



ENVIRONMENTAL HEALTH PROJECT

**EHP II Year 1 Annual Report
June 21, 1999, to September 30, 2000**



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Abbreviations

ADRA	Adventist Development and Relief Agency International
AFRIMS	Armed Forces Research Institute of Medical Sciences, Thailand
AFRO	Regional Office for Africa, WHO
AIL	activity implementation letter
AMR	antimicrobial resistance
ANDA	National Aqueduct and Sewerage Administration (Administración Nacional de Acueductos y Alcantarillado), El Salvador
ANE Bureau	Asia and the Near East Bureau, USAID
ARI	acute respiratory infection
BASICS	Basic Support for Institutionalizing Child Survival
CDC	Communicable Disease Control Division, MOH, Eritrea; U.S. Centers for Disease Control and Prevention
CDIE/DEC	Development Experience Clearinghouse, USAID Center for Development Information and Evaluation
CESH	Community-Based Environmental Sanitation and Hygiene
CGIAR	Consultative Group on International Agricultural Research
CIMEP	Community Involvement in the Management of Environmental Pollution
DAP	detailed action plan; detailed activity plan
DIGESA	General Directorate of Environmental Health (Dirección General de Salud Ambiental), Peru
DR	Dominican Republic
DRC	Democratic Republic of the Congo
ECHO	Environmental Change and Health Outcomes
ECHO/IP	ECHO Integrated Programs component
ECHO/XS	ECHO Cross-Sectoral Surveillance component
EH	environmental health
EHP	Environmental Health Project
EIR	entomological inoculation rate
ENACAL	Nicaraguan Aqueduct and Sewerage Company (Empresa Nicaragüense de Acueductos y Alcantarillados)

GESCOME	Community Management of Environmental Health (Gestion Communautaire de la Santé Environnementale)
GIS	geographic information system
GOP	government of Peru
G/PHN/HN	Center for Population, Health, and Nutrition, Bureau for Global Programs, USAID
HS II Program	Health Sector II Program
IC	Information Center
ICDDR,B	International Center for Diarrheal Disease Research in Bangladesh
IDRC	International Development Research Center, Canada
IEC	information, education, and communication
IMCI	integrated management of childhood illness
IMCI/DR model	Dominican IMCI model
INAPA	National Water Supply and Sewerage Institute (Instituto Nacional de Aguas Potables y Alcantarillados), Dominican Republic
IND	investigational new drug
IQC	indefinite quantity contract
IR	intermediate result
JE	Japanese encephalitis
JHU	Johns Hopkins University
LAC	Latin American and Caribbean region
M&E	management and evaluation
MIM	Multilateral Initiative on Malaria
MOH	ministry of health
MOU	memorandum of understanding
MRC	Medical Research Council, South Africa
MSP1	merozoite surface protein 1
MVDP	Malaria Vaccine Development Program
MVDPTA	MVDP technical adviser
NASA/CHAART	Center for Health Applications of Aerospace Related Technologies, U.S. National Aeronautics and Space Administration
NGO	nongovernmental organization
NIAID	U.S. National Institute of Allergy and Infectious Diseases

NIMR	National Institute for Medical Research, Tanzania
NMCP	national malaria control program
OR	operations research
PAHO	Pan American Health Organization
PHN	population, health, and nutrition; Center for Population, Health, and Nutrition, USAID/G
PVO	private voluntary organization
RBM	Roll Back Malaria
RPM	Rational Pharmaceuticals Management Project
RUDO	Regional Urban Development Office, USAID/South Africa
Saniconn	Sanitation Connection
SCG	Scientific Consultants Group, MVDP
SEARO	South East Asia Regional Office, WHO
SOW	scope of work
SSO	strategic support objective
TWG	Technical Working Group
UNICEF	UN Children's Fund
USAID	U.S. Agency for International Development
VBD	vector-borne disease
VBDRTC	Vector-Borne Disease Research and Training Center
WASH	Water and Sanitation for Health Project
WAWTTAR Program	Water and Wastewater Treatment Technologies Appropriate for Reuse Program
WHO	World Health Organization
WSH	water, sanitation, and hygiene
WSP	Water and Sanitation Program
WS&S	water supply and sanitation
WSSCC	Water Supply and Sanitation Collaborative Council
XS	cross-sectoral surveillance

Summary

The Environmental Health Project II (EHP II) aims to achieve two objectives: (1) Reduce mortality and morbidity in children under five or associated with infectious diseases of major public health importance, by improving environmental conditions or reducing exposure to disease agents; and (2) Provide a mechanism for access by diverse interests within USAID to a broad range of expertise in environmental health. In particular, there is growing concern in some USAID-assisted countries and regions about environmental problems, which are not connected with infectious disease, but rather are associated with noninfectious disease outcomes.

To achieve these objectives, EHP II was awarded as an indefinite quantity contract (IQC) by USAID. Task Order 1, which was awarded at the same time as the umbrella IQC, is specific in its objectives and detailed activities in order to serve primarily the first of the two objectives above. In support of USAID's Bureau for Global Programs, Center for Population, Health and Nutrition's strategic support objectives in child health (SSO #3) and infectious diseases (SSO #5), the key function of this task order is to provide global leadership in the development, implementation, and promotion of new and improved, cost-effective, and scaled-up environmental health interventions. The IQC also provides for other task orders, Task Orders 2 and 3, which may serve either of the two objectives, but will be the avenue for addressing the second objective.

Task Order 1 was designed to accomplish two intermediate results (IRs): IR #1—Community-based Environmental Sanitation and Hygiene (CESH): Improved environmental health interventions will be implemented at the community and household levels, as well as taken to scale at the national level, using innovative methods proven to be effective in reducing childhood mortality and morbidity due to diarrheal disease, acute respiratory infections (ARI), and malaria as well as other vector-borne diseases; and IR #2—Environmental Change and Health Outcomes (ECHO): Surveillance systems and interventions which support and exploit improved understanding of the connections between environmental factors and health outcomes at the local, national, and regional levels will be developed and implemented. Consistent with the overall objective of EHP, this result is focused on reducing childhood mortality and morbidity, as well as preventing and controlling infectious diseases of major public health importance. In part, this result will also elucidate the health implications of increased stress placed upon natural resources at the local, regional, and global scales, including water in its fundamental role in supporting good health.

EHP will reach these two Intermediate Results through subtasks, organized under six tasks: Task 1, Work Plan; Task 2, Policy and Lessons Learned; Task 3, Community-Based Environmental Sanitation and Hygiene (CESH); Task 4, Environmental Change and Health Outcomes (ECHO); Task 5, Grants; Task 6, Information and Communication; and Task 7, Other Activities.

This annual report describes EHP II's activities, accomplishments and partnerships that took place during Year 1 at EHP II Washington headquarters and in 15 developing countries (CESH: Benin, Democratic Republic of the Congo, Dominican Republic; ECHO: Eritrea, Mozambique, Nepal Madagascar; Task 7: Morocco, Honduras, El Salvador, Peru, South Africa, Tanzania; Task 2-n: Ukraine, Nicaragua.) Year 1 of EHP II covers 15 months from June 1999 to September 2000.

