

# a new partnership that works

UNITED STATES-ASIA

ENVIRONMENTAL

PARTNERSHIP

1995 ANNUAL REPORT



A LETTER

FROM THE ADMINISTRATOR OF

THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

dear  
partners and  
friends:

I am happy to present the 1995 Annual Report for the United States-Asia Environmental Partnership (US-AEP). Designed and led by the U.S. Agency for International Development, US-AEP successfully concluded another year of fostering an Asian clean revolution.

US-AEP has concentrated on building long-term partnerships among governments, businesses, and nongovernmental organizations in Asia and the United States to help create incentives, build private and public capabilities, and transfer technology that will improve Asian environmental conditions in the industrial sectors. The urban environmental services sector is enhanced as US-AEP seeks to bring U.S. experience, technology, and practice to the provision of these services. These efforts have met with considerable success.

This year US-AEP added a new Office of Technology Cooperation in Sri Lanka, supported hundreds of business and professional exchanges between the United States and Asia, and facilitated the transfer of significant technology resulting in improved environmental conditions in Asia and in increased sales for U.S. firms. In addition, US-AEP programs were refined and enhanced to meet the challenges of the Asian environment more effectively.

This ground-breaking effort—targeting the expertise of U.S. government agencies, U.S. states, more than 3,000 private sector companies, and many nongovernmental organizations—continues to change and adapt to new concerns critical to sustainable development in Asia.

In 1996, US-AEP will continue the tradition of having Asian, Pacific Island, and American stakeholders actively work together to protect the common future.

Sincerely,

J. Brian Atwood

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# A Successful Experiment

BALANCING THE FUTURES OF ASIA,  
THE UNITED STATES, THE GLOBAL ENVIRONMENT,  
AND ECONOMIC DEVELOPMENT

Industrial development in Asia and the Pacific will profoundly affect the future of the global environment. Already, the region's environmental degradation arouses deep concern. Its carbon emissions may change the world's climate. Its biological endowment is imperiled.

Meanwhile, rates of economic growth surpass those of other regions by large margins. Asia's fabled "industrial miracle" has become the model for development throughout the world; its delivery of prosperity is widely envied. Yet a rising tide of pollutants threatens the logic and appeal of the model.

Within this threat, however, lies the seed of an opportunity. In spite of its astounding performance, Asian industrial development is still young. Indonesia, for example, has yet to install 85 percent of the industrial capacity it will have by 2010. New investment will soon overwhelm previous investments. Asia enjoys a once-in-a-lifetime opportunity to pursue industrialization from a clean foundation and avoid the costs of remediation that plague industrialized countries. Asia's environmental destiny still hangs in the balance. Asia still has a chance to create a "Clean Revolution."

The issue is sustainability. Some Asian countries have captured key ingredients: rapid growth in economic well-being; significant reductions in poverty; and relatively equitable distribution of wealth. If Asia now incorporates clean production within its engine of growth, a new model of sustainable development will be available for emulation everywhere.

Most advanced economies are anchored in aging industries and infrastructures that require expensive pollution-control and remediation tech-

nologies to manage the environmental consequences of modern economies. Other countries have not yet achieved a level of development that requires grappling with those consequences. Much of Asia, however, is capable of making a seamless transition. Some countries already have an informed and concerned citizenry; others, functioning regulations and enforcement mechanisms; and a few, sophisticated responses to the emerging pressures to consider environmental concerns as strategic factors in international business and trade.

To move toward cleaner production is to introduce environmental factors into the mainstream of industrial policy. It entails the mobilizing of an entire arsenal of government policies, business incentives, and community resources to transform industrial behavior. It means taking the quality of the environment as a culminating signature of a nation's industrial culture. And it involves removing all impediments to the efficient adoption of best practices and technologies.

Two generations ago, the Green Revolution in Asia became an agricultural model for the rest of the world. The key elements of cleaner production are broadly reflective of the factors that went into the making of the Green Revolution: total commitment from the highest levels of governance; comprehensive application of science and technology; wide dissemination of useful information; and public and private incentives for the recasting of a fundamental sector.

With Asia approaching an industrial transformation and the United States earning praise for its expertise in environmental management, the time has arrived for a new model of cooperative development in Asia, one that

will demonstrate the designing and installing of a cleaner and more efficient regime for an industrial economy. In other words, the time is ripe to repeat the success of a previous partnership between the United States and Asia, the one that brought about the Green Revolution.

The U.S. Agency for International Development (USAID) is taking the initiative in creating a new partnership to promote cleaner systems of production in Asia. This alliance rests on a commitment to sustainable development. It also relies on the strength of the American environmental community, the largest and most skilled aggregation of relevant experience, technology, and practice in the world.

Change will come most rapidly in the high-growth economies of East Asia. The countries in this sub-region, partly supported by their USAID-founded institutions, are already moving toward clean production. Partnerships in East Asia offer the greatest promise for establishing a new Asian model of development.

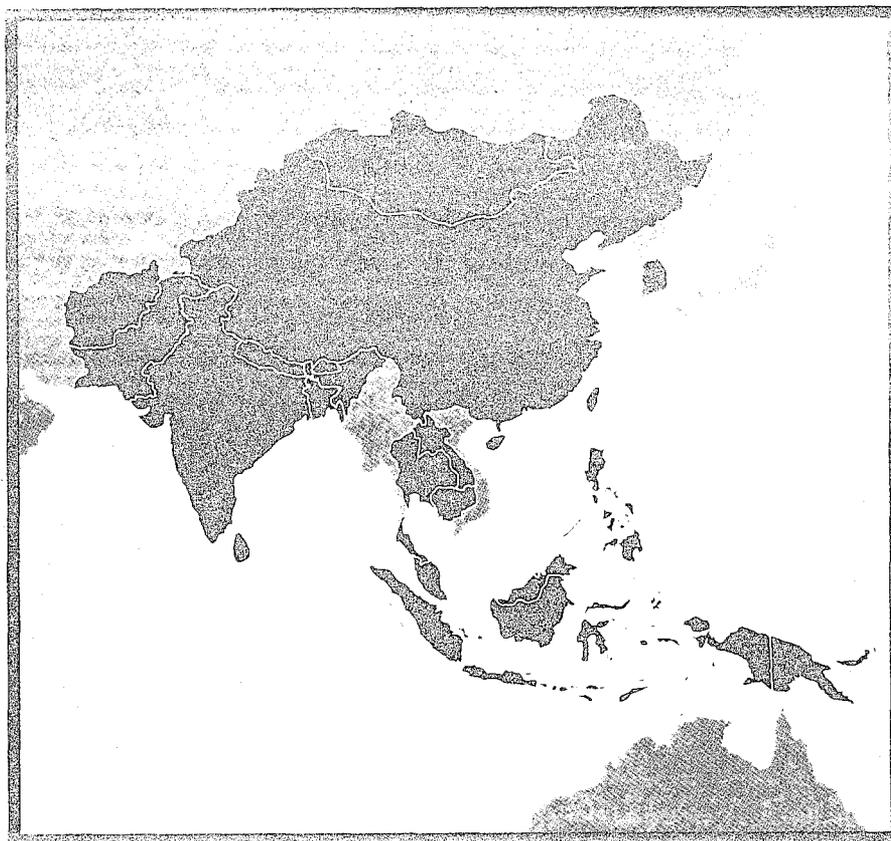
The United States-Asia Environmental Partnership (US-AEP) was created to take advantage of this window of opportunity. Founded in 1992 as a Presidential Initiative, US-AEP operates under the leadership of USAID, which has, thus far, authorized core funding of more than \$130 million. Other partners — American and Asian individuals, nonprofit organizations, private businesses, and government agencies—augment the core funding with cash and in-kind contributions that could reach hundreds of millions of dollars. These investments could generate billions of dollars through direct sales, joint ventures, and licensing agreements. Given its early success, the US-AEP experiment suggests itself as a contemporary model for continuing America's historical engagement with the development of countries that

contain 50 percent of the world's population and many of its most dynamic economies.

