India. According to the US-AEP technology Representative for Nothern India, CGWB is now in the bidding process to purchase some equipment. However, he was not aware of any actual sales to U.S. firms to date regarding these exchange activities.

Conference on Bio-Medical Waste Management in India

US-AEP and the Tamil Nadu Pollution Control Board (TNPCB) co-sponsored the Southern Regional Conference on "Bio-Medical Waste Management" in Chennai, India, during February 1999. The TNPCB is responsible for regulating the collection, storage, segregation, transportation and disposal of medical wastes from hospitals, clinics, and nursing homes in the Indian State of Tamil Nadu. The US-AEP financed the trip of four U.S. specialists to speak at the conference on such topics as technologies for storage, collection, and transport of bio-medical wastes. The cost of the trip was about $11,000.

Progress/Results: According to the US-AEP Technology Representative, Chennai, this conference was the first event of its kind in Southern India. Approximately 250 people participated, including representatives from health care institutions, non-government organizations, environmental consultants, Government Medical Colleges and environmental engineering firms. The TNPCB prepared "Proceedings" on the conference that included recommendations on implementing a medical waste system in Tamil Nadu. The TNPCB began counseling the hospitals on the need to comply with medical waste rules and has asked US-AEP for further assistance to evaluate the different options for a centralized bio-medical waste treatment and disposal facility. US-AEP plans to finance an exchange to send a consultant to India to help evaluate the options. According to the Chairman of the TNPCB, the US-AEP Technology Representative, Chennai, has been a very useful resource and has helped him and others learn about environmental technologies that could address pollution problems for the State of Tamil Nadu.

ACRONYMS USED IN THE REPORT

ACEC – American Consulting Engineers Council

ADB – Asian Development Bank

ANE Bureau – Asia and Near East Bureau

AWMA – Air and Waste Management Association

CARB – California Air Resources Board

CEP – California Environmental Partnership

CGWB – Central Ground Water Board

CMAG - City Managers Association of Gujarat

COTR – Contracting Officer's Technical Representative

CSG – Council of State Government

CTEM – Clean Technology and Environmental Management

CTI – USAID/India's Clean Technology Initiative Project

DOC – U.S. Department of Commerce

EDSA – Epifanio Delos Santos Avenue

EMB – Environmental Management Bureau

EPA – U.S. Environmental Protection Agency

ETNA – Environmental Technology Network for Asia

FCS – Foreign Commercial Service

FICCI – Federation of Indian Chambers of Commerce and Industry

ACRONYMS USED IN THE REPORT

G/ENV/UP – Global Bureau/Center for Environment/Office of Environment and Urban Programs

G/ENV/EET – Global Bureau/Center for the Environment/Office of Energy, Environment and Technology

GOP – Government of the Philippines

GTN – Global Technology Network

IIE – Institute of International Education

IRG – International Resources Group

MCEI - Municipal Coastal Environmental Initiative

MOU – Memorandum of Understanding

NASDA – National Association of State Development Agencies

NGO – Non Governmental Organization

NPPR – National Pollution Prevention Roundtable

OTC – Office of Technology Cooperation

R4 – Results Review and Resource Request

RIG/M – Office of the Regional Inspector General, Manila

RUDO – Regional Urban Development Office

SEI – State Environmental Initiative

SO – Strategic Objective

ACRONYMS USED IN THE REPORT

TERI – Tata Energy Research Institute

TNPCB – Tamil Nadu Pollution Control Board

TSSC – Technical Support Services Contractor

UEIR – Urban Environmental Infrastructure Representative

US-AEP – United States Asia Environmental Partnership