

**ENVIRONMENTAL HEALTH PROJECT**

Report for the File No. 452

**EHP II Year 4 Annual Report**  
**July 2002— June 2003**

Prepared for the U.S. Agency for International Development  
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**U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT**  
OFFICE OF HEALTH,  
INFECTIOUS DISEASES AND NUTRITION  
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# Abbreviations

ADB	Asian Development Bank
ADRA	Adventist Development and Relief Agency, Madagascar
AFRIMS	Armed Forces Research Institute for Medical Sciences
AKDN	Aga Khan Development Network
ANASAM	Asociacion Nicaraguense para al Agua y Saneamiento Ambiental
ANE	Asia and the Near East Bureau
ANERA	American Near East Refugee Aid
ANVR	African Network for Vector Resistance
ARI	acute respiratory infection
ASOS	Action Sante Organisation Secours
ASTMH	American Society of Tropical Medicine and Hygiene
AWW	Angan Wadi Workers (India)
BASICS	Basic Support for Institutionalizing Child Survival
BBIN	Bangladesh, Bhutan, India, and Nepal
BHR/PVC	Bureau of Humanitarian Response/Private Voluntary Cooperation (USAID)
CAR	Central Asian Republics
CBS	community-based organization
CDC	Center for Development Studies (India)
CDM	Camp Dresser & McKee International Inc.
CECI	Canadian Center for International Studies and Cooperation
CESH	Community-Based Environmental Sanitation and Hygiene
CGIAR	Consultative Group on International Agricultural Research

C-IMCI	Community-Based IMCI
CORE Group	Child Survival Collaborations and Resources Group
CRS	Catholic Relief Services
CSTS	Child Survival Technical Services
DHS	Demographic Health Survey
DIGESA	General Directorate of Environmental Health (Peru)
DRC	Democratic Republic of the Congo
EAWAG	Swiss Federal Institute for Environmental Science and Technology
ECC	Eglise du Christ au Congo
ECHO	Environmental Change and Health Outcomes
EDCD	Epidemiology and Disease Control Division (Nepal)
EGAT/UP	Economic Growth, Agriculture and Trade Bureau/Urban Programs
EHP II	Environmental Health Project II
EWARS	Early Warning and Response System
EWOC	Emergency Water Operations Center (West Bank)
GESCOME	Community management of Environmental Health (Benin)
GIS	geographic information system
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
ICIPE	International Center for Insect Physiology and Ecology
IEC	information, education, and communication
IHNP	Integrated Nutrition and Health Program (CARE)
IIN	International Institute for Nutrition (Peru)
IMA	Interchurch Medical Assistance (Democratic Republic of Congo)

IMCI	integrated management of childhood illnesses
INAPA	National Water Supply and Sewerage Institute (Dominican Republic)
INPRHU	Instituto de Promocion Humana (Nicaragua)
INSTAT	National Institute of Statistics (Madagascar)
IP	integrated programs
IQC	indefinite quantity contracts
IRC	International Resource Center for Water and Sanitation
IRI	International Research Institute for Climate Prediction, Columbia Univ.
IVM	integrated vector management
JMP	Joint Monitoring Program (WHO/UNICEF)
KAP	knowledge, attitudes, and practices
KPC 2000	Knowledge, Practices, and Coverage Survey 2000
LAC	Latin America and the Caribbean Bureau
LSHTM	London School of Tropical Medicine and Hygiene
MEASURE	Monitoring and Evaluation to Assess and Use Results
MEDS	Monitoring, Evaluation, and Design Support Project
MISAU	Ministry of Health, Mozambique
MVDP	Malaria Vaccine Development Program
NGO	non-governmental organization
PAHO	Pan-American Health Organization
PATH/CVP	Program for Appropriate Technology in Health/Child Vaccine Program
PCI	Project Concern International
PHN	Population, Health and Nutrition Office

PSI	Population Services International
PVO	private voluntary organization
RUDO	Regional Urban Development Office
SAF	Department for Development, Church of Jesus Christ, Madagascar
SANDEC	EAWAG Department of Water and Sanitation in Developing Countries
SANRU	Rural Health Program III (Democratic Republic of the Congo)
SFH	Society for Family Health (Zambian affiliate of PSI)
SIMA	System-Wide Initiative on Malaria and Agriculture
SOTA	state of the art
TIP	trials of improved practices
TSA	environmental health technicians, Honduras
UN	United Nations
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
VS/IDI	Voahary Salama/Integrated Programs Initiative (Madagascar)
VBDRTC	Vector-Borne Disease Research and Training Center, Nepal
VWS	Village Water and Sanitation Program, West Bank
WASH	Water, Sanitation, and Hygiene Campaign (WSSCC)
WEDC	Water, Engineering and Development Center at Loughborough
WELL II	Water and Environmental Health at London and Loughborough
WHO	World Health Organization
WHO/AFRO	WHO Regional Office for Africa
WHO/SEARO	WHO Regional Office for South East Asia
WSSCC	Water Supply and Sanitation Collaborative Council

XS

cross-sectoral surveillance

# Executive Summary

This annual report describes the principal activities and accomplishments of Year 4 (July 1, 2002–June 30, 2003) of the second phase of the U.S. Agency for International Development (USAID) Environmental Health Project (EHP II). In addition, status reports on meeting the project's performance indicators and on achieving the project's highest level of monitoring results are given. Project activities were carried out in the field and at the project's headquarters in Arlington, Virginia.