From its very inception, US-AEP has experimented with a large inventory of tools and instruments, including exchange programs that enrich the experience of environmental professionals and business managers, incentive grants that encourage small American companies to explore Asian markets for environmental technologies, and streamlined workshops that explain the nuances of working in Asia. In 1995, US-AEP

decided to target the program's most productive activities on assisting Asian countries in the making of a Clean Revolution.

The new strategy focuses US-AEP's resources on industrial development and the environmental infrastructure of urban areas. With the agricultural transformation nearly complete, industry is now expected to generate enough work and wealth to satisfy the rising expectations of Asia's burgeoning populations. Cleaner production in industry, coupled with a full-scale attack on the rising toxicity of the



region's megacities, will relieve pressure on rural areas and natural resources. Success in the industrial and urban sectors will also improve the prospects for sustainable development and more rewarding lives.

US-AEP is now organized around three major components: Clean Technology and Environmental Management (CTEM); Environmental Infrastructure in Urban Areas (EIU); and a Framework of Policies, Constituencies, and Public Awareness for sustaining clean production. A newly strengthened Environmental Exchange Program (EEP) interweaves itself with the other components and helps the ensemble become greater than the sum of its parts.

# CTEM: clean technology and environmental management

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CTEM lies at the core of the new strategy. Designed to improve operating efficiency and environmental performance, it concentrates resources in three complementary spheres: the incentives that persuade companies to refine practices; the capacity of businesses to respond to inducements; and the transfer of technology that takes advantage of incentives and capacities within a given business, sector, or country.

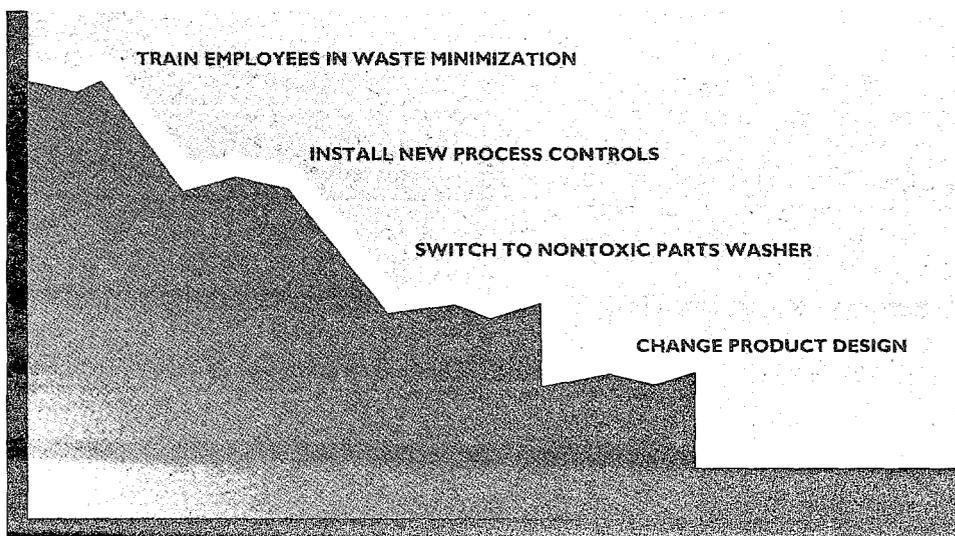
Tools are varied: assistance from US-AEP Technology Representatives throughout Asia; on-site engineering expertise in the latest industrial processes; educational and professional exchanges; identification of opportunities for transferring technology that are immediately distributed to 3,500 American companies through the Environmental Technology Network for Asia (ETNA); grants to encourage small and medium-sized American firms to explore Asian markets and Asian businesses and nongovernmental organizations (NGOs) to collaborate; and assistance for conferences on critical issues and demonstrations of equipment and expertise.

To expand incentives, US-AEP clusters an array of activities around the shaping of public policies, business practices, and community behaviors. The development and dissemination of public policy is facilitated by bringing together key players and experts and providing technical assistance to address specific problems. The adoption of voluntary standards for environmental management is emphasized through exchanges, training, and consultations. The effects of financial institutions and lending practices and the influence of NGOs are also underscored.

To increase capacity, US-AEP works closely with businesses, associations, and professions in both Asia and the United States. Under US-AEP auspices, Asian organizations that bring together industry, academia, and government to promote clean production are strengthened by partnerships with similar organizations in the United States. Industrial sectors also find common ground. In chemicals and textiles, US-AEP sponsors improvements tailored to the configurations of each sector. Expertise also reaches Asian businesses through US-AEP's alliances with profes-

sional organizations and individual professionals, such as architects, engineers, and builders, who occupy pivotal positions and whose influence reverberates throughout the industrial regime.

Transferring a technology, along with its accompanying body of experience and practice, raises basic questions: What are the benefits? Who can supply it? Where should it be deployed? US-AEP provides vehicles for answering such questions: information centers in three Asian locations; technical experts stationed throughout Asia; incentive grants administered by the National Association of State Development Agencies (NASDA) and the Council of State Governments (CSG); and a continuous flow of professional exchanges. Dissemination of crucial information strengthens business-to-business and industry-to-industry partnerships.



WASTE REDUCTION IN A UNIT OF PRODUCTION OVER TIME

## THE CTEM MODEL

### CTEM: MOVING TOWARD CLEAN PRODUCTION

**Saving Money with Clean Technology.** US-AEP helped introduce wastewater pre-treatment in the Philippines through its promotion of cavitation air flotation (CAF) technology. CAF, an energy-efficient alternative developed by Hydrocal of California, addresses wastewater treatment in a logical and cost-effective way—by reducing the volume that will need more expensive treatment later in the production process.

US-AEP supported a CAF demonstration unit in Manila during 1994 and 1995. Subsequently, CTEM helped coordinate demonstrations and seminars with local companies throughout greater Manila. The technology has been received with enthusiasm. Pepsi Cola Far East Trade Development Company is the first company to use the CAF technology as part of a turn-key waste treatment project. Other companies are considering CAF technology as a cost-effective means of upgrading facilities to meet tougher standards. Some \$317,000 in CAF technology has been sold in the Philippines since its launching.

A little help, wisely distributed, can go far toward meeting environmental concerns, transferring technologies, and strengthening local industries.

### BOTTOM LINE

**Thai Firms Find U.S. Partners for Analysis, Instrumentation.** CTEM supports institutions that encourage the shift toward clean production. In Thailand, inspection and analytical services are essential to the setting of standards and enforcing of regulations. The Thai Board of Investments encourages joint ventures with American firms to provide such services.

