



ENVIRONMENTAL HEALTH PROJECT

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EHP II Year 2 Annual Report
October 2000 through June 2001

EHP Staff

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Abbreviations

AFRO-NETS	African Networks for Health Research and Development
ANDA	National Aqueduct and Sewerage Administration (Administración Nacional de Acueductos y Alcantarillado), El Salvador
ARI	acute respiratory infections
BASICS	Basic Support for Institutionalizing Child Survival
CAPS	WS&S committee (<i>comité de agua potable y saneamiento</i>), Nicaragua
CDC	Centers for Disease Control and Prevention
CDSE	Department Environmental Health Committee (Comité Départemental de Santé Environnementale)
CECI	Canadian Center for International Studies and Cooperation
CESH	Community Based Environmental Sanitation and Hygiene
CORE Group	Child Survival Collaborations and Resources Group
COSUDE	Swiss Development Agency
DIGESA	General Directorate of Environmental Health, Peru
EAWAG	Swiss Federal Institute for Environmental Science and Technology
ECHO	Environmental Change and Health Outcomes
ECHO/IP	ECHO Integrated Programs component
ECHO/XS	ECHO Cross-Sectoral Surveillance component
EHP	Environmental Health Project
EHP I	first phase of EHP
EHP II	second phase of EHP
EME	enlarged municipal team (<i>équipe municipale élargie</i>)
ENACAL	Nicaraguan Aqueduct and Sewerage Company (Empresa Nicaragüense de Acueductos y Alcantarillados)

EWARS	Early Warning Reporting System
GAR	water supply management division of ENACAL, Nicaragua
GARNET	Global Applied Research Network
GESCOME II	Community Management of Environmental Health II (Gestion Communautaire de la Santé Environnementale II)
G/PHN	Center for Population, Health, and Nutrition, Bureau for Global Programs, USAID
G/PHN/HN	Office of Health and Nutrition, Center for Population, Health, and Nutrition, Bureau for Global Programs, USAID
HH/C–IMCI	household and community IMCI
IC	EHP Information Center
IgG	immunoglobulin G
IgM	immunoglobulin M
IMCI	integrated management of childhood illnesses
INAPA	National Water Supply and Sanitation Utility, Dominican Republic
INSTAT	National Statistics Institute (Institut National de la Statistique), Madagascar
IR	intermediate result
IRC	International Water and Sanitation Center
KPC 2000	Knowledge, Practices, and Coverage Survey 2000
MINSA	MOH (Ministerio de Salud), Nicaragua
MISAU	MOH, Mozambique
MOH	ministry of health
NAMRU	U.S. Naval Medical Research Unit
NGO	nongovernmental organization
NMCP	national malaria control program
OR	operations research

PAHO	Pan American Health Organization
PVO	private voluntary organization
RBM	Roll Back Malaria (WHO)
RRASCA	Regional Water and Sanitation Network, Nicaragua
SANDEC	EAWAG Department of Water and Sanitation in Developing Countries
SANICONN	Sanitation Connection
SANRU III	Projet des Soins de Santé Primaires en Milieu Rural III
SIMA	System-Wide Initiative on Malaria and Agriculture
SINAS	National Water and Sanitation Information System, Nicaragua
UNICEF	UN Children's Fund
USAID	U.S. Agency for International Development
VS/IPI	Voahary Salama, or Integrated Programs Initiative, Madagascar
WASH	Water and Sanitation for Health Project
WELL	Water and Environmental Health at London and Loughborough
WHO	World Health Organization
WHO/AFRO	WHO Regional Office for Africa
WS&S	water supply and sanitation

Summary

This annual report describes activities and accomplishments that took place during Year 2 (from October 1, 2000, through June 30, 2001) of the second phase of the U.S. Agency for International Development (USAID) Environmental Health Project (EHP II). These activities and accomplishments took place in the field and at the project's Washington, D.C., headquarters.

Tasks under EHP Task Order 1 evolved in several significant ways: Malaria operations research shifted from Task 2, Lessons Learned and Policy, to Task 4, Environmental Change and Health Outcomes Integrated Vector Management. Sanitation policy moved from Task 2 to Task 3, Community-Based Environmental Sanitation and Hygiene (CESH). Operations research concerning acute respiratory infections was dropped altogether from Task Order 1, as USAID elected to manage the modest funds available for the task. The Partnership activity enjoyed greater emphasis and level of effort in Year 2, with a new Partnership Coordinator on board. A partnership strategy was also developed. Finally, the performance monitoring and indicators task started with EHP's participation in the Water Supply and Sanitation Collaborative Council Global Forum in Iguaçú, Brazil, leading to a number of activities and collaboration with key partners.

The CESH work plan was refocused with the development of an explicit hygiene improvement framework that includes access to services, an enabling environment, and hygiene promotion as supports for improved hygiene behaviors. CESH Year 2 activities emphasized the rapid articulation of this framework, development of materials that support communication about the approach, and development and application of tools for diarrheal disease prevention in the field. To achieve these targets, EHP actively sought partnerships to identify needs and demand for CESH products and to identify opportunities to work in coordination or collaboration with other organizations. A four-person CESH team was assembled to contribute to the technical direction and management of this task.

The Environmental Change and Health Outcomes (ECHO) Cross-Sectoral Surveillance component (ECHO/XS) continued to gather steam, with increased activities in Mozambique and Eritrea and a continued high level of activity in Nepal. EHP is now working under a three-year plan of action in Eritrea and is helping the USAID mission in Mozambique prepare a four-year plan that will be part of the mission's bilateral program. Other changes included accelerating general work in the ECHO/XS program, dropping Malawi from the portfolio, and pursuing cross-border regional activities in South Asia through the Nepal program.

The ECHO Integrated Programs component (ECHO/IP) developed a detailed implementation plan for work in Madagascar and helped set up Voahary Salama, or Integrated Programs Initiative (VS/IPI)—a consortium of 20 partners in Madagascar—to implement the Madagascar activity. In addition, a baseline survey

was also implemented as part of a process to document lessons learned in Madagascar. The lessons-learned document aims to contribute to the global understanding of ECHO/IP as well as the Madagascar program.

The Information Center continued its widely valued activities and services. The EHP World Wide Web site was revamped and updated, and Web site usage trends continued to increase. Electronic transmission of information continued to increase, and all EHP II publications as well as the majority of EHP I and Water and Sanitation for Health Project (WASH) publications were electronically available on the Web. Two new EHP products were developed and disseminated: the EHP e-newsletter and EHP Briefs. The e-newsletter currently has 390 subscribers. The Information Center sought to become ever more strategic in the use of resources by developing a dissemination strategy to guide and support coordinators and activity managers in each technical area to develop and pursue specific information dissemination goals.

In Year 1, there were a number of activities collected under “other activities.” These represented activities implemented in response to missions’ and bureaus’ requests that did not fit under Tasks 1 to 6 of Task Order 1. In Year 2, Task 7 was added and formalized through a contract amendment to Task Order 1. Task 7 responds to the need of missions and bureaus to have a convenient mechanism to contract for relatively small activities that do not fall squarely into the original Task Order 1 technical agenda. Task 7 activities in Year 2 included regional-level activities in Latin America and the Caribbean and country-specific activities in the Dominican Republic, the Democratic Republic of the Congo, El Salvador, Peru, and South Africa.

Introduction

Background

The U.S. Agency for International Development (USAID) established the second phase of the Environmental Health Project (EHP II) 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 that 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 that has, in effect, two main parts. Task Order 1, which was awarded at the same time as the umbrella contract, is specific in its objectives and detailed activities in order to serve primarily the first of the two objectives listed above. In support of the strategic support objectives in child health (Strategic Support Objective 3) and infectious diseases (Strategic Support Objective 5) of USAID's Office of Health and Nutrition, Center for Population, Health, and Nutrition, Bureau for Global Programs (G/PHN/HN), 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 contract also provides for Task Orders 2 and 3, which may serve either of the two objectives, but which will be avenues 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, 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 [OR])

Project Strategy

To contribute significantly to improved child health, EHP II works in a way that not only avoids duplication but also fosters integration and synergy with other projects, agencies, and institutions with common programmatic objectives. On the one hand, the goal is to contribute to improving child health by more effectively integrating environmentally related prevention measures into child health programs. On the other, the goal is to advocate the inclusion of health concerns—and associated program decisions—in environmental programs.