## **Year 4 accomplishments for the seven tasks under Task Order #1 are as follows:**

**Task 1: Workplan.** The workplan for the fifth and final year of the project was completed on time, but final approval from USAID was pending at the end of the fiscal year. At the request of the EHP Technical Officer in USAID, the plan was condensed and presented in table form and described Task Order #1 activities only.

**Task 2: Policy and Lessons Learned.** EHP continued to take an active role in developing indicators for assessing improvements in hygiene and diarrheal disease prevalence, working in cooperation with WHO/UNICEF, the DHS Urban Working Group, the Measure Evaluation Technical Advisory Group, and the Safe Household Water Treatment Network's Research Working Group. The highlight of the year's policy activities was EHP participation in the 30<sup>th</sup> Annual Conference of the Global Health Council in Washington, DC, in May. EHP organized two panels on mainstreaming prevention of diarrhea in child health and improving maternal and child health in urban slums and participated in panel discussions on environmental strategies for control and prevention of malaria, dengue and cholera and on integrated health-population-environment programs. A second policy report was produced: Best Practices for Dengue Prevention and Control in the Americas, and a decision was made on topics for the remaining three policy reports: urban health, integrated health-population-environment programs, and vector control. Two partnership activities were especially noteworthy: EHP participated as a member of the World Bank Steering Committee for a Global Initiative for Public-Private Partnership in Handwashing and prepared and ran a training session on hygiene improvement for the First Annual Child Survival and Health Grants Program Mini-University, organized by Child Survival Technical Services.

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

Progress is being made in the development of several tools: the hygiene improvement framework advocacy document (nearing completion), a package of training and field guides for behavior-centered programming for hygiene improvement and diarrheal disease prevention (first draft prepared by the Manoff group), a hygiene improvement assessment guide (in final review by EHP and

USAID staff), a community-based participatory monitoring and evaluation methodology (being produced by the Nicaraguan PVO NicoSalud), and finally a revision of the 1997 UNICEF Sanitation Programming Guide (revised draft under preparation with UNICEF, WSSCC, and PAHO). In addition, further possibilities for applying the assessment guidelines for environmental sanitation policy were identified in Honduras, Madagascar, and Laos and a new operations research effort was launched to evaluate the point-of-use water chlorination project in Zambia. CESH approaches and tools were applied in Year 4 in Benin, the Democratic Republic of the Congo, the Dominican Republic, Egypt, Ghana, Honduras, India, Nepal, Nicaragua, Peru, West Africa (Ghana, Mali, and Niger) and the Latin America and the Caribbean region (LAC). The urban emphasis, begun in Year 3, continued in Year 4 as the programs in Egypt and India began in earnest. Two new field programs—one in Peru and the other in Nepal—are part of the World Bank's Initiative for Public-Private Partnerships for Handwashing.

**Task 4: Environmental Change and Health Outcomes (ECHO) Cross-Sectoral Surveillance (XS) and Integrated Vector Management (IVM).** Several new XS and IVM core activities were initiated: a partnership was forged with Columbia University's International Research Institute for Climate Prediction, World Bank pipeline projects that might inadvertently increase malaria breeding sites were identified, and trials were planned for Kenya, Tanzania and Ethiopia to demonstrate the impact of larval control methods on malaria transmission in three different ecological settings: urban, highland, and desert fringe. Field work continued in Eritrea, with the focus on risk mapping, epidemic forecasts, and measurements to routine surveillance, and in Nepal, with the emphasis on improving the Early Warning and Response System (EWARS), implementation of the vector-borne disease program in Dhanusha-Mahottari Districts, and strengthening the Vector-Borne Disease Control Research and Training Center. The VBDRTC is preparing for the time when it will not be able to rely on EHP support. In Asia/Near East (ANE), the Bangladesh, Bhutan, India, and Nepal (BBIN) Network continued to work for the standardization of diagnostic and surveillance methods for Japanese encephalitis and for monitoring resistance to anti-malaria drugs. This year, two new field activities were launched: technical support to review current and proposed practices for using pesticides in malaria control in the Central Asian Republics, and an effort in Uganda to reduce malaria transmission in urban areas.