Two business groups, Thai Patana and Oregon Pacific, have responded to the encouragement. After exploratory meetings in both countries, arranged through US-AEP, the two firms incorporated as the Patana-Pacific Group. The partnership saw \$1 million in sales of pollution-prevention and environmental equipment in 1995. The partners are now committed to marketing projects that increase industrial efficiency, reduce wastes, and improve the environment while locking in profitability for Thai companies.

**BOTTOM LINE**

Small American ventures that occupy niches with high priority have a bright future, but chances for success are enhanced by the formation of public and private partnerships, the cultivation of experienced institutions, and the manipulation of established networks in clean technologies and environmental management.

**Audits, Exchanges Whet Asian Markets for U.S. Clean Technologies.** Waste audits and environmental management systems are new in Asia. In conducting their first waste audits, Filipino Pipe and Foundry Corporation (FPFC) in the Philippines and River Kwai International Ltd. (RKI) in Thailand uncovered numerous ways to reduce waste, incorporate less hazardous processes into basic practices, and achieve higher productivity while using fewer resources.

FPFC, manufacturer of cast iron pipes, reduced solid wastes by 109 tons a year after implementing recommendations of a waste reduction assessment conducted by US-AEP in 1994. FPFC realized annual savings of \$55,600 by mixing conservation and good-housekeeping practices with recycling and changes in production processes and equipment. In May 1995, FPFC participated in US-AEP's Environmental Business Exchange program, traveling to the United States to observe clean production in various iron and steel mills. Subsequently, FPFC raised its investment in technologies for cleaner production from \$15,000 in 1994 to \$546,000 in 1995.

RKI, a corn exporter, has converted 80 metric tons per day of waste husks into revenue. The waste found a market as animal fodder among farmers and feed millers. The dried, unprocessed cobs sell for the equivalent of \$640 a day. RKI awaits further market response before purchasing American machinery to process bulk waste. The audit has led to investments of \$500,000 in American de-huskers, autoclaves, and food conveyors.

Many companies in key sectors—iron and steel, food processing, cement, pulp and paper, metal finishing—have participated in waste reduction assessments and tours conducted by US-AEP through the Environmental Exchange Program (EEP). Their conversion to cleaner production supports a market in environmental equipment worth \$2.5 million in 1995, a figure that does not include pending arrangements with U.S. suppliers. The Filipino market for environmental technologies in iron and steel alone will reach \$1 billion over the next five years.

**BOTTOM LINE**

Asian companies use waste audits to evaluate clean technologies and business exchanges to create new channels for meeting suppliers and partners.

# EIU: environmental infrastructure for urban areas

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New infrastructure spending, in some estimates amounting to more than \$1 trillion, will soon be disbursed to meet the accelerating demands of Asian economies. Governments in the region are pondering the imminent construction of power generation plants, roads, high-speed rail links, harbors, airports, water supply and sewage systems, telecommunications systems—and even entirely new cities. Given this breathtaking scale, US-AEP staff decided in 1995 to review all its activities that provide infrastructure services for urban jurisdictions.

While tightening its focus, US-AEP also decided to maintain a regional presence by continuing its support for a Commercial/Environmental Specialist based at the Asia Development Bank (ADB). In 1995, this office helped open to U.S. technology consultants a \$3.2 million annual market for technical assistance and planning grants.

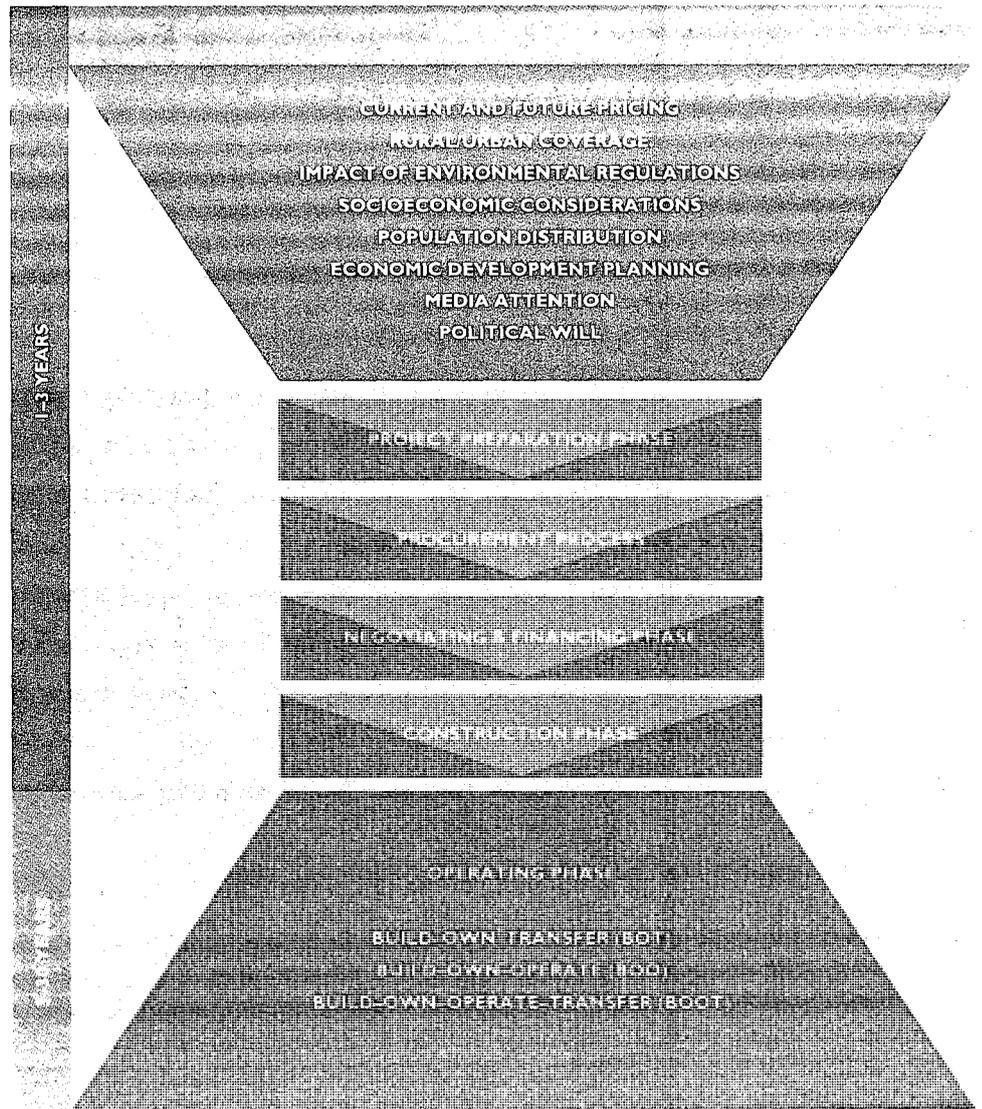
In Thailand and Indonesia, US-AEP Urban Infrastructure Representatives targeted the need to create a proper investment climate for water supply, wastewater, solid waste, and hazardous waste projects at the municipal level. US-AEP worked with USAID missions to structure a viable environment for public projects, collaborating on the sponsorship of technical workshops on privatization for municipal officials through the Institute for Public-Private Partnerships and the Center for Financial Engineering in Development. As a result, municipalities are better equipped to develop and use external studies on the effects of privatization.