Introduction

Background

The Environmental Health Project II (EHP II) was established by the U.S. Agency for International Development (USAID) to achieve two objectives:

1. Reduce mortality and morbidity in children under five or associated with infectious diseases of major public health importance, by improving environmental conditions or reducing exposure to disease agents;
2. Provide a mechanism for access by diverse interests within USAID to a broad range of expertise in environmental health. In particular, there is growing concern in some USAID-assisted countries and regions about environmental problems, which are not connected with infectious disease, but rather are associated with noninfectious disease outcomes.

In order to achieve these objectives, EHP II was awarded as an indefinite quantity contract (IQC) which has, in effect, two main parts. Task Order 1, which was awarded at the same time as the umbrella IQC, is specific in its objectives and detailed activities in order to serve primarily the first of the two objectives above. In support of USAID's Bureau for Global Programs, Center for Population, Health and Nutrition's (G/PHN/HN's) Strategic Support Objectives in child health (SSO #3) and infectious diseases (SSO #5), the key function of this task order will be to provide global leadership in the development, implementation, and promotion of new and improved, cost-effective, and scaled-up environmental health interventions. The IQC also provides for other task orders, Task Orders 2 and 3, which may serve either of the two objectives, but will be the avenue for addressing the second objective.

EHP II is managed by a consortium of specialized organizations headed by Camp Dresser and McKee International Inc, an environmental engineering company based in Cambridge, Massachusetts. Other members in the consortium are as follows:

- Associates in Rural Development (surveillance, natural resources management, grants administration)
- International Science and Technology Institute (tropical and vector-borne diseases, information management)
- John Snow Inc. (health policy, epidemiology, health and hygiene education, surveillance)
- The Manoff Group (behavior change, community involvement and social marketing)

- Research Triangle Institute (policy and regulation, health financing, municipal services, air pollution, risk assessment)
- Training Resources Group (institutional strengthening, organizational development, training)
- Tulane University School of Public Health and Tropical Medicine (tropical diseases and malaria, operations research)

Project Strategy

In order to contribute significantly to improved child health, EHP II will work in a way that not only avoids duplication but fosters integration and synergy with other projects, agencies, and institutions with common programmatic objectives. On the one hand, the goal is to contribute to the improvement in child health by more effectively integrating environmentally related prevention measures into child health programs. On the other, the goal is to advocate for including health concerns – and associated program decisions – in environmental programs.

EHP II will adopt several key strategies:

- Work in partnership
- Develop rigorously tested, cost-effective interventions and tools
- Mainstream prevention of childhood diseases through environmental interventions in child health programs – both within USAID and partner organizations
- Implement country-level strategies, maximizing the use of local expertise, to have national-level impact
- Focus on effective community-based approaches to improving health
- Manage information and communication in a strategic fashion
- Apply an interdisciplinary approach and analysis

Results to be Achieved

Task Order 1 is designed to accomplish two of USAID's intermediate results:

1. IR #1—Community-based Environmental Sanitation and Hygiene (CESH): Improved environmental health interventions will be implemented at the community and household levels, as well as taken to scale at the national level, using innovative methods proven to be effective in reducing childhood mortality and morbidity due to diarrheal disease, acute respiratory infections (ARI), and malaria as well as other vector-borne diseases.
2. IR #2—Environmental Change and Health Outcomes (ECHO): Surveillance systems and interventions which support and exploit improved understanding of the connections between environmental factors and health outcomes at the local, national, and regional levels will be developed and implemented. Consistent with the overall objective of EHP, this result is focused on reducing childhood mortality and morbidity, as well as preventing and controlling infectious diseases of major public health importance. In part, this result will also elucidate the health implications of increased stress placed upon natural resources at the local, regional, and global scales, including water in its fundamental role in supporting good health.

EHP will reach these two Intermediate Results through subtasks, organized under six tasks:

Task 1: Work Plan

Task 2: Policy and Lessons Learned

Task 3: Community-Based Environmental Sanitation and Hygiene

Task 4: Environmental Change and Health Outcomes

Task 5: Grants

Task 6: Information and Communication

Task 7: Other Activities

Task Order 1

Task 1: Work Plan

Overview of Task

Task 1 in Task Order 1 is the development and finalization of the yearly EHP work plans. Development and finalization of the yearly EHP work plans required extensive assessments of existing activities; discussions and meetings with USAID, the EHP technical staff, and subcontractor representatives; and the preparation of outlines, drafts, and final approved plans for the upcoming year of the project.

Accomplishments during Year 1

- EHP II organized a start-up workshop with USAID, all eight subcontractors and the CORE group in October 1999. The purpose of the workshop was to ensure a common understanding of the project, build a project team, clarify how the project would be managed and provide input into the work plan.
- The EHP II Year 1 Work Plan and Five Year Overview were submitted and approved by USAID on January 10, 2000, following three months of development, preparation and review.
- A draft of the Year 2 Work Plan was submitted to USAID.

Task 2

Overview of Task

Task 2 includes six subtasks—Operations Research, Sanitation Policy, Monitoring and Evaluation, Meetings, Partnerships, and Lessons Learned and Policy. Taken as a whole, these activities describe work that EHP will undertake under task order 1 at the project and global levels to influence policy (e.g., through operations research), develop partnerships, provide monitoring and evaluation and capture and disseminate lessons learned.

Operations Research

Operations Research on Malaria

Overview of Subtask

The Operations Research on Malaria subtask was originally Subtask 1 under Task 3, Community-Based Environmental Sanitation and Hygiene (CESH), but was moved under Task 2.

The activity contributes to the following CESH Result 2: The effectiveness (including efficacy) of community-based environmental management interventions for control of vector-borne disease will be determined, with a focus on urban malaria in several African settings, but also potentially including other issues of regional importance.

Accomplishments during Year 1

- A technical paper on field experience on community-based management of malaria vectors was prepared as a background discussion paper for an EHP Technical Working Group (TWG) meeting. The technical literature review describes the current state of the art regarding the essential characteristics of preventive environmental health actions for malaria vector management. The document addresses a range of preventive actions including (1) environmental management, (2) chemical application, (3) biological control, and (4) personal protection. It also emphasizes two cross-cutting themes: (1) community participation in implementation of identified actions and (2) demonstrated successes in urban areas.
- An EHP Technical Working Group (TWG) met to identify key elements of the operations research agenda on community-based malaria vector control. Three key operations research (OR) topics were identified. The topics are as follows:
 - Develop an algorithm to choose a specific intervention appropriate to a particular ecological and community context

- Define the minimum package of data and related methods to make strategic vector management decisions at the community level and use of the package. Define and promote use of the following standardized outcome measures:
 - Percent of productive breeding sites eliminated
 - Human bites per hour
 - Entomological inoculation rate (EIR)
- Define the most effective ways of involving the community in malaria vector management.
- Actions were initiated to prepare a Key Issues Summary with an Annotated Bibliography as an initial step towards establishing an OR agenda.

Sanitation Policy

Overview of Subtask

The purpose of the Sanitation Policy activity is to lay the groundwork for collaborating with major international organizations (e.g., the World Health Organization, the Pan American Health Organization, the UN Children’s Fund [UNICEF], the Water Supply and Sanitation Collaborative Council) working in the sector, to develop tools to assist in the promotion of sanitation as national policy, and to apply these tools in five USAID-assisted countries in which there is a PHN sector program. Such tools could include, but are not limited to, presentations, guidelines, policy workshops—alone or in combination—in an overall process that will lead to sanitation policy improvements. The basic strategy is to create strategic partnerships, collaborate with USAID-funded projects and other organizations that have relevant experience or similar needs, and maintain and enhance networking; to identify and develop information for programming and policy discussions; to identify needs for specific policy tools; to identify possible future opportunities to apply the tools; and to seek to affect and implement sanitation policies on national and local levels.