**Task 5. Grants—Madagascar: ECHO/Integrated Programs (IP).** The major accomplishment for Year 4 was the establishment of Voahary Salama/Integrated Programs Initiative (VS) as a legally registered association. The emphasis now will be on strengthening the VS institutionally. VS secured \$200,000 from the Flexible Fund for Family Planning Activities and additional funds from USAID. Planning started for the post intervention survey to be held in the fall of 2003.

**Task 6: Information Center (IC).** In addition to normal work maintaining information and publications services and supporting core EHP activities, the IC redesigned the home page of EHP's website and added a new "current feature."

The website improvements were prompted by an evaluation of the website and analysis of the lessons learned from the evaluation. IC continued to expand the website as a vehicle for knowledge sharing, accessing reports and publications, and developing partnerships. As the project nears completion, the number of reports published accelerates. In Year 4, 15 Activity Reports and 5 Strategic Reports were published, in addition to numerous EHP Briefs and e-newsletters on various topics.

There were five additional Task Orders in Year 4.

**Task Order #2: Malaria Vaccine Development Program.** The MVDP continued to coordinate USAID efforts by supporting regular vaccine team meetings and organizing the semiannual meetings of the Scientific Consultants Group. In Year 4, the MVDP was evaluated by USAID.

**Task Order #801. El Salvador: Legal and Regulatory Reform of the Water Sector.** In Year 4, EHP assisted the Ministry of the Environment to develop the legal and institutional framework for watershed management commissions. The activity was completed in September 2002 with issuance of the final summary report.

**Task Orders #803 and #804. West Bank: Village Water and Sanitation Program.** This program was intended to provide safe and sustainable water and sanitation services to 44 rural towns serving a population of 135,000 in the West Hebron and South Nablus areas. Task Order #803 was for health, governance, wastewater reuse studies, designs, and programs; and #804 was for engineering designs. The engineering studies were completed, but in March, 2002, when the other aspects of the program were due to begin, major Palestinian municipalities were invaded and occupied by the Israeli Defense Forces. Since planned project activities were not possible, USAID shifted project resources and personnel to provide emergency water supplies through the Emergency Water Operations Center.

**Task Order #805: Jordan Watershed/Water Quality Program.** This task order consists of implementing the second phase of an effort to improve water management in Jordan. Camp Dresser & McKee (CDM) carried out the first phase, which consisted of analyzing Jordan's water management system and identifying areas for improvement. EHP will work on the second phase, which consists of addressing priority problems: watershed protection, laboratory quality control, and operations and maintenance of water treatment facilities.

EHP continues to make steady progress in meeting end-of-project performance indicators. Some examples:

- EHP has met the end-of-project target of organizing two major international meetings and participating in four.

- A key accomplishment in the development and testing of indicators for water, sanitation and hygiene is the drafting of a hygiene improvement assessment guide with second-level indicators.
- The monitoring and evaluation plan for CESH and ECHO is in place.
- Two out of five policy reports have been published (one on public-private partnerships for handwashing and the other on control and prevention of dengue in the Americas), and the other three topics have been identified.
- Two operations research questions are being pursued: safe disposal of children's excreta and the impact of household water chlorination on households with family members who have HIV/AIDS.
- Three CESH tools are under development: gathering baseline information to identify priority environmental conditions related to diarrheal disease prevention, programming hygiene behavior change activities, and participatory monitoring and evaluation. They are being applied in Benin, the Democratic Republic of Congo, the Dominican Republic, Nicaragua and Peru.
- Three cross-sectoral surveillance methods have been developed: national-level risk stratification, local-level risk stratification, and characterization of larval habitats. These have been or are being tested in Eritrea, Mozambique and Nepal.
- Integrated vector-management control approaches have been developed for six different settings in Africa and have been promoted in Eritrea.
- Finally, four of the core tasks (CESH, ECHO/XS, ECHO/IVM and ECHO/IP) have achieved clear success in innovation and partnerships/leveraging and are poised for documenting their effectiveness in the final year of EHP II.

A table in Annex 1 lists the project milestones for Year 4 and their status. Of the total 52 milestones, 12 were rescheduled for Year 5, 2 were cancelled, and the remainder were achieved.

# 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 mortality or morbidity 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.

## Results

To achieve these objectives, EHP II was awarded as an indefinite-quantity contract with two main parts. The first part is Task Order #1, which was awarded at the same time as the umbrella contract. It specifies the programmatic areas in which the project should work to enable it to meet the first objective above. These are all related to the child health strategic objectives of USAID's Office of Health and Nutrition. The key function of Task Order #1 activities is to provide global leadership in the development, implementation and promotion of new and improved, cost-effective, and replicable environmental health interventions.

Two intermediate results under the Office of Health and Nutrition's strategic objective for child health are to be accomplished by EHP II through Task Order #1:

- *Intermediate Result 1:* 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, and malaria, as well as other vector-borne diseases.
- *Intermediate Result 2:* Surveillance systems and interventions that 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.

The second part of the contract provides for additional task orders as mechanisms for achieving the second objective, above. So far there have been eight such task orders: three completed and five ongoing.