US-AEP staff in the United States supported the Asian initiatives by mobilizing business interests, developing financial scenarios, and finding proper matches for various proposals. In September, US-AEP and the American Consulting Engineers Council (ACEC) hosted an infrastructure workshop with experts from Asia who analyzed privatization schemes for Thailand, Indonesia, Malaysia, and the Philippines. The workshop launched a discourse on Asian opportunities among the American participants—engineers, developers, equipment suppliers, investors, financial experts—who normally have few opportunities to discuss common interests.

US-AEP also joined with ACEC to create a direct link to the latter's 5,500 members, enabling US-AEP to benefit from the organization's technical and institutional expertise. During the year, ACEC evaluated project leads from US-AEP overseas representatives and then matched them appropriately. This process identified seven Asian projects attractive enough to persuade ACEC members to begin discussions with potential Asian partners.

**THE PROJECT  
CONTINUUM FOR**

ENVIRONMENTAL INFRASTRUCTURE



**US-AEP AT WORK ON ENVIRONMENTAL INFRASTRUCTURE**

**New York Treatment Plant Receives First Lady of the Philippines.** The First Lady of the Philippines, Amelita Ramos, took advantage of the celebrations surrounding the 50th Anniversary of the United Nations to inspect one of the latest and most sophisticated products of American expertise in wastewater treatment. US-AEP officials in Manila and Washington were instrumental in suggesting and managing her visit to the North River Water Pollution Control Plant, which is located along the Hudson River in New York City.

The recent clean-up of the Hudson River, a dramatic change from its condition only a generation ago, suggests parallels with the Pasig River, which runs through the center of Metro Manila. First Lady Ramos spearheads a movement in Manila to clean up the Pasig River, now heavily polluted from urban runoff, industrial discharges, and the sewage from more than 70,000 squatter families living along its banks.

U.S. industry is supremely capable of demonstrating the latest technology to countries that seek an immediate halt to environmental destruction.

**BOTTOM LINE**

**US-AEP Helps Land Large Water Study.** The Bangkok Metropolitan Authority (BMA) of Thailand awarded a large feasibility study, under its BMA III program, to a partnership of Thai and U.S. firms that demonstrated a unique approach to meeting the technical and financial demands of a large infrastructure project. The U.S. companies displayed advanced "trenchless technology," which, according to the Thai contractor, will offer the most effective alternative for building a wastewater collection and treatment system within the land constraints of densely urbanized Bangkok. This part of the project will develop facilities to serve the 12 million residents exposed to the polluted Chao Phraya River.

US-AEP provided training to BMA and the Thai contractor, a process that also exposed both to U.S. technology. The three U.S. companies, all located in Texas, assumed the risk of participating in distant projects and quickly formed joint ventures with other American and Thai firms to meet BMA requirements with a competitive proposal. The total project is worth \$224 million, with success in this competition likely to position U.S. firms advantageously for ensuing projects, especially the half dozen or so that will emerge from BMA in the near future.

Infrastructure projects are slow to mature, but patience is usually rewarded with advantageous positioning in the next round of awards.

**BOTTOM LINE**

**US-AEP Infrastructure Experts Help California Firm.** With the help of US-AEP field staff, Montgomery Watson of Pasadena, CA, won a \$600,000 technical assistance contract from the Asian Development Bank. The firm worked in conjunction with Macro Consultants of Thailand to prepare a plan for developing wastewater and pollution control facilities in metropolitan Bangkok.

US-AEP supported this ADB project through information and coordination services supplied by its environmental representative to the ADB in Manila and its Urban Environmental Infrastructure Representative in Bangkok. The experts in both offices worked closely together to help representatives of Macro visit the Metropolitan Water Reclamation district of Greater Chicago and attend WasteExpo '95.

In addition to expertise on local circumstances and technical issues, US-AEP provides early alerts on big projects coming down the pipeline.

**BOTTOM LINE**

# Framework: policies, constituencies, and public awareness

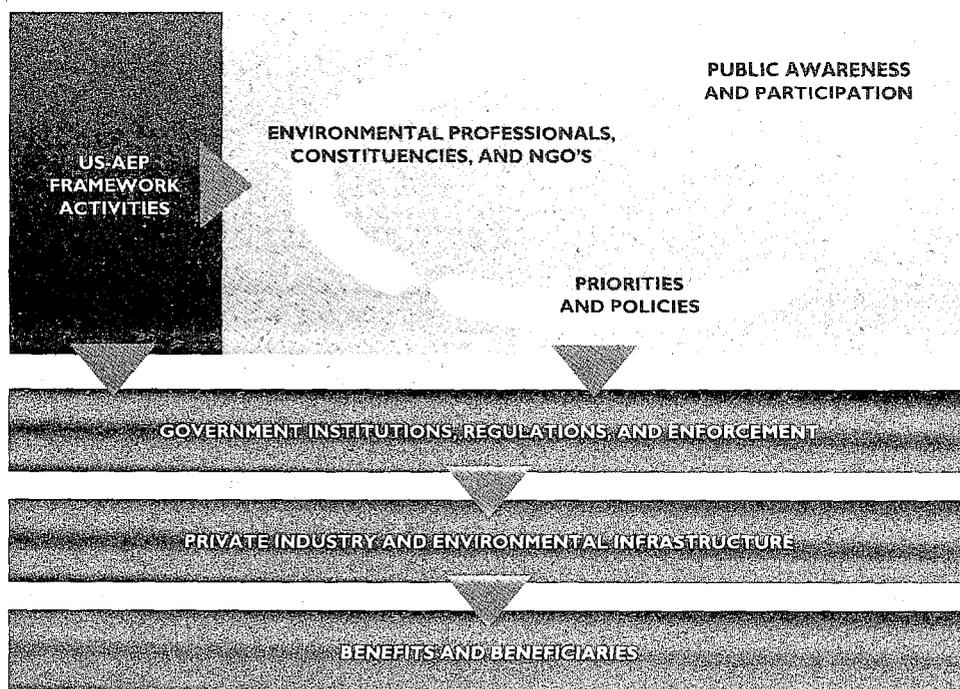
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Environmental progress is virtually impossible without a strong public concern expressed in policies, laws, and regulations. This ethos, coupled with appropriate public programs, fosters behaviors that reward good environmental practices. The US-AEP component concerned with policies, constituencies, and public awareness helps Asian countries establish the understandings, government policies, business practices, and community behaviors that are prerequisites to — and the “framework” for — a Clean Revolution. The work of this component will eventually give issue to new criteria for investing in industry and infrastructure.

The rich complexity of social, cultural, economic, political, and environmental conditions in Asian countries compels US-AEP to tailor its framework activities to the needs of each nation. In countries where low public awareness of the hazards of pollution inhibits the development of support for needed policies and practices, US-AEP sends Asian journalists or NGO leaders to the United States to improve their environmental understanding and professional abilities. Where laws discourage investment in clean technologies, US-AEP engages American experts in effluent charges (or other market-based approaches appropriate for the Asian context) to meet with a ministry of finance or industrial trade association. Where the execution of sound laws and regulations suffers from poorly informed management, US-AEP links Asian professionals with the resources, information, and experience of the Air and Waste Management Association and the Water Environment Federation. And where the enforcement of well-crafted pollution standards is problematic, US-AEP supports partnerships for training and short-term technical assistance with the EPAs of both the federal government and the state of California.