Accomplishments during Year 1

- A series of internal EHP and USAID meetings took place to lay the groundwork for collaboration with major international organizations working in sanitation to develop tools to assist in the promotion of sanitation as a national policy and to apply the tools in five USAID-assisted countries. Collaboration with the Water Supply and Sanitation Collaborative Council (WSSCC) was also initiated, related to the planning of the WSSCC meeting in Iguacú, Brazil.

Indicators and Performance Monitoring

Overview of Subtask

Performance Monitoring assists planning and management of all tasks and activities and addresses needs internal to the project and of USAID. This activity ensures that management and evaluation (M&E) plans are developed, for EHP as a whole as well as CESH, ECHO and field programs; systems and procedures are in place to track activities from planning through implementation to evaluation; and a quality management process of reviews and progress monitoring is implemented.

The purpose of the Indicators subactivity is to improve the validity and reliability of existing water, sanitation and hygiene (WSH) indicators and the development of new indicators where necessary. This activity is implemented at two levels, international consensus building for key WSH indicators, and improving local monitoring to assist programmatic decision making. It supports directly EHP's two main goals, namely, to focus on health results of environmental health interventions, and to mainstream prevention in child survival programs. EHP works closely with international organizations and private voluntary organizations (PVOs) to implement this activity.

Accomplishments during Year 1

- Work plans were developed for five of the six tasks stated in the EHP II contract. (There is no separate work plan for grants.)
- Policies and procedures for performance monitoring and quality management were drafted and posted in the eRoom.
- The EHP Monitoring and Evaluation Plan was drafted.
- M&E Plans for the following country programs—Benin, Eritrea, Nepal, Nicaragua—were completed.
- Quarterly Reports starting from the start-up phase through June 30th, 2000 were finalized and posted in the eRoom.
- Preliminary design and testing of components of the activity tracking system (e.g., the eRoom and the activity planning schedule) were implemented.
- Indicators: A Scope of Work for the Indicators subactivity was prepared. Initial contacts were made with MACRO, UNICEF and the World Health Organization (WHO) about water, sanitation and hygiene (WSH) indicators.

Meetings and Reports

Overview of Subtask

The purpose of the Meetings and Reports subtasks of Task 2 is to communicate EHP's technical areas of interest to wider audiences.

The Meetings subtask serves as a vehicle for promotion of environmental health as a component of other, broader tools used for policy formulation, through EHP participation in international meetings, conferences, and workshops.

The Reports subtask serves as EHP's mechanism for influencing relevant policy discussions through development of five policy reports over the life of the project. Reports may discuss policy issues, the current state of environmental-health-related knowledge, or results of specific activities undertaken by EHP.

Accomplishments during Year 1

- EHP served as the Conference Secretariat for the International Consultation on Indoor Air Pollution. The Consultation was cosponsored by USAID and WHO. EHP prepared two background bibliographies related to acute respiratory illness for the consultation. The project also prepared the Consultation Proceedings report.
- At USAID's request, EHP provided logistical support for four consultants to attend the Respiratory Disease and Environment Conference held in Lucknow, India.

Partnerships

Overview of Subtask

The purpose of the Partnerships activity to establish and maintain communication with various partner organizations and to identify specific opportunities for collaboration with EHP. This coordination and collaboration is an essential element for EHP to achieve its goal of mainstreaming the primary prevention of diarrhea, malaria, and acute respiratory infection within the child survival context. This activity is aimed at the development of partnerships at the more institutional or general level and at the development of a consistent approach to building partnerships that may be monitored.

A partnership strategy will be developed and implemented with the aim of developing specific collaborative activities with USAID cooperating agencies, UN and other international agencies, private voluntary organizations (PVOs), nongovernmental organizations (NGOs), the Office of Private and Voluntary Cooperation in USAID's Bureau for Humanitarian Response, and with private, commercial-sector partners.

Once specific areas of collaboration have been identified, the actual collaboration on specific issues and topics is budgeted under other EHP tasks and subtasks.

Accomplishments during Year 1

- EHP finalized the Scope of Work (SOW) and began initial work on the partnership strategy that will provide a framework for consistently approaching, sharing, and tracking contract and partnership activities.
- Collaboration was initiated with the CORE Group for the development and refinement of their overall strategy and the definition of a “collaborative relationship” of EHP with CORE consistent with that strategy.
- Initial meetings were held with potential collaborating partners including the World Bank, UNICEF, WHO, the Water and Sanitation Program (WSP), and others.
- A decision was made to recruit a Partnership Coordinator.

Lessons Learned and Policy

Overview of Subtask

The purpose of the Lessons Learned and Policy subtask is to capture the lessons learned from EHP’s experience and to keep USAID updated on the project’s progress. EHP accomplishes this by holding regular technical and management meetings internally, with EHP staff, and externally, with USAID. In addition, this subtask includes the time spent initiating and maintaining the project’s eRoom and the time for staff to read and respond to non-activity-specific e-mail.

Accomplishments during Year 1

- Project management and USAID established a weekly meeting schedule. EHP staff met regularly based on the schedule. Summary notes were produced and distributed to staff.

Issues/Problems during Year 1

There was lack of effective use of the EHP Management eRoom. Plans were made to assess the eRoom structure.

Task 3

Community-Based Environmental Sanitation and Hygiene

Overview of Task

Task 3 under Task Order 1 is Community-Based Environmental Sanitation and Hygiene (CESH). Task Order 1 was designed to contribute to achievements in two broad areas, one of them being CESH. EHP will contribute to implementing environmental sanitation and hygiene interventions by developing, using, and disseminating systematic processes which help NGOs, government program managers, and communities identify local environmental health priorities and guide selection of actions to reduce morbidity and mortality in children under 5. EHP will also provide assistance in developing and implementing appropriate, participatory, community-based interventions to address those priorities and improve health at the household and community levels.

The CESH component focuses on reduction of diarrheal diseases by improving personal, household, and community hygiene and consists of four Subtasks.

Subtask 1: Develop and implement an operations research plan to achieve CESH results, which respectively address improving environmental interventions to combat diarrheal disease, malaria, and ARI.

Subtask 2: In conjunction with other major international organizations working in the sector (e.g. WHO, the Pan American Health Organization [PAHO], UNICEF, Water Supply and Sanitation Collaborative Council, etc.), develop tools to assist in the promotion of environmental sanitation as national policy and apply these tools in five USAID-assisted countries in which there is a PHN sector program. Such tools could include, but are not limited to, presentations, guidelines, policy workshops, or some combination of these in overall process which will lead to sanitation policy improvements.

Subtask 3: Build upon existing community-based approaches to environmental health improvements and in close collaboration with USAID activities under the Child Health Results package and project operations research activities, refine and test community-based methods to prevent diarrheal disease, malaria, and ARI, including behavior change.

Subtask 4: Use the approaches developed in Subtask 3 to improve community environmental sanitation and hygiene in at least three USAID-assisted countries.

CESH Approach

Overview of Subtask

The CESH Approach is an aspect of Subtask 3: Build upon existing community-based approaches to environmental health improvements and in close collaboration with USAID activities under the Child Health Results package and project operations research activities, refine and test community-based methods to prevent diarrheal disease, malaria, and ARI, including behavior change.