## Year 4 Highlights

- The scope of work for Task Order #1 was revised in September 2002. Task 2 (Lessons Learned and Policy) was revised to include a policy report on urban health. Task 3 (CESH) was revised to reduce the number of countries in which CESH tools are to be applied (from five to three) and to limit tools and operations research to diarrheal disease prevention, rather than to diarrhea *and* malaria and acute respiratory infections. Another change broadened the scope of CESH to include activities previously identified as “other,” notably several urban activities. Finally, because of an evolution in the understanding of CESH, the amendment shifts the focus of CESH from environmental sanitation in general to disposal of excreta specifically. Under Task 4 (ECHO) the subtasks were revised to reflect the regional dimension of surveillance activities.
- As a result of planning for Year 5, Task 4B (ECHO/IP) was changed to Task 5 (ECHO/IP—Madagascar). Originally, Task 5 was intended as a grant-making program for local groups experimenting with integrated programs. However, plans for such a program never materialized; the focus has been uniquely on the Madagascar activities.
- Although urban health is now subsumed under CESH, it constitutes a distinct programmatic area that is more broadly defined than CESH. Urban health activities focus on improving child health in under-served settlements, through addressing service delivery and health behavior promotion through NGOs.
- In CESH, several field activities have documented the effectiveness of CESH tools. For example, in the Dominican Republic, use of behavior-change techniques was associated with numerous improvements in hygiene behavior; likewise, in the Democratic Republic of Congo, a program to improve environmental health in urban markets recorded improvements in hygiene KAP; up to 80% of the food vendors and restaurant managers attended the education sessions.
- CESH tool development efforts are nearing completion. Tools have been or are being prepared on developing sanitation policy, baseline assessment for hygiene improvement activities, diarrheal disease prevention for child health programs, participatory community monitoring, and behavior-centered programming.
- ECHO/XS continues to refine the concept of cross-sectoral surveillance. The concept includes risk stratification, epidemic risk forecasting, and data collection and analysis – all of which are being applied in Eritrea.
- Under ECHO/XS and IVM, EHP has collaborated closely with WHO/AFRO. Because of their joint activities—which focus on guidelines for integrated vector management—WHO headquarters is considering the application of IVM approaches in controlling vectors of human disease.

- The ECHO/IP activities in Madagascar will be assessed in Year 5, using baseline data collected in March-April 2001. The program has pioneered the use of three new approaches—community champion, farmer-to-farmer, and child-to-child—and has established VS as a legally registered association that can continue its work after the conclusion of EHPII.

## **Challenges**

The greatest challenge in Year 4 was the departure in the second quarter of the CESH Coordinator. Since EHP II had only 1.5 years to go, a decision was made not to try to replace the coordinator but instead to divide up responsibility for various aspects of CESH among the present staff and additional consultants.

## **EHP Consortium**

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. Seven other organizations make up the consortium:

- 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).

## **Strategic Approach**

To contribute significantly to improved child health, EHP II's strategy is to work in a way that avoids duplication and fosters integration and synergy with other projects, agencies, and institutions. EHP II seeks, on the one hand, to integrate environmentally related prevention measures with child health programs, and, on the other, to advocate for the inclusion of health programs and perspectives in environmental programs.

In keeping with its strategy, EHP II adheres to several key approaches:

- Work in partnerships.
- Develop rigorously tested, cost-effective interventions and tools.
- Integrate environmental interventions in child health programs.
- Operate within a field context and maximize the use of local expertise.
- Focus on community-based approaches.
- Apply an interdisciplinary approach.
- Manage information and communication in a strategic fashion.

## **How This Report Is Organized**

The first two chapters look at project-level achievements and results. Chapter 1 presents the project's highest level of monitoring results for the four core activities: CESH, ECHO/XS, ECHO/IVM, and ECHO/IP. Achievements are summarized in three categories: effectiveness, innovation, and partnerships/leverage. Chapter 2 covers the achievements to date in meeting the end-of-project results for core activities: Policy and Lessons Learned, CESH, ECHO/XS, ECHO/IVM, and ECHO/IP. This information is presented in a table. Chapter 3 covers all activities that were ongoing (or that were completed) during Year 4. Each activity is introduced briefly and Year 4 highlights are listed. Both Task Order #1 and additional Task Orders are covered.

Two annexes complete the report: Annex I is table showing Year 4 milestones and their status and Annex II is list of EHP Products for Year 4 for all Task Orders.



# Chapter 1. End-of-Project Results to Date

This chapter presents the status of performance indicators leading to end-of-project results for EHP II core activities: Policy and Lessons Learned, CESH, ECHO/XS, ECHO/IVM, and ECHO/IP. For each activity, the results and indicators are given along with the current status.