The Framework component thus links up well with US-AEP’s industrial and infrastructure activities. It draws on American and Asian experience with the complexities of environmental management and with the array of local actions that are required in each country to make environmental management more effective. By promoting partnerships and exchanges with American research institutes, government agencies, universities, NGOs, professional associations,

and other organizations, US-AEP helps Asian countries establish the overall context for the construction of a new environmental regime. Similarly, US-AEP helps Americans understand how the future of the global environment depends on sound management everywhere.



INFORMATION FLOWS  
WITHIN FRAMEWORK

US-AEP BUILDING THE FRAMEWORK

**States Share Environmental Expertise.** US-AEP and the Council of State Governments (CSG) are collaborating on a State Environmental Initiatives (SEI) program, a graphic and illuminating example of an effective federal-state partnership at work. Following a national competition, eight public-private partnerships, formed by 10 states and five Asian countries, were awarded grants as high as \$144,000 each, in addition to a state contribution of matching funds averaging \$520,000. The three-year program encourages the partnerships as a means of achieving the long-term transfer of U.S. environmental experience and technologies. The program takes advantage of the historical involvement of states in environmental management and of their detailed knowledge of local firms with technologies and techniques that can be redeployed to address Asian environmental problems.

Winners include: Louisiana-Indonesia, Indonesia Environmental Rice Project; Kentucky-India, International Environmental Trade Initiative; Maryland-District of Columbia-Indonesia-Solomon Islands, a project on Transfer of Solar Photovoltaic Technology for Rural Electrification; Washington State-Indonesia, East Java Water Project; Connecticut-Rhode Island-India-Hong Kong-Taiwan-Korea, World Partners for Environmental Commerce; and Pennsylvania-Korea, Water Resources in Korea.

The New York State Department of Economic Development, another of the first eight winners, is collaborating with the Maharashtra regional government in India to reduce industrial pollution in Bombay. The new partnership will draw on New York's highly successful attack on pollution problems across a broad front.

In the winning grant between Arizona and Taiwan, the Morrison Institute for Public Policy at Arizona State University, the Arizona Department of Commerce and Department of Environmental Quality, Environmental Technology Industry Cluster, World Trade Center Arizona, University of Arizona, and Phoenix Sister Cities Commission have joined together in an unprecedented effort to build partnerships within the state and between the state and a foreign counterpart. The Arizona organizations are working closely with the Taiwanese government to identify solutions to Taiwan's most pressing industrial and environmental challenges.

**BOTTOM LINE** The complexity of the variables affecting the environment is uniquely matched by the diversity of the American experience in environmental management.

**Legislators Teach and Learn How to Improve the Policy Environment.** The American legislative and regulatory regime for the environment is tough. In governing the permissible uses of the environment, it is undoubtedly the most rigorous and comprehensive in the world. And the world now values it highly.

Under a US-AEP fellowship, a Washington State Senator assisted the Thai House of Representatives to review environmental policies. She quickly identified a range of feasible ways to strengthen legal procedures. Like many American leaders, she has learned from trial-and-error experience, a hard-earned wisdom that led her to emphasize pollution prevention as the most cost-effective approach to the Thai dilemma. She later organized a Parliamentarian's Conference on environmental issues.

In Korea, an alumnus of a US-AEP fellowship was elected mayor of Iuwang City. His campaign focused on sustainable development. The fellowship included meetings with American officials, environmental NGOs, and business leaders and attendance at the International Development Conference in Washington, DC. "I like the way Americans admit their own mistakes while learning to solve problems," the new mayor said later.

The Mongolian Minister of Justice spent time with the Environmental Law Alliance Worldwide, a fellowship that introduced him to the formulation, installation, and evaluation of American environmental legislation.

**BOTTOM LINE** The world now enjoys easy access to a broad array of American expertise in formulating environmental policy, building constituencies, and cultivating public awareness and participation.

# EEP: environmental exchange program

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The Environmental Exchange Program (EEP) constitutes a unique initiative within US-AEP. Yet it is also densely interwoven into the very fabric of the other components. EEP's multiple functions are managed by the Institute for International Education (IIE), the largest nonprofit educational and cultural exchange organization in the United States. EEP provides Asian professionals and relevant organizations and businesses with unique opportunities to address their most pressing environmental problems. Exchanges may flow from Asia to the United States, from the United States to Asia, or, occasionally, among various points within Asia. Wherever the location and whatever the program, participants can rely on IIE's professionalism to inform all three categories of exchange:

*Environmental Business Exchanges* provide Asian participants with opportunities to identify sources of U.S. technology, observe key facilities and technologies first-hand and evaluate their suitability for Asian applications, meet face-to-face with potential partners, and confer with government officials and industry leaders. American participants may travel to Asia to evaluate the scope of environmental problems and suggest solutions that may draw upon U.S. sources for appropriate technologies and practices. These exchanges are short and intense, usually lasting less than two weeks.

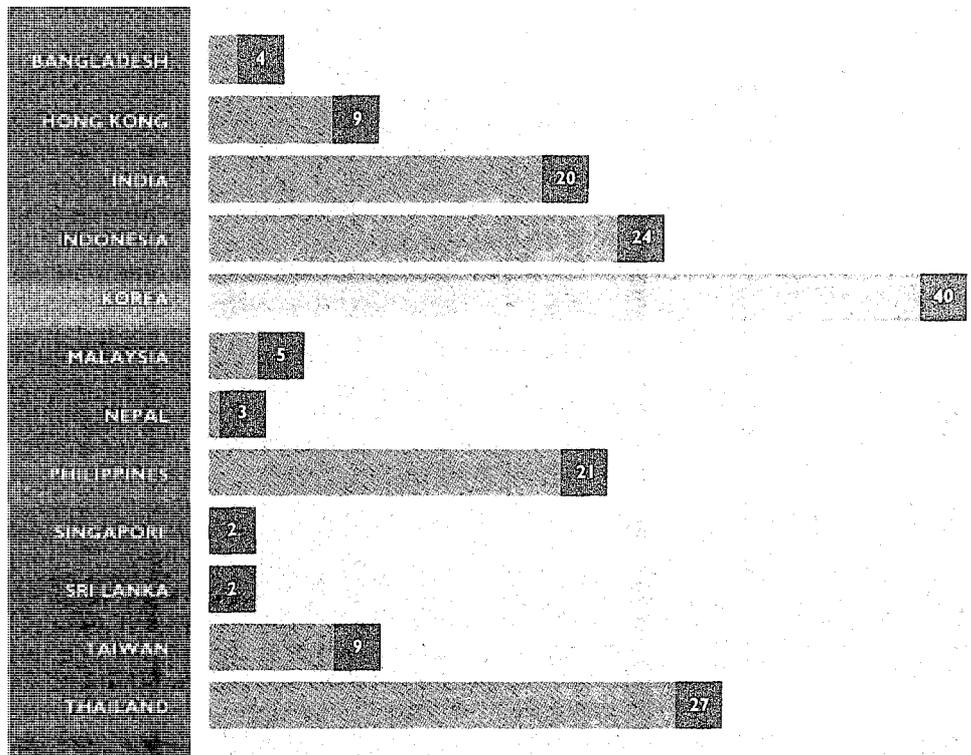
*Environmental Technical Exchanges* provide Asian leaders with specific short-term technical experience on a variety of topics, such as incineration of hazardous and industrial waste, landfill and solid waste management, and air pollution control technologies. Technical curricula are often managed by the U.S. Environmental Training Institute, an organization that received early support from US-AEP and is now an IIE subcontractor.