EHP II has adopted several key strategies:

- Work in partnership
- Develop rigorously tested, cost-effective interventions and tools
- Prevent childhood diseases through environmental interventions in child health programs—both within USAID and with 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 (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.

- *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 focussed 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

Year 2 of EHP II covers nine months, from October 1, 2000, through June 30, 2001.

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 2

- The EHP II Year 2 Work Plan and Five-Year Overview were submitted on October 2, 2000, and approved by USAID. The Year 2 Work Plan covers the period October 1, 2000, through June 30, 2001.
- EHP II organized a Year 3 Work Plan review meeting in May 2001 with USAID, subcontractor representatives, and the Child Survival Collaborations and Resources (CORE) Group to update partners on EHP progress and developments and to develop an initial outline for the Year 3 Work Plan.
- The Year 3 Work Plan was submitted on June 29, 2001, and approved by USAID.

Task 2: Policy and Lessons Learned

Overview of Task

Task 2 includes the following subtasks: Performance Monitoring and Indicators, Meetings and Reports, Partnerships, and Lessons Learned and Progress. Taken as a whole, these activities describe work that EHP has undertaken under Task Order 1 at the project and global levels to influence policy (e.g., through meetings and reports), develop partnerships, provide monitoring and evaluation, and capture and disseminate lessons learned. Note that under Year 2, two subtasks originally under Task 2, Operations Research and Sanitation Policy, have been moved under Task 4A, Environmental Change and Health Outcomes, and Task 3, Community-Based Hygiene and Sanitation, respectively.

Indicators and Performance Monitoring

Overview of Subtask

The purpose of the Indicators subactivity is to improve the validity and reliability of existing water, sanitation, and hygiene indicators and data collection methods and to develop new indicators and methods where necessary. This activity is implemented at international and local levels and has three components:

1. Build international consensus to improve existing indicators that measure water supply and sanitation (WS&S) coverage or hygiene behaviors and that do not have acceptable levels of validity, sensitivity, and specificity. Develop new indicators where useful indicators are not measured routinely—for example, water quality.
2. Assist programmatic decision making by developing methods for collecting data at national and local levels, because existing indicators and data collection instruments, such as the Demographic and Health Survey and the Multiple Indicator Cluster Survey, are mostly appropriate for international comparisons.
3. Develop methods to link water, sanitation, and hygiene indicators to health outcomes and to human development and poverty reduction.

EHP works closely with international organizations and private voluntary organizations (PVOs) to implement this activity.

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

Accomplishments during Year 2

Indicators

- EHP participated in the Water Supply and Sanitation Collaborative Council Global Forum in Brazil and assisted in the preparation, implementation, and follow-up related to forum theme 7, “Indicators and Targets.” EHP staff prepared an issues paper on indicators for the Global Forum with input from the World Health Organization (WHO) and Water and Environmental Health at London and Loughborough (WELL). EHP staff also co-moderated an electronic conference related to indicators and targets and prepared weekly summaries and a final summary.

- EHP drafted indicators for family hygiene behaviors for WHO household and community integrated management of childhood illnesses (HH/C–IMCI) and shared these for an external review.
- EHP prepared a technical brief on monitoring rural water supply projects for an evaluation planned by the World Bank.
- EHP collaborated with the CORE Group and the Child Survival Technical Support Project in revising the Knowledge, Practices, and Coverage Survey 2000 (KPC 2000); a meeting to discuss the survey handbook will be held in the next quarter.

Performance Monitoring

- The monitoring and evaluation plan, with project-level and task-specific indicators, was revised.
- Monitoring and evaluation plans were completed for Benin, Eritrea, Nepal, and Nicaragua.
- An activity tracking system (eRoom and activity planning schedule) was implemented.
- A system for tracking, review, and approval of detailed action plans and scopes of work was implemented.
- EHP performance monitoring indicators based on end-of-project results were defined.
- Quarterly reports and annual reports were produced by the Information Center (IC).

Issues and Problems

- It is not clear what the goal of the HH/C–IMCI task force on indicators is and how the work on indicators will proceed. EHP needs to reevaluate how much effort to invest in this activity.

Meetings and Reports

Overview of Subtask

The common 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 2

- Documentation of the EHP–Basic Support for Institutionalizing Child Survival (BASICS) Central American Handwashing and Public-Private Partnerships activity, which began in 1995, was initiated. EHP, in collaboration with BASICS, the World Bank, and the UN Children's Fund (UNICEF), implemented the documentation of a summary report describing the development and implementation of the Public-Private Partnerships Initiative. The document covers key steps, critical decisions and choices, facilitating and inhibiting factors for public-private partnership activities, and key lessons learned during the development and implementation phases of the activity. A preliminary draft was prepared and circulated for comments among 13 reviewers.
- Several meetings and presentations were held:
 - EHP met with UNICEF/New York and UNICEF/Nepal to discuss potential partnership opportunities related to promoting handwashing and soap use in Nepal.
 - EHP and BASICS held a presentation and discussion at USAID on the Handwashing Initiative, which featured participation by Colgate-Palmolive's director of personal care products.
 - EHP participated in a series of meetings and workshops held by the World Bank as part of its Global Public-Private Partnerships in Handwashing Initiative.

Partnerships

Overview of Subtask

The purpose of the Partnerships activity is 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, PVOs, nongovernmental organizations (NGOs), the Office of Private and Voluntary Cooperation in USAID's Bureau for Humanitarian Response, and 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 2

- A Partnership Coordinator was recruited.
- The partnership strategy was developed and finalized. The strategy will provide a framework for consistently approaching, sharing, and tracking contract and partnership activities.
- Meetings were held with the Office of Private and Voluntary Cooperation in USAID's Bureau for Humanitarian Response to discuss a memorandum of understanding for EHP to work with a CORE working group, to be funded with buy-in funds from the Office of Private and Voluntary Cooperation. CORE's Integrated Management of Childhood Illnesses (IMCI) Working Group was identified for partnership under a draft memorandum of understanding.
- Introductory meetings were held with CORE's Malaria Working Group. Potential collaborative activities in integrated vector control were discussed, including the possibility of EHP support for and participation in a PVO-sponsored meeting on malaria to be held in Kenya in the fall of 2001.
- Regular contacts were maintained with UN organizations, such as UNICEF and WHO, and other PVO partners. These contacts included participation in an interagency working group on IMCI, preparation meetings for the World Summit for Children, and coordination meetings and presentations with UNICEF and the Pan American Health Organization (PAHO).

Issues and Problems

- Approval of the memorandum of understanding was delayed. Nevertheless, the EHP work with the IMCI Working Group that was outlined in the memorandum was contingent upon completion of a CESH collaborative activity with PAHO. This EHP-PAHO activity should be completed in the fall of 2001, after which activities with the CORE IMCI Working Group can be more directly discussed and implemented.

Lessons Learned and Progress

Overview of Subtask

The purpose of the Lessons Learned and Progress 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 2

- 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. The eRoom structure has been assessed and improved, and the EHP Management eRoom is being used frequently.

Task 3: Community-Based Environmental Sanitation and Hygiene (CESH)

Overview of Task

Task 3 under Task Order 1 is CESH, under which EHP will implement environmental sanitation and hygiene interventions by developing, using, and disseminating tools that help NGOs, government program managers, and communities identify local environmental health priorities and hygiene behaviors and guide selection of actions to reduce the incidence of diarrhea in children under 5 years old. 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.