## Policy and Lessons Learned

#	Result	Indicator	Status to Date
1.	Monitoring and evaluation plan <i>implemented</i> for CESH and ECHO.	Monitoring and evaluation plan with project-level and task-specific indicators.	EHP has developed a monitoring and evaluation plan and is using it for monitoring CESH and ECHO activities.
2.	Indicators for water, sanitation, and hygiene that go beyond coverage and access <i>developed</i> , in collaboration with other organizations, and <i>tested</i> in CESH field programs.	List of indicators and data collection methods developed.	EHP has <ul style="list-style-type: none"> <li>-Developed a comprehensive environmental health assessment that includes intestinal parasites as proximate measures for changes in water, sanitation and hygiene practices as well as water quality.</li> <li>-Tested a comprehensive environmental health assessment tool containing a core set of hygiene improvement indicators in the West Bank (March 2002).</li> <li>-Prepared draft indicators.</li> <li>-Developed a hygiene improvement assessment guide with second-level indicators.</li> </ul>
3.	Indicators and data-collection instruments for cross-sectoral surveillance with a focus on malaria <i>developed</i> and <i>tested</i> , in coordination with WHO and other organizations.	List of indicators and instruments for cross-sectoral surveillance and integrated vector management.	
4.	Four major international meetings <i>supported</i> by EHP participation and two <i>organized</i> by EHP.	Number of major international meetings in which EHP participates and	EHP has met the end-of-project target of organizing two major international meetings:

#	Result	Indicator	Status to Date
		which it organizes.	<p>1. 2000, the Global Consultation on the Health Impacts of Indoor Air Pollution.</p> <p>2. December 2001, Monitoring and Evaluation of Water, Sanitation and Hygiene Behaviors, Delft, Netherlands. EHP played a role in organizing this policy meeting, which included the participation of approximately 15 professionals from WHO, UNICEF, WELL, LSHTM, the IRC, and EHP. Consensus was reached on the establishment of a monitoring network to pursue agreed upon objectives for advancing the state of the art in monitoring.</p> <p>3. EHP organized an E-Forum on Hygiene Promotion, a month-long e-conference on EHP's hygiene improvement framework with a final report.</p> <p>EHP has met the end-of-project target by actively participating in four major international meetings:</p> <ol style="list-style-type: none"> <li>1. Respiratory Diseases and the Environment, Lucknow, India.</li> <li>2. November 2000. WSSCC meeting, Iguacu, Brazil.</li> <li>3. November 2001. American Public Health Association (APHA) annual meeting.</li> <li>4. May 2003. Global Health Council annual meeting.</li> </ol>
5.	Major policy issues of global importance in CESH and ECHO <i>identified</i> and five reports <i>produced</i> to contribute to their consideration.	Number of reports published.	<p>EHP published a policy report on public-private partnerships for promoting hand washing. A second report on Best Practices for Dengue Prevention and Control in the Americas by Linda Lloyd was produced and disseminated a regional SOTA for Latin America and the Carribean.</p> <p>EHP has developed three other topics, but none has reached policy-report status, other topics are being pursued:</p> <ol style="list-style-type: none"> <li>1. Funding for water and sanitation: case study produced but topic not pursued for policy report.</li> <li>2. Hygiene and food security: discussion included in USAID's Global Health nutrition operational plan.</li> <li>3. HIV/AIDS and water and sanitation: concept paper disseminated.</li> </ol>

**Community-Based Environmental Sanitation and Hygiene (CESH)**

#	Result	Indicator	Status to Date
1.	Two operations research questions on diarrheal disease prevention in CESH programs <i>studied</i> and results <i>documented</i> .	Number of questions studied.	EHP is studying one operations research question: the safe disposal of children’s excreta. The study is being implemented by the International Institute for Nutrition in Peru.  EHP is studying the impact of household water chlorination on households with family members who have HIV/AIDS.
2.	At least one tool developed under CESH to promote environmental sanitation as national policy <i>applied</i> in five USAID-assisted countries.	Number of USAID-assisted countries in which tools have been applied.	Tools are mainly developed through field implementation of CESH activities in the DR, DRC, Nicaragua, Peru and other countries.
3.	Tools to assist NGOs, governments, and communities to identify priorities and to select, implement, and evaluate interventions <i>developed</i> .	Tools developed, applied, and documented to (1) identify local priority environmental conditions related to diarrheal disease prevention, (2) to guide selection of interventions, (3) to guide implementation and monitoring, and (4) to evaluate impact on behaviors related to diarrheal disease in children under five.	EHP is developing two tools:  1. As part of the development of the hygiene improvement assessment tool, gathering baseline information in the field in advance of program implementation to identify local priority environmental conditions related to diarrheal disease prevention and to evaluate impact on behaviors related to diarrheal disease in children under five – now being refined.  2. Action learning guide on behavior change for hygiene improvement to guide selection of interventions and to evaluate impact on behaviors related to diarrheal disease in children under five – now being developed by the Manoff Group.  3. Participatory monitoring and evaluation tool – development initiated.
4.	Activities using tools developed under result #3 <i>implemented</i> in at least three USAID-assisted PHN countries.	Number of USAID-assisted PHN countries which apply tools.	EHP tools have been or are being applied in four countries:  1. Benin (community-level project used tool on gathering baseline data).  2. Democratic Republic of Congo (a water and sanitation project is using tool on gathering baseline information and a training course on applying TIPs methodology).  3. Nicaragua (a program to increase the capacity of NGOs to bring about change in hygiene behavior used both tools).