Accomplishments during Year 1

- An outline of the CESH Approach was drafted as well as two CESH Approach tools—a situational analysis tool to be used by EHP scoping/design teams and a local situation analysis and activity design tool to be used by local leaders.

Issues/Problems during Year 1

- The CESH Coordinator left.
- Progress on the activity was slow relative to the timeline laid out in the Year 1 work plan. Project staff struggled with issues around the definition of EHP's contribution to the understanding of "community based" processes and the linkages between the direction the activity was taking and other activities planned by EHP. An interim CESH Coordinator was appointed to facilitate the development of Year 2 work plan.

CESH Field Programs

Benin (GESCOME II)

The Benin activity is also referred to as GESCOME II (Gestion Communautaire de la Santé Environnementale). GESCOME I was a Community Involvement in the Management of Environmental Pollution (CIMEP) activity under EHP I, which ran from 1997 to 1999. GESCOME II is the continuation of the program under EHP II, which began in June 1999. Similar to the CESH Approach (described above) the Benin activity falls under subtask 3—build upon existing community-based approaches to environmental health improvements and in close collaboration with USAID activities under the Child Health Results package and project operations research activities, refine and test community-based methods to prevent diarrheal disease, malaria, and ARI, including behavior change.

Benin program activities consist of refining EHP's community-based approach, applying it in the field, conducting operations research and scale-up activities, and promoting environmental sanitation policies.

Accomplishments during Year 1

- A work plan through December 2000 was drafted with a focus on the prevention of diarrhea in 12 neighborhoods of four towns in the Parakou Department using microprojects.
- Community members, local NGOs, district-level government and provincial-level government were trained to recognize local risk factors for diarrhea diseases, identify means to reduce transmission , build environmental health infrastructure and promote behavior change.
- Several meetings were held and presentations were given to local policy makers to garner increased political support for the activity.

Task 4: Environmental Change and Health Outcomes

Overview of Task

Task 4 of Task Order 1 is Environmental Change and Health Outcomes (ECHO), and is comprised of four subtasks.

Under Subtask #1, EHP will assist in the design, evaluation, and dissemination of lessons learned and support NGOs in implementing field projects that combine community-based natural resource management with interventions to improve health outcomes. (Subtask #1 is described under “4B ECHO/IP: Integrated programs.”)

Under Subtasks 2 through 4, EHP will develop methods for performing integrated analysis of epidemiological, environmental, demographic, and other data to improve the prevention and control of malaria, other vector-borne diseases, and other environmental health problems. These subtasks are described below under “4A ECHO/XS: Cross-Sectoral Surveillance.”

4A. ECHO/XS: Cross–Sectoral Surveillance

Overview of Subtask

Cross-sectoral surveillance (XS) is part of EHP’s Environmental Change and Health Outcomes (ECHO) component. Referred to as ECHO/XS, this program area has two elements: ECHO/XS Cross-Sectoral Surveillance and ECHO/XS General: Planning Research and Outreach.

ECHO/XS Cross-Sectoral Surveillance covers three subtasks:

- Develop cross-sectoral surveillance methods to collect, integrate, and analyze environmental, demographic, epidemiological, and other information in support of disease prevention and control programs.
- Develop and use policy advocacy tools to gain support from national ministries of health and international health organizations for the use of these methods, to better understand the changing patterns of infectious diseases of major public health importance.
- Institutionalize the use of cross-sectoral surveillance methods in at least three USAID-assisted countries.

ECHO/XS Field Programs

The ECHO/XS program currently focuses on surveillance, prevention, and control of malaria with mission-funded activities in Eritrea, Mozambique and Nepal. An EHP funded activity complements the field activities with program-level planning,

outreach to partner organizations, and desk studies that guide and support field-based research.

Eritrea: Technical Assistance to the National Malaria Control Program

EHP is providing technical assistance to Eritrea's Ministry of Health (MOH) in the implementation of the National Malaria Control Program (NMCP). EHP is supporting the MOH in strengthening its surveillance systems, operational research program, evidence-based decision making, and vector control operations.

Accomplishments during Year 1

- A framework for a three-year technical assistance program was drafted by EHP and NMCP officials.
- Based on the framework, EHP prepared a draft detailed activity plan for providing technical assistance
- Activities focusing on building the capacity of the central and zonal staff of MOH's Communicable Disease Control Division (CDC) to collect basic entomological data on malaria vectors and develop digital maps for use in developing malaria stratification maps were initiated.
- EHP consultant teams trained MOH staff in general entomological methods and use of geographic information systems (GIS).
- EHP also provided support for conducting a national entomological survey to evaluate the distribution and behavior of malaria vector species. Support included in-field supervision of survey teams and laboratory support for the analysis of mosquito samples.

Issues/Problems during Year 1

- Because of the border conflict between Eritrea and Ethiopia, the NMCP was not able to perform the vector and parasite prevalence studies in certain areas.
- For the same reason, NMCP was not fully up to date on entering and processing data collected in Year 1 of the program.

Mozambique: Technical Assistance to the National Malaria Control Program

EHP has been working in Mozambique since 1998 to help the MOH improve malaria surveillance through enhanced data collection and using geographic information systems (GIS). Based on USAID/Mozambique's decision to substantially increase its support to the national malaria control program (NMCP), EHP was invited by USAID/Mozambique to conduct a scoping visit. Utilizing information gathered during the visit, EHP prepared a draft detailed action plan (DAP) proposing a technical assistance program.

Accomplishments during Year 1

- A four-year draft plan for technical assistance to Mozambique was developed by EHP in collaboration with other partners (the World Bank, South African Medical Research Council and UNICEF)..
- EHP II provided technical and material assistance to the MOH for mapping patterns of malaria and the first set of maps showing the distribution of malaria cases in two districts (Maputo and Matola) was prepared.
- Preparation for collecting malaria case reports and mapping cases in a selected high-risk neighborhood, Polana Canico, were completed. This is the third step in EHP's phased effort to develop a malaria risk stratification map for Maputo.

Nepal: Prevention and Control of Selected Infectious Diseases

In 1998, USAID/Nepal and Nepal's Ministry of Health initiated a five-year program for the prevention and control of selected infectious diseases. The program's first component focuses on surveillance and control of three vector-borne diseases (VBDs), malaria, kala-azar, and Japanese encephalitis. EHP has lead responsibility for implementing this component, in collaboration with the Vector-Borne Disease Research and Training Center (VBDRTC) in Hetauda, Nepal. The second component addresses antimicrobial resistance (AMR) and drug policies and is being implemented by the International Center for Diarrheal Disease Research in Bangladesh (ICDDR,B) and USAID's Rational Pharmaceuticals Management (RPM) Project.

EHP began work in Nepal in the last year of the EHP I contract (1998 to 1999); therefore, year 1 of EHP II (1999 to 2000) was the second year of the technical assistance program in Nepal. The Nepal program is expected to continue for three more years.

Accomplishments during Year 1

- The Development Board for the Vector-Borne Disease Research and Training Center (VBDRTC) was established on January 24, 2000. EHP worked with the board to establish the Center's operating guidelines, salary structure, business plan, and publicity materials, as well as completing urgent repairs and maintenance of facilities. A total of six meetings were organized for the VBDRTC Development Board. The meetings were important steps in strengthening VBDRTC's institutional capacity.
- EHP provided training in the use of laboratory diagnostic tests for kala-azar and Japanese encephalitis (JE) to technicians at VBDRTC and selected hospitals throughout Nepal. Work began on a sentinel surveillance system for JE at six hospitals in several eastern districts.