Accomplishments during Year 2

- A new CESH Coordinator was recruited.
- A four-person CESH team was established.
- A general hygiene improvement framework covering the four-year life-of-project timeline was developed, based on review of state-of-the-art information and experiences related to hygiene improvement.
- End-of-project results related to CESH were revised, and a work plan (for EHP Year 3) reflecting the revised results was developed.
- OR on diarrheal disease prevention:
 - Safe disposal of children’s excreta was identified as a priority OR topic.
- Promotion of sanitation policy:
 - The purpose of the Sanitation Policy activity is to lay the groundwork for collaborating with major international organizations (e.g., WHO, PAHO, UNICEF, the Water Supply and Sanitation Collaborative Council) working in

Community-Based Environmental Sanitation and Hygiene Subtasks
<ul style="list-style-type: none">• OR on diarrheal disease prevention• Promotion of sanitation policy• Development of hygiene improvement tools for diarrheal disease prevention• Application of hygiene improvement tools in field programs

- 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 program in the population, health, and nutrition sector. Such tools could include, but are not limited to, presentations, guidelines, and policy workshops—alone or in combination—in an overall process that will lead to sanitation policy improvements.
- EHP participated in the Water Supply and Sanitation Collaborative Council meeting in Iguaçú, Brazil, and also assisted in the facilitation of a premeeting e-conference on sanitation.
 - EHP networked with various international partners involved in sanitation policies, including UNICEF, the World Bank, the Department of Water and Sanitation in Developing Countries (SANDEC) at the Swiss Federal Institute for Environmental Science and Technology (EAWAG), the International Water and Sanitation Center (IRC), and PAHO.
 - A scope of work for Year 3 was developed and approved.
 - Development of hygiene improvement tools for diarrheal disease prevention:
 - *Benin*: Support to a field activity in Benin, GESCOME II, also known as Community Management of Environmental Health II (Gestion Communautaire de la Santé Environnementale II), continued. A situational assessment tool to assess local environmental health priorities and hygiene behaviors was developed and piloted in Benin. Latrine construction and potable water microprojects were undertaken after using participatory rapid appraisal to identify community risks, and strategies to address the problems identified through participatory rapid appraisal were developed at roundtables whose participants were departmental and municipal decision makers and community representatives.
 - *Democratic Republic of the Congo*: Three baseline survey questionnaires were developed and applied by the University of Kinshasa School of Public Health to evaluate health impacts of three urban hygiene improvement activities.
 - EHP continued discussions with CORE’s HH/C–IMCI coordinator for collaborative activities between EHP and CORE under funding from the Office of Private and Voluntary Cooperation in USAID’s Bureau for Humanitarian Response and for the introduction of EHP’s hygiene improvement framework within CORE’s HH/C–IMCI activities. EHP’s hygiene improvement framework emphasizes the key family practice of handwashing and safe disposal of excreta.
 - Discussions were initiated with PAHO for a joint PAHO-EHP activity to develop materials for implementation of behavior change related to

handwashing and safe disposal of excreta as part of HH/C–IMCI field programs. The activity should result in generic instructional materials, which can be used broadly throughout Latin America and the Caribbean, and in a methodology guide describing how the generic materials can be adapted to be most appropriate for a range of local conditions.

- Application of hygiene improvement tools in field programs:
 - Field programs initiated in Year 1 in Benin (see “CESH Field Programs,” below) and in Nicaragua, the Dominican Republic, Peru, and the Democratic Republic of the Congo (see Task 7, “Other Activities,” below) continued.
 - *India*: The CESH Coordinator participated in an overseas assignment to India. The objective of this trip was to prepare an urban health strategy paper for USAID/India. The rationale for the CESH Coordinator’s participation was to ensure the inclusion of diarrheal disease prevention for children under 5 years old in the urban health strategy.

CESH Field Programs

Of the CESH-related field programs in Benin, Nicaragua, the Dominican Republic, Peru, and the Democratic Republic of the Congo, only the Benin activity is grouped under Task 3. The rest fall under Task 7 (Other Activities).

Benin (GESCOME II)

The Benin activity is also referred to as GESCOME II. GESCOME II is the continuation of GESCOME I, a Community Involvement in the Management of Environmental Pollution activity under EHP I, which ran from 1997 to 1999. Benin program activities consist of refining EHP's community-based approach, applying it in the field, conducting OR and scale-up activities, and promoting environmental sanitation policies.

Accomplishments during Year 2

Training and Implementation

- Training activities for members of the enlarged municipal team (EME) were held. The training included prevention and identification of transmission paths for diarrheal disease in EME members' own towns and locus of transmission and community problem analysis. Members also received training in gender awareness, community and social mobilization, further tools in community organizing (e.g., introduction to coalition building, segmenting the community into formal and nonformal natural groups), and participatory community health communication (including community-based materials development).

Microprojects

- Twenty-one latrines were constructed in Sinendé, Banikoara, and Bembéréké under the first round of microprojects. For the second round of microprojects, Sinendé and Banikoara focused on potable water and Bembéréké focused on two dining rooms for market women (one in each quarter), with emphasis on the provision of safe, cheap food and on hygiene education, including handwashing and food safety.

Policy Dialogue

- A decree was issued to institutionalize the GESCOME structure of the Department Environmental Health Committee (CDSE). The structure links communities with NGOs and local and departmental government agencies. Roundtables continued on policy dialogue for the design of mechanisms to supply local funding for these structures. Five roundtables have been held.

Monitoring and Evaluation

- Process and outcome indicators, including democracy and governance indicators, were developed. EHP II will fund a three-month period (June 1 to August 31, 2001) to collect lessons learned from GESCOME II and conduct OR to examine sustainability and the effect of microprojects and health communication on latrine use and related handwashing.

Task 4: Environmental Change and Health Outcomes (ECHO)

Overview of Subtasks

Task 4 of Task Order 1 is ECHO, and it comprises 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 “Task 4B: ECHO Integrated Programs,” below).

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 under “Task 4A: ECHO Cross-Sectoral Surveillance,” below.

Task 4A: ECHO Cross-Sectoral Surveillance (ECHO/XS)

Overview of Subtask

Cross-Sectoral Surveillance is a component ECHO. Referred to as ECHO/XS, this component has three elements: (1) ECHO/XS General: Planning Research and Outreach, (2) ECHO/XS Operations Research on Malaria, and (3) ECHO/XS Field Programs.

ECHO/XS Cross-Sectoral Surveillance 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 increase understanding of 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 General: Planning, Research, and Outreach

ECHO/XS General: Planning, Research, and Outreach is funded by the USAID Global Bureau's Office of Health and Nutrition. The purpose of this activity is to provide program-level coordination and technical direction to ECHO/XS field activities to ensure that the full ECHO/XS program achieves its objectives (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: (1) Planning and Evaluation, (2) Partnerships and Communication, (3) Methods Development, and (4) Program Development. During Year 2, EHP conducted activities under the Partnerships and Communication, Methods Development, and Program Development components.

Accomplishments during Year 2

Partnerships and Communication

- *WHO Regional Office for Africa (WHO/AFRO)*. EHP prepared case studies of vector control activities in Uganda, Zimbabwe, Cameroon, and Senegal for the regional consultation of WHO/AFRO in February 2001 and developed joint activities with WHO/AFRO: writing of technical guidelines for integrated vector management and strategy for building the cadre of trained vector ecology and vector control specialists.
- *Consultative Group on International Agricultural Research*. EHP supported a special session of the Consultative Group on International Agricultural Research on linkages between malaria and agriculture in October 2000 at the World Bank, which led to the establishment of the System-Wide Initiative on Malaria and Agriculture (SIMA) within the group at an organizational conference in Nairobi, Kenya, in May 2001.
- *Roll Back Malaria (RBM)*. EHP collaborated with the RBM Secretariat in the development of a protocol for evaluating malaria vector control programs and arranged to field-test the protocol in Eritrea, in association with WHO/AFRO, and in Nepal, in association with the WHO South East Asia Regional Office.

Methods Development

- *Protocol for Evaluating Malaria Vector Control Programs*. See item above under "Roll Back Malaria (RBM)."

Program Development

- *Proposed malaria vector control units in Uganda*. EHP facilitated the future involvement of USAID/Uganda in the establishment of malaria vector control

units in several Ugandan cities, as requested by the chief entomologist for Uganda's National Malaria Control Program (contact made at the Consultative Group on International Agricultural Research–SIMA consultation in May 2001 in Nairobi).