#	Result	Indicator	Status to Date
			4. Dominican Republic (PAHO/DR C-IMCI training and educational materials adopted a module on diarrheal disease prevention).

**Environmental Change and Health Outcomes/Cross-Sectoral Surveillance (ECHO/XS)**

#	Result	Indicator	Status to Date
1.	Methods for cross-sectoral surveillance <i>developed</i> and <i>tested</i> .	Number of methods tested.	EHP has developed and has tested or is testing three methods: 1. Risk stratification at the national level, in Eritrea 2. Risk stratification at the local level, in Mozambique 3. Characterization of larval habitats in Eritrea, Mozambique, and Nepal. 4. A model is being developed for forecasting the probability of malaria epidemics in Eritrea.
2.	Tools to promote the use of cross-sectoral surveillance <i>developed</i> , in partnership with other international organizations.	Number of tools developed for promoting the use of cross-sectoral surveillance.	EHP has developed three tools for promoting cross-sectoral surveillance: 1. Draft activity report on risk stratification. 2. <i>Activity Report #111: Malaria Vector Studies in Eritrea</i> . 3. Draft activity report on a national prevalence survey in Eritrea. Articles submitted to and published in professional journals on vector studies
3.	Cross-sectoral surveillance tools developed under result #2 <i>used</i> by EHP to promote cross-sectoral surveillance as part of official MOH policy in three USAID-assisted PHN countries.	Number of countries in which cross-sectoral surveillance methods have been promoted.	EHP has promoted cross-sectoral surveillance in three countries: 1. Eritrea. 2. Mozambique. 3. Nepal.

**Environmental Change and Health Outcomes/Integrated Vector Management (ECHO/IVM)**

#	Result	Indicator	Status to Date
4.	Effectiveness of IVM interventions determined and appropriate settings for each <i>identified</i> , with an emphasis on controlling malaria in Africa using community-based approaches.	Number of tests and evaluations supported by EHP.	EHP has supported three tests of larval control interventions: 1. Efficacy of bacterial larvicides in Eritrea.. 2. Operational feasibility and effectiveness of larval control for Eritrea 3. Environmental management for larval control in Uganda.
5	IVM approaches appropriate for malaria in urban and rural settings in Africa <i>developed</i> , in partnership with other international organizations.	Number of settings for which IVM approaches have been developed.	EHP has developed IVM and control approaches for six different settings in Africa. (Technical meeting in January 2002 identified six different settings in Africa.) Field trials are planned in three settings to begin in Y5.
6.	The use of IVM approaches as part of official national malaria control plans and procedures <i>promoted</i> , in collaboration with other major international organizations.	Number of countries in which EHP has promoted the use of IVM approaches.	EHP has promoted the use of IVM approaches in two countries: Eritrea and Uganda, and work to promote IVM in Zambia will begin in Y5.

**Environmental Change and Health Outcomes/Integrated Programs (ECHO/IP)**

#	Result	Indicator	Status to Date
1.	Potential for scaling up integrated health, population, and environment program in rural settings along environmental corridors in Madagascar <i>evaluated, documented, and disseminated</i> .	Integrated health-population-environment evaluation approach developed, tested, applied, and disseminated.	Two video productions were planned for Year 5. International recognition at the Ecosystems Health Conference in Montreal and the Global Health Council Conference

## Chapter 2. Achievements to Date

Chapter 2 presents achievements to date of the Environmental Health Project (EHP) related to Tasks 3, 4, and 5 (Community-Based Environmental Sanitation and Hygiene and Environmental Change and Health Outcomes—CESH and ECHO). The achievements report on the project's highest level of monitoring results. They are presented in three categories: effectiveness, innovation, and partnerships/leverage.

*Effectiveness:* Effectiveness is measured through changes in key indicators related to the prevention of diarrheal disease, malaria, and other vector-borne diseases. They may include, for example, access to water and sanitation, hygiene behaviors, such as handwashing and feces disposal, or the efficacy and effectiveness of larvicides to control malaria vectors.

*Innovation:* Achievements related to innovation highlight how EHP has advanced the state-of-the-art in hygiene improvement or in control of malaria and other vector-borne diseases. Examples include the development of tools and new approaches and their application in the field.