*Environmental Fellowships* provide senior Asian and U.S. professionals with practical work, on-site opportunities for exchanging information and expanding their understanding of environmental issues and various approaches to solving problems. Typically lasting from one to four months,

fellowships help participants develop concrete solutions to specific environmental problems. Participants usually work side by side with overseas counterparts and may be placed in businesses, nongovernmental organizations (NGOs), or government agencies.

Candidates for exchanges may include the following: Asian individuals, representatives of companies, NGOs, or government units that require help in addressing highly specific environmental dilemmas; American individuals, representatives of companies, NGOs, or government units with expertise requested by an Asian entity.

**SUMMARY OF  
COMPLETED EXCHANGES  
BY COUNTRY  
MAY 1995-JANUARY 1996**



**US-AEP EXCHANGING INFORMATION AND EXPERTISE**

**Exchanges Build Foundations for the Long Term.** The general manager and senior technical managers of India's Thermax, Ltd., wanted to meet leaders of the American environmental monitoring sector and pursue the possibility of forming joint ventures and making arrangements for representing U.S. manufacturers in India. US-AEP staff members in Bombay quickly recognized the potential of this request and passed it to Washington for approval and action.

Within a few weeks, EEP was able to help the Indians meet with top executives at 10 American manufacturers of monitoring equipment and attend an exhibition devoted to rural water problems. These face-to-face discussions and site visits enabled the Indian exchange participants to identify five potential business partners.

**BOTTOM LINE**

Doing business in Asia entails the building of complex relationships and the construction of a scaffolding of trust; exchanges help lay the foundations.

**Exchanges Help Level the Playing Field.** The Creighton Group, a minority-owned company based in Los Angeles, CA, was introduced to the Asian environmental market through a technical course on financial development. The course was sponsored by US-AEP.

As a direct result of the contacts made at the US-AEP event, the Los Angeles company won contracts for two small wastewater projects in Thailand. The Los Angeles firm also won a contract for a feasibility study of a larger project located at Doi Suthpe, a major Buddhist Wat in Northern Thailand. Feasibility studies often lead to downstream contracts.

US-AEP support helps a plucky, if untested, company hook up with key decision-makers, thus opening an entirely new market for its services.

**B O T T O M   L I N E**

**Markets for Advanced Technologies Advance with Education.** An employee of Hong Kong's Department of Environmental Protection wanted to study control and enforcement mechanisms for industrial and indoor air pollution. US-AEP was there to help.

An EEP Fellowship enabled this employee to evaluate the use of vapor recovery and destruction units that reduce toxic emissions and volatile organics, visit factories and end-users, and consult with U.S. government agencies and laboratories.

U.S. technologies and the technical studies to support their deployment anywhere in the world are second to none.

**B O T T O M   L I N E**

# Environmental Contexts: biological diversity and energy

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In August, US-AEP began to concentrate its focus on industrial efficiencies and the infrastructure of the urban environment, particularly within Asia's megacities. As a result, US-AEP, while continuing its funding, is gradually shifting many management responsibilities for biodiversity and energy to the Environment Center of USAID's Global Bureau. These activities include programs for the conservation of fisheries and ocean resources and the generation, transmission, and distribution of power and renewable energy. The Biodiversity Conservation Network (BCN) remains under the US-AEP rubric, but the program is now operationally managed by the Global Bureau.

## US-AEP PROTECTING DIVERSITY AND SAVING ENERGY

**Helping Biodiversity Earn Its Own Way.** The International Institute of Rural Reconstruction is using a BCN grant, funded by US-AEP, to develop a community-based enterprise for collecting and processing medicinal plants. This venture helps residents of the newly created Mount Palaypalay National Park in the Philippines exploit the new reserve in sustainable ways. The Institute is also exploring the potential for local residents to benefit from ecotourism and related activities.

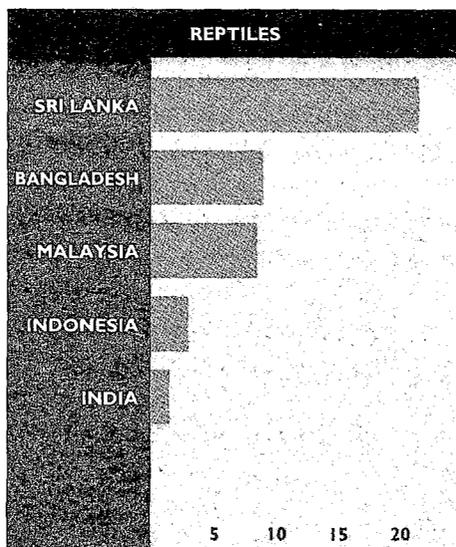
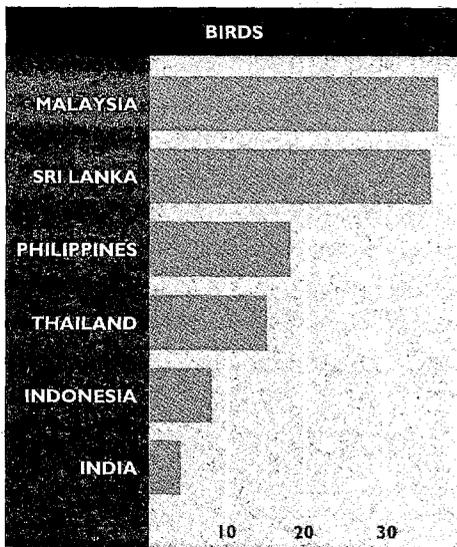
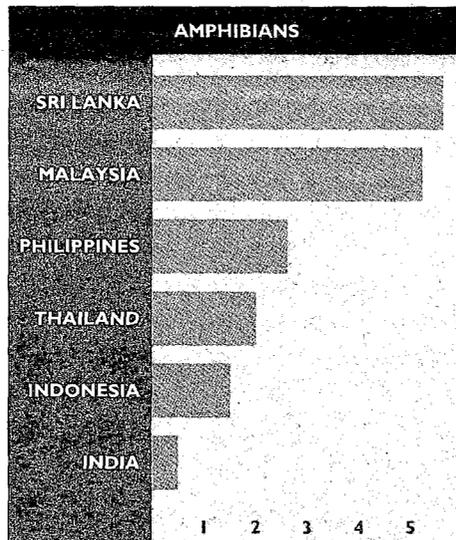
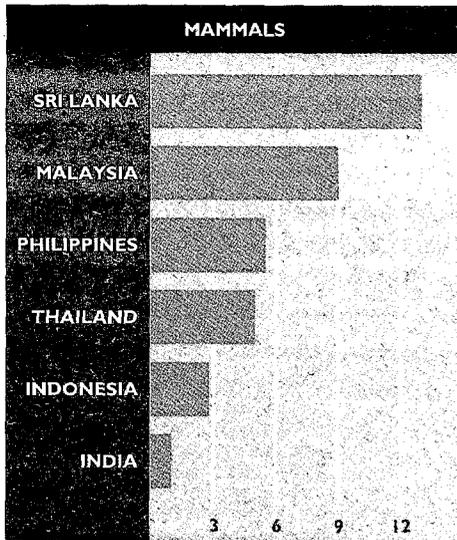
The core enterprise focuses initially on three medicinal plants that the Department of Health's (DOH) Traditional Medicine Unit has approved and is promoting throughout the country. The plants are collected and then either sold as raw materials or processed into syrups and ointments for sale to the DOH, which has indicated it will purchase all products the site can supply. The possibility of marketing the plants to up-scale markets for natural foods and health products in Manila is being explored.