- *Advocacy tool for integrated vector management.* EHP prepared a PowerPoint presentation to advocate integrated vector management as a component of malaria control programs.
- *Search for Senior Technical Specialist.* EHP continued the search for a new Senior Technical Specialist to support its malaria OR program.

ECHO/XS Operations Research on Malaria

Overview of Subtask

The Operations Research on Malaria subtask was originally Subtask 1 under Task 3, CESH, but EHP determined that it would be optimal for this activity to be moved under Task 4, ECHO. Progress made in ECHO-related field programs in Eritrea and Mozambique indicated opportunities for pursuit of the operations research agenda under ECHO.

Accomplishments during Year 2

- EHP, USAID/Democratic Republic of Congo, and the USAID Regional Urban Development Office in South Africa developed a scope of work that incorporated community-based malaria vector management into USAID's urban environmental health program in Congo.

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 helping the MOH strengthen its surveillance systems, operational research program, evidence-based decision-making, and vector control operations.

Accomplishments during Year 2

- *Operations research.* EHP continued to estimate parasite prevalence rates in a large sample of villages, to collect data on vector species distribution and abundance, and to examine vector behavior and larval ecology at longitudinal study sites. EHP completed parasite prevalence surveys in four inland zones.
- *Vector control.* EHP launched field studies to determine the effectiveness of biological larvicides and to evaluate the NMCP's current larval control methods.
- *Surveillance and evidence-based decision making.* EHP initiated information gathering on the personnel functions of the zonal malaria technicians in Aseba Zone.
- *Study tours.* EHP conducted the first of several planned study tours by Eritrean malaria control personnel to the United States and Mexico to examine modern methods of mosquito control, as well as to neighboring Kenya to observe ongoing research efforts on the use of insecticide-treated bednets.
- *Publications.* The following reports were issued:
 - “Assessment of Therapeutic Efficacy of Chloroquine (CQ) in Eritrea, 1998–2000,” by E. Mberu
 - “Larval Ecology of Malaria Vectors,” by Josephat Shililu, EHP Resident Adviser in Eritrea
 - “National Malaria Prevalence Survey, 2000–2001,” by MOH, State of Eritrea, with principal input from USAID Child Survival Fellow and the EHP Resident Adviser in Eritrea

- “Overview of Results of Entomological Surveys,” by Josephat Shililu, EHP Resident Adviser in Eritrea

Mozambique: Technical Assistance to the National Malaria Control Program

EHP is providing technical assistance to the MOH in Mozambique (MISAU) to improve malaria surveillance in Maputo, develop MISAU’s capacity for using geographic information systems, and identify areas of Maputo with the highest risk of malaria. Local health officials will use this information to target malaria control interventions in Maputo. This effort began under EHP I and is scheduled for completion under EHP II in November 2001. The USAID mission is planning a three-year follow-on expanded technical assistance activity to begin in the fall of 2001.

Accomplishments during Year 2

- *Pesticide evaluation report and safe use action plan.* EHP completed a pesticide evaluation report and safe use action plan to ensure that activities of the proposed expanded technical assistance program for the NMCP comply with the environmental review requirements of USAID pesticide procedures [22 CFR 216.3(b)] and obtained mission approval of the report.
- *Final design of expanded technical assistance program.* EHP provided input to the design of the mission’s expanded technical assistance program.
- *Malaria surveillance and risk stratification.* EHP continued to monitor malaria case reports from a network of sentinel sites in urban and periurban Maputo and maintained regular surveillance of selected sites to identify larval habitats and monitor the density of larvae through several seasons.

Issues and Problems

- *Timing and shape of the expanded program.* At the end of Year 2, the USAID mission had not yet issued the task order for the expanded technical assistance program; the current program is funded only through August 31, 2001, and will have to be ended then unless USAID provides bridge funding to cover the period between the end of the current program and initiation of the expanded program. The mission’s decision on bridge funding was pending as of June 30.

Nepal: Prevention and Control of Selected Infectious Diseases

In 1998, USAID/Nepal and Nepal’s MOH 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: malaria, kala-azar,

and Japanese encephalitis. EHP has the 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 and drug policies, and it is implemented by the International Center for Diarrheal Disease Research in Bangladesh and USAID's Rational Pharmaceuticals Management Project.

EHP began work in Nepal in the last year (1998–99) of the EHP I contract; therefore, Year 1 (1999–2000) of EHP II 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 2

Institutional Strengthening

- VBDRTC staff recruitment was completed. Strategic planning workshops were held, and the VBDRTC Board endorsed a strategic plan and a plan of action that were developed at the workshops.

Early Detection and Response

- *Kala-azar*: A critical review to compare the direct agglutination test and K39 dipstick tests for kala-azar diagnosis was completed in kala-azar endemic areas, leading to a recommendation for K39 dipstick use in Nepal. It was found that the K39 dipstick would be more cost-effective and feasible for kala-azar laboratory diagnosis in Nepal. As a result, in November 2000 EHP introduced K39 dipstick laboratory diagnosis for kala-azar in 11 health facilities, including the Janakpur Zonal Hospital.

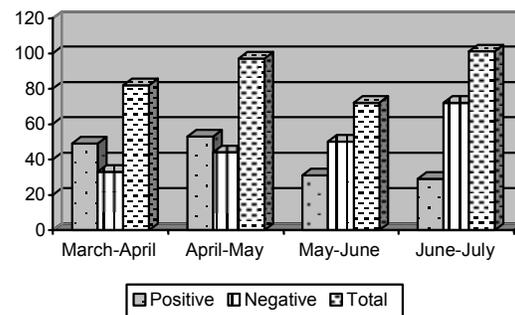


Figure 1. Results of K39 dipstick tests, Janakpur Zonal Hospital, Dhanusha District, March–July 2001

- *Japanese encephalitis*: With EHP support, testing of specimens from suspected Japanese encephalitis patients admitted to hospitals continued at VBDRTC and B. P. Koirala Institute of Health Sciences, Dharan, using the immunoglobulin M (IgM) capture enzyme-linked immunosorbent assay. Training in the laboratory diagnosis of Japanese encephalitis by using the IgM and immunoglobulin G (IgG) capture enzyme-linked immunosorbent assay was also conducted at VBDRTC. The main objective was to provide practical training in Japanese encephalitis laboratory diagnostic methods, collection and transportation of samples, biological handling of specimens, preparation of reagents, storage techniques, and recording and reporting systems. A new laboratory to diagnose Japanese encephalitis was also established in Bheri Zonal Hospital, Nepalgunj.

- *Early Warning Reporting System (EWARS) assessment:*
The assessment of the EWARS was completed. The assessment team visited 24 sentinel sites to assess the laboratories in the EWARS. Based on assessment findings, a prioritized list of EWARS surveillance activities was developed, including the formulation of the EWARS Technical Assistance Group.



Figure 2. Early Warning Reporting System

The first assessment planning meeting was held from January 8 to January 11, 2001, at Hetauda. It was decided at the meeting that steps would be taken to improve and strengthen the function of EWARS and also to expand EWARS to the community level in three pilot districts: Dhanusha, Kanchanpur, and Jhapa. The planning meeting was attended by representatives from EHP/Washington, the Armed Forces Research Institute of Medical Sciences, the U.S. Naval Medical Research Unit (NAMRU), the Nepal MOH Epidemiology and Disease Control Division, VBDRTC, and the District Public Health Office of Dhanusha and Jhapa.

Information and Data Availability

- The epidemiological surveys of the eight districts and the analyses of the data collected in those surveys were completed. The data have been compiled and made available electronically. A vector-borne disease database of sociobehavioral, entomological, parasitological, and environmental information on malaria, kala-azar, and Japanese encephalitis, including detailed mapping, has been established.
- The RBM Guidelines prepared by the WHO South East Asia Regional Office have been translated into Nepali through EHP support. This will be a key document for RBM intervention at the district level. EHP has also compiled all the malaria documents published in Nepal.