*Partnerships/Leverage:* Much of EHP's work is done in collaboration with international and local partner organizations, including private and non-governmental organizations (PVOs and NGOs). Describing when, where and with whom such partnerships occur and how they foster EHP's technical agenda is an important function of the monitoring and evaluation plan. In this context, it is also important to note whether resources from missions of the United States Agency for International Development (USAID) and partner organizations have been mobilized. Mission funding is also an indication how much demand there is for EHP's services and products.

### CESH Achievements to Date

**CESH Result:** Improved environmental health interventions for reducing childhood mortality and morbidity from diarrheal disease, malaria, and other vector-borne diseases implemented at community and household levels and taken to scale at the national level using innovative, proven methods.

Under CESH, EHP has focused on diarrhea prevention through hygiene improvement.

**Effectiveness:** Achievements relate to the effectiveness of tools and field approaches.

- **Benin:** From 1999 through 2001, EHP worked with USAID/Benin to optimize decentralized decision-making related to diarrheal disease prevention in selected medium-sized towns in Benin. The activity, which engaged citizens and government in local communities, resulted in the provision under well-structured management of much wanted and needed public latrines and water points.

Additionally, participatory community health ensured proper use of latrines in the communities (e.g., as high as 7,000+ users in Sinende) and led to improved hygiene behavior, such as handwashing after latrine use, covering food, covering water jars, and improving the general cleanliness of the environment. Coalitions between local government, civil society, and communities led to an increase in participatory decision making and health problem solving.

- **Nicaragua:** In October 1998, Hurricane Mitch wreaked unprecedented destruction through the heart of Central America, leaving thousands dead and causing billions of dollars worth of damage. To protect the health of families affected by Mitch, USAID allocated nearly \$9.8 million for water and sanitation improvements over a 28-month period (1999–2001) to assist rural communities in Nicaragua. EHP and its partners reached an estimated 215,000 beneficiaries in 289 rural communities, within 43 municipalities in nine departments spread across northern Nicaragua. Program outputs included: 2,692 water supply systems, 7,226 household latrines, 295 bore holes, and water and sanitation to service 40 health clinics. In addition, all hygiene behavior change targets were achieved. The PVO partners have documented increases in improved hygiene practices, such as correct handwashing (from 53% to 86%) and safe excreta disposal (from 62% to 85%). Diarrhea prevalence fell from 20% to 12% in children under five.
- **Dominican Republic:** In response to the devastation of Hurricane Georges in the Dominican Republic, USAID brought together the government's rural water supply authority and the NGO community in a joint effort to replace infrastructure and improve hygiene behaviors for diarrhea prevention in impacted communities. After a five-month period of activities in pilot communities, a quick assessment showed positive changes: observed use of soap during handwashing increased from 59% to 79%. An increase from 15% to 31% was also recorded for reported handwashing of the youngest child before eating.
- **Democratic Republic of Congo:** During 2000–2001, the USAID Mission to the Democratic Republic of Congo supported an urban environmental health project that focused on diarrheal disease prevention in urban markets. In less than a year, high levels of participation (60%–80%) in education sessions by food vendors and restaurant managers resulted in improvement of knowledge and key hygiene behaviors by 10% or more; unhygienic practices, such as foods unprotected from dirt and insects, decreased from 55.9% to 40.2%; knowledge of five steps in proper handwashing by market clients increased from 14.6% to 33.2%; and execution of five steps in proper handwashing by vendors increased from 38.0% to 47.6%.

**Innovation:** Achievements relate to the development of tools, methods, and approaches.

- **Sanitation policy assessment guidelines:** EHP developed a tool for assessing national sanitation policy in collaboration with key partners: *Strategic Report #2:*

*Guidelines for the Assessment of National Sanitation Policies.* The guidelines are being used in Peru, Honduras, Madagascar, and Laos to develop national policies.

- **Community approach to sanitation and hygiene:** In Benin, in the Borgou Department (population 414,000), families' access to basic sanitation was increased and their hygiene practices were improved through implementation of an innovative micro-project approach whereby neighborhood groups analyzed their environmental health problems and made improvements with minimal funding. Forty-five micro-projects were carried out.
- **Hygiene-improvement framework:** EHP has developed a framework for understanding the essential elements of hygiene improvement as an integrated approach for diarrheal disease prevention (applying water and sanitation technologies, creating an enabling environment, and promoting appropriate hygiene practices). The framework is presented in an advocacy document available as a final draft.
- **Hygiene-improvement assessment tool:** EHP developed a baseline assessment tool and guidelines for hygiene improvement activities. The tool was used in the Gaza-West Bank, Nicaragua, the Dominican Republic, and the Democratic Republic of the Congo.
- **Diarrheal disease prevention module/hygiene behavior change process guide:** A hygiene behavior change (HBC) is currently being developed in collaboration with PAHO that will serve as PAHO's diarrheal disease prevention module as part of PAHO's series of IMCI modules. This guide will be adapted from the Field Guide component of the Action Learning Package developed by Manoff .
- **Promotion of urban environmental health:** EHP has initiated an effort to promote environmental health as an integral part of urban programs. In India, a major long-term urban health program began with a focus on child and neonatal health and, hygiene improvement. In Cairo, Egypt, a pilot urban slum program got underway with a situation analysis and a Demographic Health Survey (DHS). In Ghana, an urban health assessment was conducted. Also, EHP is participating in an Urban DHS Working Group to develop an urban environmental health module.
- **Behavior change guides:** The Manoff Group, under contract to EHP, has produced the first draft of a package of training and field guides entitled "Action Learning Package: Behavior-Centered Programming for Hygiene Improvement and Diarrheal Disease Prevention." The package will draw on a full set of program design materials and products for behavior change communication that was developed in 2000 for a pilot hygiene improvement program in the Dominican Republic. The materials, which have been made available in Spanish and English, are being used by local NGOs and PVOs in the Hato Major region in the Dominican Republic and in Nicaragua and Peru where the Dominican Republic effort is being replicated.