- A baseline assessment to characterize the spatial distribution and risk characteristics of malaria, kala-azar, and Japanese encephalitis was designed and launched in four districts.
- EHP organized an initial regional meeting with representatives of Nepal, India, Bangladesh, Sri Lanka, and Bhutan to discuss common interests and issues in the control of vector-borne diseases.
- EHP coordinated implementation of three activities by the U.S. Centers for Disease Control, including a training workshop on early detection of outbreaks and response and a study to assess the sensitivity of malaria surveillance and a case control study to identify risk factors for kala-azar.

ECHO/XS General: Planning, Research, and Outreach

This element of the cross-sectoral (XS) program is funded by the Global Bureau's Office of Health and Nutrition. The purpose of this activity is to provide program-level coordination and technical direction to the XS field activities, to ensure that the full XS program achieves the objectives—i.e., to develop, promote, and institutionalize the use of cross-sectoral approaches for improving the surveillance of infectious diseases of major public health importance. This activity has four components: Planning and Evaluation; Partnerships and Communication; Methods Development; and Program Development.

Accomplishments during Year 1

Partnerships

- Partnerships for implementing field activities in Eritrea (World Bank), Mozambique (the Medical Research Council [MRC] of South Africa, UNICEF, World Bank) and Nepal (U.S. Centers for Disease Control and Prevention [CDC], Thai Armed Forces Research Institute of Medical Sciences [AFRIMS], Mahidol University, WHO South East Asia Regional Office [SEARO]) were established.
- Agreement was obtained from WHO/Roll Back Malaria (RBM) to collaborate in developing a protocol for evaluating vector control programs that will become part of the RBM situational assessment process.
- An agreement was reached with the WHO Regional Office for Africa (AFRO) to support efforts to develop a network of entomologists in Africa.
- Relationships were strengthened with personnel responsible for malaria programs in the USAID Africa Bureau and Asia and the Near East (ANE) Bureau and for infectious disease surveillance in G/PHN/HN.
- Contacts were made with other U.S. agencies that may prove useful in future efforts, including the U.S. CDC, National Institutes of Health (National Institute

of Allergy and Infectious Diseases [NIAID] and Fogarty Center), and the National Aeronautics and Space Administration's Center for Health Applications of Aerospace Related Technologies (NASA/CHAART).

- With support from the USAID Office of Agriculture and Food Security and in collaboration with the International Development Research Center (IDRC) of Canada, EHP sponsored a session on linkages between agricultural practices and malaria at the upcoming annual meeting of the Consultative Group on International Agricultural Research (CGIAR).

Methods Development

- A Technical Working Group meeting was held to agree on common approaches for collecting data and developing GIS capabilities in EHP programs in Nepal, Eritrea, Mozambique, and Malawi.

Program Development

- An agreement was reached with USAID/Asmara and the MOH on the scope of a three-year technical assistance activity for the national malaria control program in Eritrea.
- An agreement was reached in principle with USAID/Maputo on the scope of a four-year technical assistance activity for the national malaria control program in Mozambique.
- An agreement was reached with ANE Bureau on use of current funds and likely emphases for future regional funding.

4B. ECHO/IP: Integrated Programs

Overview of Subtask

ECHO's Integrated Programs (IP) component (ECHO/IP) is defined as an integrated and community-based approach that links natural resource management with health and population interventions. Natural resources include watersheds, forests, arable land, and maritime environments.

The purpose of ECHO/IP is to test the hypothesis that by integrating activities in natural resource management with population and health activities, both types will be more effective and more sustainable than if they were pursued vertically. While this hypothesis is plausible, there is limited evidence to support it.

ECHO/IP Field Programs

Madagascar

One of EHP's primary tasks is to assist in the design, evaluation, and dissemination of lessons learned in integrating field activities in community-based natural resource management and population and health. The primary vehicle for carrying out this task is a four-year activity in Madagascar. Because USAID programs in population and health and natural resource management are already underway, Madagascar is an ideal country to conduct this activity. The Madagascar field activity was preceded by visits by USAID staff to Madagascar as a potential project site for integrated programs.

Accomplishments during Year 1

- The concept of integrated programming was defined. EHP hired a consultant and convened a meeting to discuss and arrive at a working definition of "integrated programs."
- Partners in the broader USAID community (PVOs, universities, contractors) that are interested in and are working in this area were identified.
- The Madagascar field activity was firmly established. The development of that field activity was the primary focus of ECHO/IP work in year 1—two visits were made to Madagascar, agreement was reached with the mission and key partners, key local staff were hired.
- Development of an in-country work plan was agreed upon by all the partners.

Issues/Problems during Year 1

- The number of local partners (14) made this activity complex and required a truly collaborative effort to develop a work plan.
- The development of a detailed activity plan (DAP) was delayed because of the time required to develop the in-country work plan, on which the DAP is based.

Task 6: Information Center

Overview of Task

The impact of credible information on policy dialogue and program implementation cannot be overstated.

Task #6 under Task Order 1 is to establish an information center to support all other tasks in the dissemination of contract products and deliverables. The Information and Communication Unit established under EHP I laid a solid foundation on which to build the EHP II Information Center.

The basic strategy of the Information Center is to make documentation and dissemination an integral part of EHP II activities. The basic approach to implement the strategy is to use electronic transmission (web and email) as the principal mode for information sharing and dissemination, utilizing existing and new technologies, existing and new information products, and existing and new partners. The Information Center will play a key role in disseminating EHP II results and lessons learned within and outside the Agency. The Center's activities will be closely aligned with and supportive of EHP II's Tasks #2, #3 and #4.

The End of Project Result will be an information center established to support all other tasks in the documentation and dissemination of products and deliverables within and outside the Agency. There are four subtasks to achieve the end of project result:

1. Strategy support to Tasks #2, #3 and #4;
2. Establish an EHP activities database;
3. Develop partnerships with other centers organizations and services with complementary capabilities and specialties for information exchange, sharing of technologies, and to reach an expanded audience;
4. Provide information and dissemination services.

Accomplishments during Year 1

Subtask 1: Strategy Support to Tasks 2, 3 and 4

- Made transition between EHP I and EHP II—culled library, reorganized files and materials, installed new hardware and software, and moved offices.
- Five specialized annotated bibliographies—on handwashing and hygiene, HIV and malaria, wastewater reuse, dengue fever, and environmental management—were compiled and disseminated.

- Reading files on key topic areas were set up to facilitate EHP staff access necessary information.

Subtask 2: Establish an EHP Activities Database

- An activities database for reporting EHP activities was designed. The database is organized on the basis of clusters. Clusters are coded according to program, region, country and disease. Each cluster has a brief description, related charge codes, status of activity (ongoing, completed, start and end dates) and names of reports available which are related to the activity.