Development and Pilot-Testing of Sustainable Intervention Strategies

- Collaborating with the Epidemiology and Disease Control Division of the Nepal MOH, EHP developed a malaria prevention, control, and referral training package. CARE/Nepal used this training package for master trainers' orientation, training of trainers, and training of female community health volunteers.
- Representatives from the MOH Epidemiology and Disease Control Division, USAID, the Institute of Medicine, the Canadian Center for International Studies and Cooperation (CECI), and VBDRTC joined the EHP staff and consultants to draft a preliminary list of intervention possibilities for pilot-testing, based on

findings and information from the epidemiological survey data and completed OR. CECI was chosen as the appropriate NGO partner to pilot-test the interventions. Intervention activities under CECI's Dhanusha-Mahottari Vector-Borne Disease Program were expected to start in August or September 2001.

- An intervention planning workshop related to pilot-testing was held from May 16 to May 19, 2001, in Kathmandu. Participants in the workshop included the MOH, USAID/Nepal, USAID/Washington, EHP/Washington, CECI, the Armed Forces Research Institute of Medical Sciences, and other national as well as regional partners. The draft list of interventions to pilot-test was finalized at the workshop (see box below).

Interventions for Pilot-Testing In Nepal

1. Phased-in identification of high-risk villages
2. Implementation of awareness, prevention, and care-seeking promotion activities in targeted village development committees
3. Individual motivation and support for care seeking by people with suspected cases
4. Improved diagnosis and treatment of these diseases at more peripheral levels
5. Referral system (up and back) and follow-up
6. District reporting and surveillance
7. OR on the following:
 - Inclusion of lime (or some other product) in routine plastering in order to limit sand fly reproduction
 - Challenges and solutions to improving kala-azar case management at peripheral service levels
 - Review of anti-malaria and anti-kala-azar (sodium antimony gluconate) drug efficacy and recommendations
 - Use of the malaria dipstick to improve *Falciparum* malaria surveillance
8. Cross-border standardization of diagnostic and treatment practices and surveillance for these diseases

Operations Research

- The case study on kala-azar in the Mahottari-Dhanusha area of Nepal, focusing on the direct and indirect economic effects on households and the impact on the local health system, was completed, and the final report was submitted.

- For the assessment of treatment practices of drug vendors and communities in the Terai districts, two study teams from EHP conducted a field survey in Sarlahi and Kanchanpur Districts to collect data on knowledge, attitudes, and practices of the community in seeking treatment for malaria and kala-azar and on knowledge, attitudes, and practices of drug sellers providing services.
- The Japanese encephalitis ecological study in Lalitpur District, Kathmandu Valley, is under way and will be completed in EHP Year 3. The information on the extent of Japanese encephalitis risk in Kathmandu Valley that is gathered in this study will assist in taking the necessary steps to prevent and control this disease.
- EHP, as an RBM partner in Nepal, will also support a malaria assessment analysis to be carried out in three districts: Jhapa, Kanchanpur, and Dhanusha.
- Discussions were also initiated with the MOH Epidemiology and Disease Control Division to prepare a vector control assessment tool.

Cross-Border Prevention and Control of Priority Vector-Borne Diseases

- Discussions were held with the Armed Forces Research Institute of Medical Sciences on extending the antimalaria drug resistance studies through in vitro methods further, to the regional level in the cross-border network, using the USAID Asia and Near East Bureau funds.
- Discussions for standardizing diagnostic and surveillance procedures were also held in Kathmandu at the Inter-country Meeting on Cross-border Initiatives on HIV/AIDS, Tuberculosis, Malaria and Kala-azar, organized by the WHO South East Asia Regional Office and the South Asian Association for Regional Cooperation.

Task 4B: ECHO Integrated Programs (ECHO/IP)

Overview of Subtask

Subtask 1 under ECHO calls for EHP to assist in the design, evaluation, and dissemination of lessons learned and to support NGOs in implementing field projects that combine community-based natural resource management with interventions to improve health outcomes.

ECHO's Integrated Programs component (ECHO/IP), which falls under ECHO subtask 1, 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 those in population and health, both types of activities will be more effective and more sustainable than if they were pursued vertically. This hypothesis is plausible, but there is limited evidence to support it.

Field Program: Madagascar

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 under way, Madagascar is an ideal country for 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 2

- EHP helped set up Voahary Salama, or Integrated Programs Initiative (VS/IPI), a consortium of 20 partners in Madagascar to implement the Madagascar activity. The partnership includes USAID/Madagascar, 7 NGOs, a Malagasy foundation funded by the Summit Foundation, and 12 other organizations, including several USAID-funded projects, which provide funding, technical assistance, and implementation support.
- The baseline survey implemented by the National Statistics Institute (INSTAT), a local implementing organization, was completed. A draft report of the survey results has been prepared. The baseline survey is part of a process to document lessons learned in Madagascar. The lessons-learned document aims to contribute to the global understanding of ECHO/IP as well as the Madagascar activity.
- A one day-workshop was conducted to develop a monitoring and evaluation plan for the activity.

- A work plan for the next EHP fiscal year, from July 2001 to July 2002, was prepared by the local EHP team.

Issues and Problems

- Progress was slow in setting up NGO subcontracts.
- The most important long-term issue was to find an additional \$100,000 for Years 4 and 5 of the activity. So far, \$200,000 has been received for each of the past two years from G/PHN. The activity has evolved to require \$300,000 a year. The additional money in Year 2 came from Year 1, when EHP received \$400,000 for ECHO/IP and did not need those funds during that year. Discussions of this issue with the mission and G/PHN should begin in the fall.
- Initial discussions have begun to institutionalize VS/IPI. One possibility is for the local EHP office to become an NGO, with which EHP would then subcontract in the last year or two of the activity. This issue will receive increasing attention in the coming year.

Task 5: Grants

There was no activity under Task 5, Grants, during Year 2.

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 EHP II's IC.

IC's strategy is to make documentation and dissemination integral parts of EHP II activities. The basic approach to implement the strategy is to employ electronic transmission (World Wide Web and e-mail) as the principal mode for information sharing and dissemination, using existing and new technologies, existing and new information products, and existing and new partners. IC will play a key role in disseminating EHP II results and lessons learned within and outside USAID. IC's activities will be closely aligned with and supportive of EHP II Tasks 2, 3, and 4.

The end-of-project result will be an IC established to support all other tasks in the documentation and dissemination of products and deliverables within and outside USAID. The box at right lists the four subtasks to achieve the end-of-project result.

Information Center Subtasks

1. Provide 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 to exchange information, share technologies, and reach an expanded audience
4. Provide information and dissemination services

Accomplishments during Year 2

Strategy Support

- IC finalized EHP's dissemination strategy and made it available as a report for the file.
- IC provided support for Water Supply and Sanitation Collaborative Council Global Forum in Iguaçú, Brazil, and the environment officers' meeting in Maryland. IC developed promotional materials (CD-ROMs, EHP Briefs, EHP Web site cards) and distribution packages for the meetings. IC also assisted USAID staff and the USAID Water Team in setting up a World Water Day display of photographs, quotations, and facts.

- Throughout Year 2, IC compiled and updated an annotated bibliography on handwashing and hygiene.

Database

- IC developed a database for reporting EHP activities and posted its information on the EHP Web site.

Partnerships

- With guidance and support from EHP technical staff, IC posted data and information on monitoring and evaluation and on hygiene behavior to the Sanitation Connection (SANICONN) Electronic Gateway on Environmental Sanitation.
- As part of its collaboration with the Centers for Disease Control and Prevention (CDC), IC began incorporating social science studies into the *EHP Malaria Bulletin*.
- IC established a partnership with the UNICEF Water, Environment, and Sanitation Program Division. IC discussed publications filing and bibliographic systems, Web site maintenance, and expanded use of electronic media.
- IC also established partnerships (to reach an expanded audience) with newsletters of other organizations (World Bank HPNFLASH, SOURCE), e-mail distribution lists (CORE, the Global Applied Research Network [GARNET], Community Health, African Networks for Health Research and Development [AFRO-NETS]), and relevant working groups (the Johns Hopkins University Center for Communication Programs' Population and Health Materials Working Group, the World Bank's public health thematic group).
- A meeting was held with the information staff of the World Bank Water Sanitation Program to discuss the program's Web site and other topics.
- IC staff also attended the June meeting of the Population and Health Materials Working Group and joined the working group's Dissemination and Distribution Group and the Information and Communication Technologies Evaluation Group.
- IC worked with the BASICS Information Center on setting up e-mail lists and recommendations on Web site search engines.