## BOTTOM LINE

Biodiversity pays—as long as the careful harvesting of the biological dividend holds sway over the wanton exploitation of the biological principle.

**Sustainable Enterprises Conserve Biodiversity in Indian Sanctuary.** The Biligiri Rangan Hills Wildlife Sanctuary, located at the confluence of the Western and Eastern Ghats in India, harbors

**BIOLOGICAL DIVERSITY  
OF SELECTED  
ASIAN COUNTRIES**



**RANKED ACCORDING TO AVERAGE NUMBER OF SPECIES / 10,000 SQ. MILES**  
**SOURCE: "SRI LANKA'S BIODIVERSITY," TIGER PAPER, VOL. XIX, NO. 4, 1992, BANGKOK, THAILAND**

extraordinarily high floral and faunal diversity. Overharvesting of the forest products, however, increasingly threatens the sustainability of the biodiversity.

To address the problem, the local NGO, Vivekananda Girijana Kalyana Kendra (VGKK), a strong advocate for the sanctuary's indigenous Soligas communities, is promoting sustainable management of forest products in the sanctuary. A BCN grant through the University of Massachusetts Foundation enables VGKK to establish several new enterprises — processing amla fruits, herbs, and wild honey and producing broom sticks and herbal shampoos in sachet containers for sale to hotels. The Tata Energy Research Institute is also providing technical assistance.

The preservation of the world's biological endowment will not happen by accident.

**BOTTOM LINE**

# Financial Statements

The United States-Asia Environmental Partnership (US-AEP) was initiated under a Presidential Determination, dated December 30, 1991, as a 10-year U.S. government effort, commencing January 4, 1992, to mobilize the intellectual and financial resources of the American public, private, and nongovernmental sectors to assist the developing and newly industrializing nations and territories of Asia and the Pacific to deal with their environmental problems and, thereby, enhance sustainable development with the maximum transfer of U.S. experience, technology, and practice. As noted herein, this focus has been sharpened by the U.S. Agency for International Development (USAID) into a single Strategic Objective (SO): Promote an Asian Clean Revolution.

USAID, the lead U.S. government agency in US-AEP, originally authorized core funding for US-AEP amounting to \$100 million under USAID Project Number 499-0015, dated May 25, 1992. In this project format, the program presently has an assistance completion date (PACD) of December 31, 1999. In 1995, the Environmental Improvement Project (EIP), between USAID and the six original constituent countries of the Association of South East Asian Nations (ASEAN), which was authorized under USAID project number 399-0360 on March 20, 1992 at a life of project (LOP) level of \$17,500,000, was merged into US-AEP. During 1995, EIP was operated as an element of US-AEP for ASEAN

purposes but is otherwise fully integrated into US-AEP operating structure.

In June, 1995, the Bureau for Asia/Near East (ANE) of USAID formally reviewed and approved a new strategy for US-AEP, which is described elsewhere in this annual report. Under the new, re-engineered principles of USAID, programs such as US-AEP no longer have fixed LOP amounts. Rather, funding is authorized on a yearly basis, depending on achievements of results specified within SOs. US-AEP's future funding will depend upon its continuing a high level of performance.

The actual obligation of funds under US-AEP has been as follows:

US Fiscal Year 1992 .....	\$11,645,000
US Fiscal Year 1993 .....	\$25,159,000
US Fiscal Year 1994 .....	\$16,398,000
US Fiscal Year 1995 .....	\$22,764,615
Subtotal .....	\$75,966,615
Anticipated	
US Fiscal Year 1996 .....	\$18,300,000
<b>Total .....</b>	<b>\$94,266,615</b>

One financial objective of US-AEP is to leverage these core funds on the basis of more than a dollar of other investments for every dollar of USAID-furnished investment. Thus, over the life of the program, it is expected that significant amounts of cash and in-kind contributions will be made to the program by partner organizations and individuals from the U.S. and Asian public, private, and nongovernmental sectors.

Moreover, it is anticipated that these investments will bring about technology transfers from the United States to Asian and Pacific countries through sales, joint ventures, and licensing agreements amounting to as much as \$5 billion during the 10-year life of the partnership.

## THE FOLLOWING STATEMENTS REFLECT:

**Table A:** The amounts of US-AEP actual investments (i.e., the expenditure of USAID core financing) against specific US-AEP program components (i.e., the major management units of US-AEP) and activities together with companion partnership investments, where possible (i.e., cash and in-kind expenditures by U.S. and Asian entities) for those components and activities for the period from program inception (i.e., the date actual field activities of US-AEP commenced) to December 31, 1995, a period of three and one-quarter years. These numbers are restated from the 1994 Annual Report to conform to

# Statement A: US-AEP and Partnership Investments by Program Element

From Program Inception (October 1, 1992, or March 20, 1992 in the case of ASEAN EIP) to December 31, 1995.

Program Component and Activity	US-AEP Actual Investments	Partnership Investments	Total Investment
<b>A. Clean Technology Environmental Management</b>			
Asian Offices of Technology Cooperation Activity (US Department of Commerce/US&FCS)	2,722,829	2,702,750	5,425,579
Environmental Technology Network for Asia (ETNA) Activity (USAID/Center for Trade and Investment Services)	367,967	600,000	967,967
Environmental/Energy Technology Fund Activity (National Association of State Development Agencies)	4,534,968	8,291,304	12,826,272
Environmental Trade Finance Information Activity (Bankers Association for Foreign Trade)	119,084	247,000	366,084
ASEAN Environmental Improvement Project (Louis Berger International Inc.)	8,276,984	869,405	9,146,389
<b>Subtotal</b>	<u>16,021,832</u>	<u>12,710,459</u>	<u>28,732,291</u>
<b>B. Environmental Infrastructure</b>			
Infrastructure Finance Advisory Service Activity (IFAS) (K&M Engineering & Consulting Corporation)	1,154,242	N/A (1)	1,154,242
Urban Infrastructure Representatives Activity (USAID/Regional Housing and Urban Development Offices)	1,585,000	75,000,000 (5)	76,585,000
Urban Infrastructure Representative Support Activity (American Consulting Engineers Council)	63,032	46,875	109,907
Energy Development Activity (US Department of Energy)	125,000	700,000	825,000
Trade Development Program Activity (US Trade Development Agency)	500,000	N/A	500,000
Environmental Enterprise Development Initiative Activity (OPIC)	1,000,000	N/A	1,000,000
<b>Subtotal</b>	<u>4,427,274</u>	<u>75,746,875</u>	<u>80,174,149</u>
<b>C. Framework</b>			
Environmental Action Activity (US Environmental Protection Agency)	1,547,684	1,448,700	2,996,384
National Environmental Association Development (Air & Waste Management Association/ Water Environment Federation)	78,319	16,548	94,867
State Environmental Initiative Activity (Council of State Governments)	521,431	4,195,641	4,717,072
Non-Governmental Organizations – Business Exchanges (The Asia Foundation)	83,200	15,240	98,440
<b>Subtotal</b>	<u>2,230,634</u>	<u>5,676,129</u>	<u>7,906,763</u>
<b>D. Environmental Exchange Program (and predecessors)</b>			
Environmental Exchange Program (Institute of International Education)	1,018,873	459,716	1,478,589
Environmental Fellowship Activity (The Asia Foundation)	3,373,439	4,122,000	7,495,439
Environmental Business Exchange Activity (World Environment Center)	3,796,990	4,928,733	8,725,723
Short-Term Technical Training Activity (US Environmental Training Institute)	2,456,868	1,792,000	4,248,868
<b>Subtotal</b>	<u>10,646,170</u>	<u>11,302,449</u>	<u>21,948,619</u>
<b>Subtotal of A thru D</b> (Represents present Strategic Objective)	<u>33,325,910</u>	<u>105,435,912</u>	<u>138,761,822</u>
<b>E. Biodiversity and Natural Resources (Special Objective)</b>			
Biodiversity Conservation Network Activity (WWF, TNC, WRI)	10,352,512	4,445,291	14,797,803
CITIES (US Fish and Wildlife Service)	47,020	86,999	134,019
<b>Subtotal</b>	<u>10,399,532</u>	<u>4,532,290</u>	<u>14,931,822</u>
<b>F. Other Activities</b>			
USAID Mission Transfer Activities	3,385,000	N/A	3,385,000
Planning, Programming, Administration, Total Quality Management, Strategic Planning	11,422,563 (2)	1,471,277 (3)	12,893,840
<b>Subtotal</b>	<u>14,807,563</u>	<u>1,471,277</u>	<u>16,278,840</u>
<b>Subtotal of E and F</b>	<u>25,207,095</u>	<u>6,003,567</u>	<u>31,210,662</u>
<b>US-AEP GRAND TOTAL</b>	<b>58,533,005</b>	<b>111,439,479</b>	<b>169,972,484</b>