Subtask 3: Partnerships with Other Centers, Organizations, and Services with Complementary Capabilities and Specialties to Exchange Information, Share Technologies, and Reach an Expanded Audience

- Collaborative partnerships were established with the following in year 1:
 - *World Bank Water and Sanitation Program Help Desk*—EHP is assisting the Help Desk in responding to information requests related to health issues on water and sanitation.
 - *Multilateral Initiative on Malaria (MIM)* – MIM helps publicize the EHP library malaria bulletin by distributing the EHP malaria bulletin to African malaria researchers sponsored by MIM.
 - *CDIE/DEC (USAID Center for Development Information and Evaluation’s Development Experience Clearinghouse)*—All EHP publications are posted on its web site. EHP and CDIE/DEC also collaborated in developing the Water for World Series of technical notes that are available via the CDIE/DEC Web site.
 - *CDC*—under the EHP-CDC partnership, data from CDC’s malaria–social science database is distributed in EHP Information Center’s malaria bulletins.
 - *Basic Support for Institutionalizing Child Survival (BASICS)*—Library resources are shared.
 - *Sanitation Connection (Saniconn)*—Saniconn is a Web-based, interagency environmental sanitation network/information clearing house. EHP is a Saniconn network member/partner and manages two theme pages on the Saniconn Web site: the monitoring and evaluation theme page and the hygiene behavior theme page.
- Brownbag organized: “Improving water and wastewater services in Poland through pricing and economic regulation reform.”

Subtask 4: Provide Information and Dissemination Services

- The EHP Web site was launched on January 5, 2000. The new web site was promoted through various electronic and print formats.
- Web site usage: For the first 7 months after the launch, an average of *300 users per week* visited the site and viewed and/or downloaded approximately 1,200 files or pages. In September 2000, after web site update notices were promoted and disseminated for web updates, the EHP Web site has averaged *more than 620 users per week* with an average of 3,100 pages/files that are viewed and/or downloaded each week.
- Links for sharing information and data: The number of linked sites stand at 35.
- Electronic transmission of information:
 - The majority of EHP I publications have been made available electronically on the EHP Web site. These include the brochure “Preventing Child Diarrhea Disease: Options for Action”; Applied Studies published by the project starting from the Water and Sanitation for Health Project (WASH); 72 Activity Reports from EHP I and WASH; EHP II brochures in English, French and Spanish, and three EHP II Activity Reports.
 - *Three EHP publications are currently available on CD-ROM—* Environmental Management Systems Planning and Implementation Workshop; The Health Impact of Indoor Air Pollution and Household Energy in Developing Countries: Setting the Agenda for Action; and the Water and Wastewater Treatment Technologies Appropriate for Reuse (WAWTTAR) Program.
- Translation support: during Year 1, one Activity Report was translated into French, one into Spanish and EHP II brochures were translated into French and Spanish.
- To enable prompt response to information requests, *the EHP library database (online and print)* is continuously upgraded and expanded. The database currently has 12,000 bibliographic entries.
- For Year 1, the Information Center:
 - *responded to approximately 3,840 information requests.* Approximately 1,280 requests were from EHP staff, EHP consultants, or USAID/Washington or USAID Mission staff. Approximately 950 information requests were from organizations or individuals in developing countries. 640 requests were from international organizations such as UNICEF, the World Bank, etc. Approximately 560 requests were from NGOs/PVOs, and 410 were from U.S.-based universities or companies.

- *30 biweekly malaria bulletins were distributed electronically.*
- *25 Environmental Health Updates (current awareness bulletins) were disseminated electronically.*
- The file maintenance/archiving system for the Information Center was established. The system currently includes use of CD-ROMs for archiving reports and all EHP publications have been archived on CD-ROMs.
- The Year 2 work plan and budget for the Information Center (IC) was developed and approved.

Issues and Problems during Year 1

The former Information Center Coordinator retired in April. A new IC Coordinator was not recruited until end of July.

The former Production consultant left and a new production consultant was recruited.

The Center has not been able to use the full capacity of Front Page with the current web host. Problems include uploading the web via front page and creating an interactive feedback form.

Task 7: Other Activities

During Year 1, the Environmental Health Project (EHP) was asked by a number of missions and bureaus to provide assistance under Task Order #1 that did not clearly fit under CESH and ECHO.

The activities included:

- Dominican Republic: Decentralization of rural water supply and sanitation services;
- Dominican Republic: Community-Level Behavior Change with Water, Sanitation and Hygiene
- Morocco – Childhood Environmental Health Disease Risk Factors Assessment
- Democratic Republic of Congo: Implementation of Urban Environmental Health Strategy
- Eritrea: Environmental Health Strengthening
- Honduras: EHP Technical Assistance
- USAID/Latin America and Caribbean (LAC) Bureau–decentralization of water and sanitation systems;
- El Salvador: Evaluation of USAID’s Rural Water Supply and Sanitation Program;
- El Salvador: Legal and Regulatory Reform of the Water Sector
- Peru: Reducing Lead –Related Risks
- Peru: Urban Environmental Health
- South Africa: Capacity-Building Activity with the Bushbuckridge Water Board;
- Tanzania: Infectious Disease Case definition
- Other Scoping

Dominican Republic: Decentralization of Rural Water and Sanitation Services

Overview of Subtask

USAID/Dominican Republic and the National Water Supply and Sewerage Institute (INAPA) agreed to work together and cofinance a pilot rural water supply and sanitation (WS&S) project in Hato Mayor Province that would allow INAPA to develop and test approaches to implement its decentralization strategy. If successful, the strategy will be scaled up to the national level. The pilot project will apply the “total community participation” model and construct sanitation systems and water supply infrastructure. USAID through EHP will provide INAPA with technical assistance and training. Entrena (a local contractor) will manage the NGO contracts under the pilot project, and EHP will provide technical assistance to help develop and strengthen INAPA's capacity to implement the decentralization strategy using the pilot project as its testing ground.

Accomplishments during Year 1

- The memorandum of understanding (MOU) between USAID and INAPA was signed and EHP was requested to move forward with its technical assistance.
- Two guidelines were completed: (1) a Technical Guideline for Rural WS&S technologies and (2) Technical Guidelines for Operations and Maintenance. These were developed in conjunction with INAPA, NGOs, and other key stakeholders.

Dominican Republic: Community-Level Behavior Change with Water, Sanitation, and Hygiene

Overview of Subtask

The overall purpose of this activity is to strengthen the behavior change component of the community health, water and sanitation interventions currently underway within the USAID/Dominican Republic (DR) reconstruction program. The activity aims to maximize the health impact of the current interventions. EHP will provide assistance to Entrena (a local contractor), NGOs involved in water supply and sanitation (WS&S) reconstruction efforts, and the MOH to design and implement a strategy to prevent diarrheal disease through improved hygiene behaviors. An interactive approach will be used to identify NGO strengths and work with them to improve the behavior change capacity of the NGOs themselves and MOH. The basic approach to this activity is to build capacity within the participating NGOs to design and implement behavior change activities. The goal is that ultimately, behavior change efforts in the realm of water, sanitation, and hygiene will be incorporated into the Dominican integrated management of childhood illness (IMCI/DR) model.

In addition to the above, EHP's technical assistance will: contribute to the development and/or adaptation of community level IMCI materials aimed at improving hygiene behaviors and preventing diarrhea; provide a model of a public sector/NGO strategy achieve health objectives; contribute to building the credibility of NGOs within the MOH.

Accomplishments during Year 1

- An assessment of training needs of NGOs related to their capacity to change and improve community-level hygiene behavior was completed.
- Information from the assessment was used to design a hygiene behavior change workshop.