Information Services

- IC revamped and updated the EHP Web site, changing the layout and adding new graphics and photographs, new links, and new navigation bars. Also added were the "Meeting Alert" page and a search feature. A Spanish page, which included

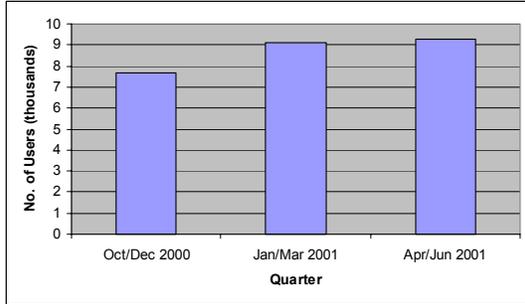


Figure 3. EHP Web site usage: users in Year 2, by quarter

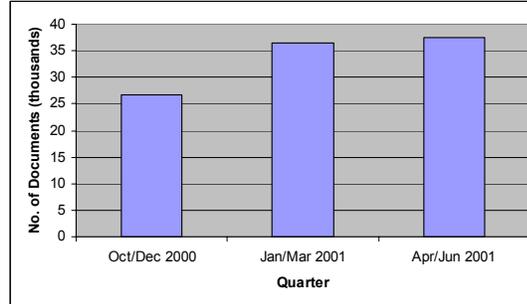


Figure 4. Electronic transmission of information: documents downloaded in Year 2, by quarter

EHP documents in Spanish and links to Spanish Web sites (e.g., EHP/Nicaragua, PAHO) was also added.

- During Year 2, new links were added to the EHP Web site for information and data sharing. The number of linked sites stands at approximately 50.
- IC introduced *What's New*, the EHP e-newsletter, in January 2001. *What's New* was intended to keep EHP staff, partners, clients, and colleagues informed of EHP happenings and activities, new EHP publications and reports, and upcoming meetings and conferences related to environmental health. Four issues were published during Year 2. *What's New* currently has 390 subscribers, including individuals from G/PHN/HN, developing countries, international organizations, NGOs, and PVOs.
- IC designed and developed the EHP Brief. Three EHP Briefs were developed and disseminated.
- To facilitate prompt responses to information requests, IC continually updated and expanded the EHP library database (online and print); 476 records were added to the EHP library database during Year 2. The library database now has 12,476 bibliographic entries.
- A draft annual report prepared by the EHP/Mozambique local coordinator was translated into Portuguese.
- Publications and products produced during Year 2 are listed in Annex 1.
- There were a total of 26,034 users of the EHP Web site, who viewed or downloaded a total of 89,980 documents and files. The Year 2 average of 725 users per week represented a 16% increase over the Year 1 average of 620.
- IC responded to approximately 2,935 information requests:
 - 1,010 from EHP staff, EHP consultants, or USAID/Washington or mission staff

- 820 from international organizations, such as the World Bank., PAHO, and UNICEF
- 675 from individuals in developing countries
- 360 from NGOs and PVOs
- 70 from U.S. universities and companies
- IC distributed 18 biweekly *Malaria Bulletins* electronically. The number of subscribers increased from 294 to 435.
- IC distributed 16 *Environmental Health Updates* electronically. The number of subscribers increased from 166 to 183.

Milestones Achieved for Year 2

The following milestones identified in the Year 2 Work Plan were achieved:

- The EHP activities database was established and posted on the EHP Web site. The database provides up-to-date information on EHP activities by region and country and by EHP's focus areas (e.g., diarrheal disease prevention, malaria, water and sanitation). The database is used to answer general requests for information related to EHP activities—to find out where EHP is working and what it is doing. The database includes summary descriptions of the activities as well as available reports related to the activities.
- EHP's dissemination strategy was developed. The dissemination strategy guides coordinators and activity managers in each technical area to develop and pursue specific information dissemination goals.
- EHP Briefs—a shorter, easily readable new print product was developed and disseminated. Briefs are two-page summaries of EHP activities and are also Web based. Each Brief focuses on a specific area in an activity and addresses a general audience.
- The EHP Web site was revamped and updated with new layout, new graphics and photographs, new links, and additional navigation bars to ease navigation. In lieu of a Spanish Web site, a Spanish Page was added to the site. The Spanish Page includes EHP documents in Spanish and links to Spanish Web sites (e.g., EHP/Nicaragua, PAHO).

Issues and Problems

- The former IC 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 former Publications Manager retired. A new Publications Manager was recruited.
- The IC Coordinator's illness (announced in early April) limited her ability to devote time and attention to IC, and the Center temporarily lost some momentum.

Task 7: Other Activities

During Year 2, a number of missions and bureaus asked EHP to provide assistance under Task Order 1 that did not clearly fit under CESH or ECHO:

- Dominican Republic: Decentralization of Rural Water and Sanitation Services
- Dominican Republic: Community-Level Hygiene Behavior Change
- Democratic Republic of the Congo: Implementation of Urban Environmental Health Strategy
- Latin America and the Caribbean: Decentralization of Water and Sanitation Systems
- Latin America and the Caribbean: Sanitation in Small Towns
- El Salvador: Legal and Regulatory Reform of the Water Sector
- Peru: Reducing Lead-Related Risks
- Peru: Urban Environmental Health
- South Africa: Urban Programs Office Capacity-Building Activity with the Bushbuckridge Water Board

Dominican Republic: Decentralization of Rural Water and Sanitation Services

Overview of Subtask

USAID/Dominican Republic and the National Water Supply and Sanitation Utility (INAPA) agreed to work together and cofinance a pilot rural 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 2

- An EHP consultant made two trips to the Dominican Republic to provide technical assistance to INAPA in reviewing and revising policies and procedures and job descriptions for the rural water department.

Dominican Republic: Community-Level Hygiene Behavior Change

Overview of Subtask

The overall purpose of the Dominican Republic Community-Level Behavior Change activity is to strengthen the behavior change component of the community health, water, and sanitation interventions currently under way within the USAID/Dominican Republic Reconstruction Program in order to achieve maximum feasible project health impact. EHP provides assistance to ENTRENA (a local contractor), NGOs involved in WS&S reconstruction efforts, and the MOH to design and implement a strategy to prevent diarrheal disease through improved hygiene behaviors. An assessment, using an interactive approach, will identify NGO strengths and weaknesses and work in a participatory fashion to improve the community-level behavior change capacity of the NGOs and the MOH. The basic approach to this activity is to improve the behavior change component by strengthening the capacity of the participating NGOs to design and implement behavior change activities. This technical assistance will be coordinated with community-level behavior change activities in the areas of nutrition and social mobilization for vaccinations, and ultimately it will be incorporated into the Dominican IMCI model.

Accomplishments during Year 2

- A two-phase workshop was organized to strengthen the capacity of participating NGOs to design and implement community-level behavior change activities. The workshop was designed based on an NGO training needs assessment carried out in Year 1. The goal is to incorporate behavior change efforts associated with water, sanitation, and hygiene into the Dominican IMCI model.

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

Overview of Subtask

In response to deteriorated urban environmental conditions in the Democratic Republic of the Congo, the USAID mission, in collaboration with EHP and the Regional Urban Development Office located within USAID/South Africa, developed an urban environmental health strategy. 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, and training; and (8) alternative techniques of environmental sanitation improvement. The USAID/Democratic Republic of the Congo urban environmental health strategy will address priority health threats, utilizing both short- and long-term interventions.