US-AEP's new Strategic Objective and its management units.

**Table B:** These same US-AEP actual investments and partnership investments arrayed against the countries in which, or for which, they were made, together with the total current value (in US\$) of all technology transfers to those countries from the United States. These amounts were supplied by reliable sources in companies that effected the transfers or intermediate organizations (such as trade associations or state development agencies) that told US-AEP that the transfers resulted, substantially or meaningfully, from US-AEP actions or programs. Under an internal USAID determination dated August 29, 1994, US-AEP agreed to restrict the amount of US-AEP investments in "other USAID-eligible countries" (i.e., USAID-nonpresence countries) to a maximum of \$20 million over the course of the US-AEP original \$100 million program. For those countries that were "USAID-assisted countries" (i.e., USAID-presence countries) and then became USAID-eligible countries, the limitation applies only to investments made after the date of change.

Both tables include the amount of support provided through the ASEAN Environmental Improvement Project (EIP), as described above.

The notes to this financial information are an integral part of that information.

# Statement B: US-AEP Investment Returns by Region

From Program Inception (October 1, 1992, or March 20, 1992 in the case of ASEAN EIP) to December 31, 1995.

Category	US-AEP (4) Actual Investments	Partnership (5) Investments	Total Investments	Total Current Value All (6) Technology Transfers
USAID-Assisted Countries (7)	28,266,205	96,846,839	125,113,044	258,610,611
Other USAID Eligible Countries (8)	10,373,293	9,622,587	19,995,880	368,805,138
Regional (9)	193,960	2,629,371	2,823,331	177,846,000 (10)
<b>OPERATIONAL SUBTOTAL</b>	<b>38,833,458</b>	<b>109,098,797</b>	<b>147,932,255</b>	<b>805,261,749</b>
Planning, Program Integration and TQM	11,422,563 (2)	1,471,277 (3)	12,893,840	
<b>TOTAL</b>	<b>50,256,021</b>	<b>110,570,074</b>	<b>160,826,095</b>	<b>805,261,749</b>
ASEAN Environmental Improvement Project	8,276,984	869,405	9,146,389	2,000,000 (11)
<b>GRAND TOTAL</b>	<b>58,533,005</b>	<b>111,439,479</b>	<b>169,972,484</b>	<b>807,261,749</b>

## NOTES TO FINANCIAL STATEMENTS:

### General:

The figures contained herein, with the exception of those relating to official authorizations and obligations of USAID, are drawn from the operational files of US-AEP, its partners, and the beneficiaries of the program. The amounts indicated against individual countries represent figures resulting from the "demand-driven" activities of US-AEP. They do not represent country allocations, entitlements, or other pre-programmed levels that would represent funding arrangements not part of the US-AEP program. The figures are not official numbers drawn from the accounting records of the United States Government. Nevertheless, the staff of the secretariat of US-AEP believe them to be accurate and to represent fairly the operations and performance of the program.

### Specific:

N/A Not applicable

1. IFAS activity by K&M Engineering is a commercial contract with no direct partnership "leverage."
2. Investments required for providing contracted operational planning, programming and administration of the US-AEP program, largely costs of the Technical Support Services Contract with Tropical Research and Development, Inc. (TR&D) for the period January 1, 1995, to May 4, 1995, and a contract with International Resources Group (IRG) for the balance of calendar year 1995. Includes certain communications, public education,

outreach, and partnering activities undertaken under grant or contract from TR&D or IRG. Also includes investments in program Total Quality Management, largely costs of the Quality Assurance activities of Management Systems International; and for strategic planning, largely costs of activities with Winrock International and the Tata Energy Research Institute (TERI).

3. Estimated value of partners' counterpart investments to US-AEP efforts in communications, public education, and outreach.
4. Actual expenditures by US-AEP and budget transfers to USAID missions for work that integrates missions' programs with US-AEP activities. Includes grants awarded by the Biodiversity Conservation Network and the National Association of State Development Agencies technology transfer grants, whether or not funds were disbursed.
5. Includes cash and in-kind or matching contributions, or attributions, reported by all partners to US-AEP. Includes \$75 million of Housing Investment Guaranty (HIG) funds acquired by the Government of the Republic of Indonesia from U.S. commercial sources, pursuant to a guarantee provided by the U.S. government. This HIG program was entered into between the U.S. Government and the Government of Indonesia as a result of, among other reasons, the agreement of US-AEP to provide expert engineering services in the provision of Urban Infrastructure. While these funds have

been acquired by Indonesia, they technically may not yet have been expended.

6. Represents value reported to, and confirmed by, US-AEP from U.S. companies or intermediaries (such as trade associations or state development agencies) of all sales of goods and services, and contracts for goods and services, systems, and projects, plus estimated value, to the U.S. partner, of all joint ventures and licensing agreements to U.S. firms during the first five years of such agreements.
7. Bangladesh, India, Indonesia, Mongolia, Nepal, Philippines, and Sri Lanka were USAID-assisted through December 31, 1995; South Pacific was USAID-assisted through September 30, 1994, and Thailand was USAID-assisted through September 30, 1995. In USG Fiscal Year 1995 and beyond, incremental amounts for South Pacific and Thailand are recorded as "Other USAID Eligible."
8. These are countries eligible for US-AEP assistance under the Foreign Assistance Act (Hong Kong, Korea, Malaysia, Singapore, Taiwan, the South Pacific after October 1, 1994, and Thailand after October 1, 1995) but without USAID mission programs.
9. Regional investments not subdividable.
10. Not otherwise identified by the U.S. firms reporting values of transfers to US-AEP.
11. This amount represents an estimate by EIP staff of the value of technology transfers. US-AEP is in the process of developing a better system to track results for EIP.