Morocco: Environmental and Behavioral Risk Factors for Diarrheal Diseases in Childhood

Accomplishments during Year 1

- A cross-sectional survey was conducted in two towns in southern Morocco to assess the prevalence of childhood diarrhea and identify associated risk factors in order to provide the communities with guidance about the magnitude of the problem and point out areas for potential interventions. The survey findings suggest that a number of indicators can be used to plan and monitor interventions to improve the chances that a child will remain healthy.

Democratic Republic of the Congo: Implementation of an Urban Environmental Health Strategy

Overview of Subtask

In response to deteriorated urban environmental conditions in the country, an urban environmental health strategy was developed by the USAID Mission to the Democratic Republic of the Congo (DRC) in collaboration with EHP and the Regional Urban Development Office (RUDO) located within USAID/South Africa.

The strategy consists of eight components: (1) community participation, (2) behavior change, (3) addressing targeted priorities, (4) decentralization of municipal service delivery, (5) microenterprise support for environmental sanitation improvement, (6) cooperation with health facilities, (7) information, education, communication (IEC) and training; and (8) alternative techniques of environmental sanitation improvement.

The USAID/DRC Urban Environmental Health Strategy will address priority health threats utilizing both short- and long-term interventions.

Accomplishments during Year 1

- EHP provided technical assistance in the development of the USAID/DRC Urban Environmental Health Strategy.

Eritrea: Environmental Health Strengthening

Overview of Subtask

Based on an agreement between USAID/Eritrea and Eritrea's Ministry of Health (MOH) related to the need to strengthen the MOH's environmental health capabilities and policies, MOH outlined a three-point strategy designed to bring immediate improvement in environmental health practices at the country's clinical facilities, and to set a course for long-term improvement through policy reform and long-term staff development and training. In the spring of 2000 EHP was asked to provide technical assistance in developing recommendations for the MOH environmental health program.

Accomplishments during Year 1

- EHP fielded a three-person team to Eritrea. The team submitted a draft Environmental Health Program Recommendations document to USAID/Eritrea and MOH. The team's report forms the basis for a three-year environmental health strengthening program.

Issues and Problems during Year 1

- Following the departure of the EHP team in May 2000, war broke out between Eritrea and Ethiopia and all development assistance programs stopped. Plans for this activity have been placed on hold

Honduras: EHP Technical Assistance

Overview of Subtask

The USAID Mission to Honduras committed field support funds to EHP for technical assistance to the Ministry of Health in the implementation of a USAID-funded program, Health Sector II (HS II). HS II focuses on prevention and control of malaria, dengue fever, and tuberculosis and also funds a training program for environmental health technicians.

Accomplishments during Year 1

- EHP sent two consultants to Honduras to review the Ministry's progress in reaching the goals and objectives specified for the HS II program. The consultants made several recommendations regarding additional technical assistance that could be provided and a regional meeting that might be organized by USAID, if

the MOH is committed to improving these programs. EHP is waiting for further instructions from the mission.

Latin America and the Caribbean: Decentralization of Water and Sanitation Systems

Overview of Subtask

The purpose of this activity was to advance the understanding and implementation of decentralization of water supply and sanitation services in the Latin American and Caribbean region (LAC) by actively disseminating experiences and information. This activity is a follow-on to a regional activity under EHP I on decentralization of water supply and sanitation services in LAC. The EHP II activity consists of three distinct tasks: documenting and sharing of successful practices by developing case studies, providing modest support to one mission in South America, and disseminating information to USAID, donors, and host country partners.

Accomplishments during Year 1

- A two-person EHP team traveled to Paraguay in November 1999 to assess the potential USAID involvement in supporting decentralization of municipal Water and Sanitation systems.
- The major focus in year 1 was the development of six case studies on decentralization of Water and Sanitation systems. All six case studies were drafted and reviewed. They are scheduled to be finalized and disseminated in year 2.

El Salvador: Evaluation of USAID's Rural Water Supply and Sanitation Program

Overview of Subtask

The purpose of the subtask was to provide a midterm evaluation of USAID/El Salvador's Rural water Supply and Sanitation Program.

Accomplishments during Year 1

- The evaluation was carried out, and a final report was submitted to the Mission. No follow-up is planned.

El Salvador: Legal and Regulatory Reform of the Water Sector

Overview of Subtask

This one-year activity was funded by the LAC Bureau to advance the understanding and implementation of decentralization of water and sanitation services in Latin America by developing several key documents and disseminating experiences and information. The activity is intended to support the legal and regulatory reform of the water sector in El Salvador and includes both water resources and the water supply and sanitation (WS&S) subsector. The objectives are to increase the level of understanding of decentralization by key stakeholders, develop institutional capacity to promote reform, and increase participation by civil society in the reform process. EHP is working with three other USAID projects in this effort. EHP's role is to provide strategic oversight and external consultant inputs. EHP's key partner in the USAID activity is CARE, which is the implementing agency for the Agua Project and the representative of the Water Supply and Sanitation and local government networks in El Salvador.

Accomplishments during Year 1

- EHP assisted the Mission in revising the overall work plan. The work plan has three phases.
- Phase 1 of the work plan was to implement an in-depth review of the water law and the WS&S law. The review of the water law took place by EHP consultants as scheduled, and a synthesis of the comments resulting from the review was developed.
- EHP fielded two separate consultants. Two papers resulted from the consultancies—one position paper on the establishment of a national water resources and another on the use of water markets to allocate water rights. These consultancies also resulted in an agenda for further discussion with the National Aqueduct and Sewerage Administration (Administración Nacional de Acueductos y Alcantarillado, or ANDA) and the Technical Secretariat in the Presidency.

Peru: Reducing Lead-Related Risks

Overview of Subtask

At the request of USAID/Peru, EHP in collaboration with CDC, provided technical assistance to Peru's General Directorate of Environmental Health (DIGESA) to develop a blood lead study protocol. EHP also provided necessary sampling equipment and supplies. The study was conducted between November 1997 and February 1999. Although the overall study results suggested that the study population did not have an alarming level of lead exposure, a subgroup analysis within the sample studied showed an important concentration of high blood lead levels in schools located in the Callao district of Lima. A follow-up plan of action for DIGESA

was developed with technical input from EHP. The plan of action laid out a series of follow-up activities for DIGESA/MOH with roles delineated for CDC, EHP, USAID, and DIGESA. The purpose of the follow-up activities was to clarify the sources of lead contamination and the extent of the health problem in Callao, and to develop appropriate short- and long-term interventions to reduce lead exposure in the area. USAID requested EHP to provide logistical support and technical assistance to DIGESA in implementing the follow-up plan of action.

Accomplishments during Year 1

- EHP subcontracted with a local Peruvian firm to create a GIS map and database of the environmental sampling for DIGESA.
- EHP procured lead sampling equipment and supplies.
- EHP provided an environmental epidemiologist to assist with sampling analysis and to write up the reports. As of end of year 1, the reports have been drafted and are being reviewed by DIGESA.

Peru: Urban Environmental Health

Overview of Subtask

The purpose of this activity was to reduce health risks associated with exposure to locally generated contaminants and pathogens in periurban residential neighborhoods and communities. The activity addresses environmental health threats through four interventions or subactivities:

- Policy improvement assistance to agencies of the government of Peru (GOP) that have environmental health responsibilities
- Site-based pilot projects to demonstrate innovative ways of addressing environmental health needs
- Technical assistance, training and local institutional strengthening
- Development of environmental health risk monitoring capacity with community involvement.