Accomplishments during Year 2

- EHP, in partnership with the University of Kinshasa School of Public Health and a Congolese facilitator, facilitated a four-day start-up workshop in Kinshasa that was attended by all USAID-funded urban pilot project cooperating agency partners and other stakeholders. The workshop launched the implementation of the three pilot activities, in Kinshasa, Kananga, and Burumbu.
- EHP contracted two international NGOs—the International Rescue Committee and Action Against Hunger (Action Contre la Faim–USA)—to implement the Democratic Republic of the Congo pilot activities.
- EHP established funding mechanisms to provide management and general oversight for the pilot activities.
- Implementation of pilot activities was initiated.
- Negotiations were initiated with the USAID/Democratic Republic of the Congo general development officer to pursue a further funding buy-in for technical assistance to urban environmental health activities from the USAID/South Africa Regional Urban Development Office.
- Preliminary discussions were held with USAID/Democratic Republic of the Congo regarding EHP involvement in providing technical assistance to the newly launched *Projet des Soins de Santé Primaires en Milieu Rural III (SANRU III)*, which USAID is expected to support for the next five years. EHP assistance is

likely to center on increasing local capacity to design, implement, monitor, and evaluate hygiene improvement activities.

Issues and Problems

- Communication problems between EHP and the NGOs implementing pilot urban environmental health activities in the Democratic Republic of the Congo delayed submission of assessment instruments for review (i.e., after they have been used in the field) and delayed disbursement of funds from EHP to the NGOs, due to slow preparation of subcontracts by EHP. These issues have been addressed through dialogue and improved planning.

Eritrea: Environmental Health Strengthening

Overview of Subtask

Based on an agreement between USAID/Eritrea and Eritrea's MOH related to the need to strengthen the MOH's environmental health capabilities and policies, the 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.

Issues and Problems

- 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 terminated.

Honduras: EHP Technical Assistance

Overview of Subtask

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

Accomplishments during Year 2

- There was no action related to this activity during Year 2. It is anticipated that the MOH may request EHP assistance through USAID/Honduras in Year 3 related to training of trainers for environmental health technicians.

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

Overview of Subtask

The purpose of the Decentralization of Water and Sanitation Systems activity in Latin America and the Caribbean is to advance the understanding and implementation of decentralization of WS&S services in the region by actively disseminating experiences and information. This activity is a follow-on to a regional activity under EHP I on decentralization of WS&S services. The EHP II activity consists of three distinct tasks: (1) documenting and sharing successful practices by developing case studies, (2) providing modest support to one mission in South America, and (3) disseminating information to USAID, donors, and host country partners.

Accomplishments during Year 2

- Six case studies on decentralization of water and sanitation systems drafted during Year 1 were finalized, published, and disseminated as an EHP strategic paper in English and Spanish. The paper, which is also electronically available, was very well received.

Latin America and the Caribbean: Sanitation in Small Towns

Overview of Subtask

EHP will develop practical guidance for USAID missions and contractors to use in improving sanitation in small towns. This activity builds on EHP's previous work in Latin America and the Caribbean in decentralization that focused on small towns and rural areas. EHP will develop an overview document that defines the problem and a methodology that can be used to develop a plan to improve sanitation services in small towns.

Accomplishments during Year 2

- The activity was initiated: a scope of work was developed, a consultant team was identified, and missions were informed about the activity.
- The overview document that examines issues of sanitation in small towns in Latin America and the Caribbean was drafted and reviewed.
- An outline for the methodology document was drafted. A short list of possible countries for pilot-testing the methodology was also developed.
- Additional funding was secured for expanded field-testing and dissemination of the methodology.

El Salvador: Legal and Regulatory Reform of the Water Sector

Overview of Subtask

The one-year Legal and Regulatory Reform of the Water Sector activity in El Salvador was funded by the USAID Bureau for Latin America and the Caribbean 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 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 WS&S and local government networks in El Salvador.

Accomplishments during Year 2

- In phase I of this activity, EHP assisted in reviewing and discussing key elements of two draft laws: one for water resources and the other a regulatory law for WS&S.
- Because of the two earthquakes that struck El Salvador in January 2001, all work on this activity was suspended, including the draft laws, which have been put on hold by the National Aqueduct and Sewerage Administration (ANDA) and may not be resurrected. Phase II, which was originally intended to assist the Legislative Assembly in reviewing the laws, will instead be refocused on more immediate issues.
- EHP staff visited El Salvador to develop a work plan for phase II.
- Three separate activities were envisioned under phase II: (1) consolidation of the insights and work carried out in phase I, (2) review of current ANDA legislation and how it might be modified to support decentralization, and (3) development of a model to provide backup support to rural communities

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. USAID requested EHP to provide logistical support and technical assistance to DIGESA in implementing the follow-up plan of action.

Accomplishments during Year 2

- The report documenting the implementation of the follow-up plan of action was finalized and distributed. The purposes of the follow-up activities were 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.
- The funding for this activity is finished. Additional work in support of DIGESA's lead program will be carried out as part of the new USAID/Peru Urban Environmental Health Program.

Peru: Urban Environmental Health

Overview of Subtask

The purpose of the Urban Environmental Health activity in Peru is 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:

1. Policy improvement assistance to Peruvian government agencies having environmental health responsibilities
2. Site-based pilot projects to demonstrate innovative ways of addressing environmental health needs
3. Technical assistance, training, and local institutional strengthening
4. Development of environmental health risk monitoring capacity with community involvement

The activity also provides a wide range of technical assistance and procurement support to DIGESA/MOH and to the implementing PVOs and local authorities to help achieve the overall Urban Environmental Health activity results.

Accomplishments during Year 2

- EHP assisted DIGESA with developing a life-of-project implementation plan and the first annual work plan and in developing criteria for the staffing of the Urban Environmental Health Coordinating Unit.
- EHP supported consultancies to help DIGESA set up formative research and develop a baseline survey instrument and to help it develop hygiene education materials based on research and survey findings.

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

Overview of Subtask

The purpose of the Urban Programs Office Capacity-Building Activity with the Bushbuckridge Water Board in South Africa was to support USAID/South Africa's efforts in capacity building related to retail water distribution in five municipalities in the Bushbuckridge area.

Accomplishments during Year 2

- Chemonics was selected as the new contractor for the activity. EHP will continue to provide period technical assistance to the activity.
- EHP conducted a lessons-learned workshop for all the key stakeholders and to provide guidance to Chemonics.
- EHP worked on the preparation and planning of a project review workshop.

Tanzania: Infectious Diseases— Case Definitions

Overview of Subtask

The Infectious Diseases—Case Definitions activity in Tanzania aimed to strengthen the Tanzanian MOH’s capacity for infectious disease surveillance. EHP was to provide technical assistance to the Tanzanian National Institute for Medical Research, which, in conjunction with the MOH, would field-test a new set of case definitions for selected infectious diseases. Using results from the field test, the institute and the MOH were to refine and finalize the case definitions for countrywide dissemination and use.

Accomplishments during Year 2

This activity has been terminated.

Task Order 2

Malaria Vaccine Development Program

Overview of Task

EHP provides support for the USAID Malaria Vaccine Development Program 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 2

- In response to the investigational-new-drug application submitted to the U.S. Food and Drug Administration for the *Escherichia coli* merozoite surface protein 1 vaccine target antigen, the Malaria Vaccine Development Program received authorization to begin clinical trials. As required by the Food and Drug Administration, an addendum to the application was also prepared to document use of a new lot of vaccines in the next set of clinical trials.
- EHP staff completed negotiation of a subcontract with the Medical Research Council in London, England. This subcontract will allow the Medical Research Council to use Malaria Vaccine Development Program funds to support the evaluation of a new vaccine candidate. The subcontract will go through February 2004.

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 and improving 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 2

- Construction of water systems, wells, and latrines:
 - Construction or rehabilitation of water systems reached a project total of 2,441 (96% of total), and the construction of latrines reached a project total of 5,735 latrines (97% of total).
 - Using EHP-purchased drilling rigs, drilling of 176 new potable water wells was completed.
 - Construction of a project total of 601 “environmental” projects, including 422 small drainage collection boxes and multiple reforestation-nursery efforts, against a total project goal of 832 (71% of total), was completed.
 - Water and sanitation improvements at 29 health clinics in Matagalpa and Jinotega were over 60% completed. This effort was carried out by CARE Nicaragua under contract with EHP.
- Institutional strengthening:
 - EHP held two lessons-learned and idea-sharing forums. The interactive events brought together participants representing PVOs, the water supply management division (GAR) of the Nicaraguan Aqueduct and Sewerage Company (ENACAL), the Nicaraguan MOH (MINSAL), USAID, and other organizations working in the rural WS&S sector. The overall objective of the forum was to discuss lessons learned, focusing on the implementation and sustainability of activities related to rural WS&S.