The activity also provides a wide range of technical assistance and procurement support to the environmental health division of the MOH (DIGESA) and to the implementing PVOs and local authorities to help achieve the overall urban environmental health (EH) activity results.

Accomplishments during Year 1

- EHP assisted DIGESA and USAID to develop an activity implementation letter (AIL)
- A workshop to ensure that all stakeholders were in consensus about the urban EH activity was organized, and facilitated
- Air monitoring equipment and supplies were procured.
- A protocol to develop a behavior change program related to lead poisoning of children in collaboration with DIGESA was initiated.
- GIS training was provided to DIGESA staff

South Africa: Urban Programs Office Capacity-Building Activity with the Bushbuckridge Water Board

Overview of Subtask

The purpose of this activity was to support USAID/South Africa's efforts in capacity building related to retail water distribution in five municipalities in the Bushbuckridge area in South Africa.

Accomplishments during Year 1

- EHP provided technical assistance to the Bushbuckridge Water Board in preparing a revised proposal for continued institutional strengthening.
- EHP developed a strategy for a public awareness program to support cost recovery.
- With EHP support, a workshop was organized that drew lessons learned and suggested adjustments in future project strategy.

Tanzania: Infectious Diseases—Case Definitions

Overview of Subtask

This activity aims to strengthen the Tanzania Ministry of Health's (MOH) capacity for infectious disease surveillance. EHP will provide technical assistance to the Tanzania National Institute for Medical Research (NIMR) which, in conjunction with the MOH, will field test a new set of case definitions for selected infectious diseases. Using results from the field test, the NIMR and MOH will refine and finalize the case definitions for countrywide dissemination and use.

Accomplishments during Year 1

- A Scope of Work was prepared by USAID/Tanzania. Meetings were also held with NIMR and MOH staff to identify key points of contact.
- The EHP activity manager together with the USAID/G/PHN coordinator for infectious disease surveillance visited Atlanta to coordinate with the CDC Epidemiology Program Office staff who are conducting a related activity in Tanzania.

Other Scoping

Overview of Subtask

The USAID Office of Health and Nutrition requested EHP to reserve a certain amount of its funds to respond to unanticipated requests outside of CESH and ECHO.

Accomplishments during Year 1

- EHP used these funds to provide partial funding for an initial scoping visit to the Democratic Republic of the Congo to develop an urban environmental health strategy. This request came from the USAID Mission in Kinshasa with the endorsement and agreement of the RUDO office in South Africa.

Task Order 2

Malaria Vaccine Development Program

Overview of Task

EHP provides support for the USAID Malaria Vaccine Development Program (MVDP) through a separate task order (Contract HRN-I-00-99-00011-00, Task Order 2). The activity's planned duration is five years (August 1, 1999, through July 31, 2004).

Accomplishments during Year 1

- EHP provides support to MVDP through an MVDP technical adviser (MVDPTA) who is responsible for the technical planning, monitoring and coordination of MVDP meetings and provides overall technical assistance.
- During Year 1, an MVDP Scientific Consultants Group (SCG) meeting was conducted at EHP. The meeting was attended by representatives from USAID, the Army, the Navy, private industry and others. Technical papers and other materials were developed and disseminated as a follow-up to participants as a follow-up to the meeting.
- The application for investigational new drug (IND) status for the merozoite surface protein 1 (MSP1) vaccine target antigen was completed and submitted to the Food and Drug Administration.

Task Order 3

Nicaragua: Emergency Rural Water Supply, Sanitation, and Environmental Health Program

Overview of Task

EHP/Nicaragua's Emergency Rural Water Supply, Sanitation, and Environmental Health Program aims to improve health by increasing/improving water supply and sanitation (WS&S) services and providing community education programs for people in areas of Nicaragua affected by Hurricane Mitch. This two-year program is being carried out primarily through a series of grants awarded to in-country PVOs with water, sanitation, health, and community education and participation experience.

Accomplishments during Year 1

- EHP II established a field office with a local team and chief of party and developed several scopes of work for project deliverables.
- A start-up workshop was held with PVOs/NGOs, USAID and the Nicaraguan Aqueduct and Sewerage Company (ENACAL), the government agency responsible for water and sanitation.
- Grant proposals received from PVOs/NGOs were reviewed and five PVOs were selected as grantees to implement the program. The finalists were: Action Against Hunger, Plan International, Adventist Development and Relief Agency International (ADRA), Save the Children and Alistar.
- Two drilling rigs purchased by EHP were delivered and assembled.
- A total of 15 water wells, 20 latrines and 5 nursery projects were completed at PVO project operation sites.
- Collaboration with Johns Hopkins University (JHU) to implement a mass media campaign related to hygiene behaviors and water supply and sanitation was initiated.

Other Tasks

Ukraine: Environmental and Occupational Health Assessment

Overview of Task

EHP was requested to undertake an assessment of environmental and occupational health activities being conducted by Ukrainian institutions, by USAID and other donors. The purpose of the activity was to assist the USAID Mission in making programmatic decisions regarding future activities in environmental and occupational health.

Accomplishments during Year 1

- EHP coordinated a three person consultant team to do the assessment in the Ukraine. A report was submitted to the USAID Mission. The report reviewed on-going environmental and occupational health activities in the Ukraine and provided recommendations for USAID's future role in similar activities.

Annexes

Annex 1: EHP II Year 1 Publications and Other Products

***EHP Brochures** (in English, French, and Spanish)

***Activity Report 79.** *Environmental and Behavioral Risk Factors for Diarrheal Diseases in Childhood; A Survey in Two Towns in Morocco.* Kelly, Patrick; Khanfir, Habib; David, Patricia H.; Arata, Michelle; and Kleinau, Eckhard F. Act. 526-CC. September 1999.

(AR 79 was initiated in EHP I; it received additional funding and was published during EHP II.)

***Activity Report 79.** *Facteurs de risque environnementaux et comportementaux pour les maladies diarrhéiques infantiles: Une enquête dans deux villes au Maroc.* Kelly, Patrick; Khanfir, Habib; David, Patricia H.; Arata, Michelle; and Kleinau, Eckhard F. Act. 526-CC. September 1999.

***Activity Report 101.** *An Assessment of Environmental and Occupational Health Activities Conducted for the USAID Mission to Ukraine.* Billig, Patricia; Daane, Janelle; and Dobrovolsky, Leonard. Project No. 27138/UK1. January 2000.

***Activity Report 102.** *USAID/Honduras Health Sector II: A Review of Malaria, Dengue, and Tuberculosis Programs, and Training of Environmental Health Technicians (October 25-November 5, 1999).* Kalson, Dennis, and Lloyd, Linda S. Project No. 26568/HN1.IDREVIEW.Y1. April 2000.

***Activity Report 102.** *Sector Salud II de la USAID/Honduras: Una Revision de los Programas de Malaria, Dengue y Tuberculosis, y Capacitación de Técnicos de Salud Ambiental. (25 de octubre-5 de noviembre de 1999).* Kalson, Dennis, and Lloyd, Linda S. Project No. 26568/HN1.IDREVIEW.Y1. April 2000.

***Activity Report 104.** *Estudio para Determinar las Fuentes de Exposición a Plomo en la Provincia Constitucional del Callao, Perú.* Hernandez-Avila, Mauricio, and DIGESA staff members. Project No. 26568/OTHER.PE1.LEAD.ANALYSIS. June 2000.

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