- Upgrades and improvements to ENACAL’s National Water and Sanitation Information System (SINAS) database were completed. The database is used to document rural water supply information for planning purposes. These improvements will help ENACAL-GAR manage the wide range of facilities and projects that fall under its jurisdiction throughout rural Nicaragua. Donor agencies, as well as PVOs and NGOs, will also benefit by eventually having greater access to water and sanitation information than was previously available. Training in the use of the new SINAS will be provided by EHP to all of its PVO implementing partners, as well as to all members of Nicaragua’s Regional Water and Sanitation Network (RRASCA).
- In collaboration with Johns Hopkins University, EHP supported the Estrella Azul Campaign. This campaign is complementary to EHP’s efforts in Nicaragua and reinforces EHP’s training efforts with respect to the handling and treatment of water, use of latrines, personal hygiene, and other subjects on national, regional, and local levels. Johns Hopkins University and EHP sponsored joint workshops to help train the trainers (PVO partners) in presentation and reinforcement of the key messages of the campaign to the project beneficiaries. Ten thousand community and household training events have been provided to project beneficiaries, and some 70,000 adults have participated in this training. Particular focus will be paid to the ongoing training of members of each community’s WS&S committee (*comité de agua potable y saneamiento* [CAPS]).
- Other activities:
 - *Arsenic testing*: USAID approved EHP to implement its proposed Arsenic Testing Plan. This plan calls for performing limited random water quality testing in each of the communities in which EHP constructed or rehabilitated a water well under its PVO grants program. Although there is no particular evidence to indicate that arsenic contamination will be a problem in these new wells, the information collected during this process will serve to help map out areas of incidence within Nicaragua for use in planning future water projects. EHP will work closely with other interested organizations, including UNICEF, the Swiss Development Agency (COSUDE), ENACAL, MINSA, and PAHO, to establish a national strategic arsenic monitoring plan for Nicaragua. This group is preparing a special document to outline the details of this strategy.
 - *Project closeout activities*: EHP began carrying out some of its closeout activities, including the following:
 - Updating and submitting its project inventory list to USAID. EHP also submitted project inventory listings for each of its PVO partners, which included any and all items procured during the course of the project with purchase values over \$500.

- Preparing and submitting a commodity disposition plan, in conjunction with the submittal of the inventory listings, which provided recommendations for the final disposition of items purchased under the EHP program, including those purchased by its PVO partners.
- Preparing an update to EHP's overall project closeout plan, to be submitted in early July next year to USAID.

Annexes

Annex 1: EHP II Year 2 Publications and Other Products

EHP Brief 1. Case Studies on Decentralization of Water Supply and Sanitation in Latin America. EHP Staff. Project 26568/ICU.YR2.SERV. November 2000.

EHP Brief 2. Linking Health, Population, and the Environment in Madagascar. EHP Staff. Project 26568/ICU.YR2.SERV. June 2001.

Report for the File 333. Trip Report: Eritrea, Technical Assistance for a National Malaria Prevalence Survey and Other Studies, 1–30 September 2000. John I. Githure, Josephat I. Shililu, Charles Mbogo, Ephantus Kabiru, and Matthew Lynch. Project 26568/E.X.ER2.NATLSURVEY. December 2000.

Report for the File 334. Trip Report: Internet Librarian 2000 Conference, Monterey, California, November 6–8, 2000. Dan Campbell. Project 26568/ICU.YR2.SERV. December 2000.

Report for the File 335. Nicaragua Rural Water Supply, Sanitation, and Environmental Health Project, Year 2 Work Plan, October 2000–November 2001. David A. Ogden. Project 27052/NIC.MANAGUA. January 2000.

Report for the File 336. Midterm Evaluation of the USAID/El Salvador Public Service Improvement Project (Project No. 519-0320): Water and Sanitation for Health Program—PROSAGUAS. Eduardo A. Perez, Patricia Martin, Harold Lockwood, and Morris Israel. Project 26568/OTHER.SV1.WSSEVAL. September 2000.

Report for the File 337. South Africa: Retail Water Distribution Project: Hand-over Workshop, 13–15 October 2000. Daniel B. Edwards, Johnathan Hodgkin, and John H. Austin. Project 26568/OTHER.SA1.4. October 2000.

Report for the File 338. Trip Report: Cameroon. Support for WHO/AFRO Efforts to Strengthen Vector Control Programs, December 12–17, 2000. Prof. Yeya T. Toure. Project 26568/E.X.GEN2.AFRONET. January 2001.

Report for the File 339. Trip Report: Senegal: Support for WHO/AFRO Efforts to Strengthen Vector Control Programs, 4–10 December 2000. Yeya T. Toure. Project 26568/E.X.GEN2.AFRONET. January 2001.

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- Report for the File 341.** Trip Report: Zimbabwe: Support for WHO/AFRO Efforts to Strengthen Vector Control Programs, 11–15 December 2000. Dr. John I. Githure. Project 26568/E.X.GEN2.AFRONET. January 2001.
- Report for the File 342.** Foro Sobre Intercambio de Experiencias y Lecciones Aprendidas, Managua, Nicaragua, 13–15 de Noviembre 2000. Harold Lockwood. Project 27052/NIC.FORUM. December 2000.
- Report for the File 343.** EHP-Nicaragua: Consultant Trip Report and Observations, Managua, October 28–November 18, 2000. Harold Lockwood. Project 27052/NIC.FORUM. November 2000.
- Report for the File 344.** Environmental Health Project II: Information Dissemination. May Post. Project 26568/ICU.YR2.SERV. February 2001.
- Report for the File 345.** Trip Report: Eritrea, November 12–December 19, 2000. Josephat I. Shililu. Project 26568/E.X.ER2.NATLSURVEY. January 2001.
- Report for the File 346.** Eritrea: Overview of Results of Entomological Surveys. Josephat I. Shililu and David Sintasath. Project 26568/E.X.ER2.NATLSURVEY. January 2001.
- Report for the File 347.** Trip Report: Eritrea, November 19–December 11, 2000. David Sintasath. Project 26568/E.X.ER2.NATLSURVEY. January 2001.
- Report for the File 348.** Eritrea: Preliminary Results of the Malaria Parasite Survey for Anseba, Debub, Gash Barka, and Maekel Zones—Phase I. Josephat I. Shililu and David Sintasath. Project 26568/E.X.ER2.NATLSURVEY. January 2001.
- Report for the File 349.** Trip Report: Nicaragua: Technical Assistance to Strengthen the EHP/Nicaragua Monitoring and Evaluation and Improvement Process, February 11–16, 2001. O. Masee Bateman. Project 27052/NIC.M&I. March 2001.
- Report for the File 350.** Environmental Health Project: Work Plan for Year Two: Task Order 1. EHP Staff. Project 26568/WORKPLAN.Y2-Y3. November 2000.
- Report for the File 351.** Identificación de Capacidades y Condiciones Laborales de los Trabajadores Independientes de Residuos Sólidos en Lima Metropolitana: Informe de Medio Término (Capabilities and Working Conditions for Independent Laborers of Solid Waste in Metropolitan Lima: Midterm Report). Asociación Nacional para el Desarrollo Sostenible (ANDE). Project 26568/OTHER.PE.URBANEH.ANDE. April 2001.
- Report for the File 352.** Trip Report: Conduct Start-up Workshop for INAPA Acueductos Rurales in Políticas, Procedures, and Rules. Dan Edwards. Project 26568/OTHER.DO2.INAPA.HATOMAYOR. June 2001.

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Strategic Paper 1. Estudio de Caso Sobre la Descentralización de los Servicios de Agua Potable y Saneamiento en Latinoamérica. Frank Fragano, Carlos Linares, Harold Lockwood, Daniel Rivera, Andrew Trevett, Guillermo Yepes, and Fred Rosensweig. Project 26568/OTHER.LACDEC.CS. January 2001.

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What's New 3/01. EHP Staff. Project 26568/ICU.YR2.SERV. March 2001.

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