- **Development and improvement of indicators:** A number of efforts have been completed or are underway to improve indicators to track improvements in diarrheal disease and related hygiene behavior. EHP:
  - developed consensus indicators for hygiene improvement and a survey instrument, in collaboration with the London School of Hygiene and Tropical Medicine (LSHTM) and the International Reference Center for Water and Sanitation (IRC)
  - proposed indicators for the C-IMCI programs of the World Health Organization (WHO)
  - is participating in a working group developing a handbook on child health indicators in an effort lead by Measure DHS+
  - worked with the Child Survival Collaborations and Resources (CORE) Group to revise hygiene improvement indicators for the Knowledge, Practices, and Coverage Survey 2000 (KPC 2000) instrument
  - developed a draft guideline for monitoring hygiene improvement framework indicators
  - collaborated with the Water Supply and Sanitation Collaborative Council (WSSCC) and other partners on improving monitoring and indicator issues related to Vision 21 and other international-level monitoring programs
  - collaborated with Measure DHS+ by adding hygiene improvement questions to the core DHS module and by drafting a hygiene improvement module for urban DHS
  - participates in the Joint Monitoring Program (JMP) of WHO and the United Nations Children’s Fund (UNICEF) for improving monitoring and indicators on a global level.
  
- **Environmental health’s role in nutrition programs:** EHP produced two concept papers for possible policy reports—one on hygiene links to food security and nutrition programs and the other on hygiene links to HIV/AIDS (human immuno-deficiency virus/acquired immuno-deficiency syndrome). In meetings to discuss these ideas, an opportunity presented itself to incorporate hygiene as an intervention into the Bureau for Global Health’s Nutrition Operation Plan. EHP responded by producing a short narrative on the importance of hygiene with suggested interventions.
  
- **Participatory community monitoring:** EHP completed a literature review of participatory community monitoring and is developing a comprehensive methodology and guide for this type of monitoring in Nicaragua.

- **Utilization of electronic conference technologies:** EHP's Information Center organized an e-conference on the disposal of children's excreta and its impact on diarrheal disease prevention being carried out by the International Institute for Nutrition (IIN) in Peru. The effort led to the creation of a database of professionals for collaboration and information-sharing and provided information for operations research on safe excreta disposal. EHP also co-chaired an e-conference on targets, indicators, and monitoring and evaluation of water, sanitation, and hygiene programs.

**Partnerships/Leveraging:** Achievements describe when, where, and with whom partnerships occur and how they foster CESH's agenda.

- **Public-Private Partnership for Handwashing Initiative:** In 2001, a group of international organizations including the World Bank, UNICEF, USAID, and EHP, and multinational and national soap manufacturers launched a global public-private partnership for the promotion of handwashing with soap in five countries: India, Ghana, Nepal, Peru, and Senegal. This global partnership is based on a successful initiative led by EHP and BASICS from 1996 to 1999 in five Central American countries. EHP, BASICS, UNICEF, and the World Bank collaborated extensively on documenting the process and the results of the Central American experience. The documentation has been widely disseminated and highlighted internationally and has increased interest in this model of public-private collaboration. EHP represents USAID at quarterly meetings of the steering committee of the initiative and is involved in two field efforts—one in Peru (with PAHO) and the other in Nepal.
- **The CORE Group:** EHP has put major emphasis on working in partnership with the CORE Group and several of its working groups, particularly those on IMCI and monitoring and evaluation. (Specific activities are described below under various headings.)
- **Improved collaboration with PVOs:** Formalized, field-oriented activities were initiated with PVOs to further CESH goals, as follows: 1) grants to PVOs, including the Adventists Development and Relief Agency (ADRA), Save the Children, CARE, Plan International, the Red Cross, Action Against Hunger, for water and sanitation rehabilitation in Nicaragua; 2) training for local NGOs involved in a Catholic Relief Services (CRS) community-level hygiene behavior change program; 3) a monitoring and evaluation plan for urban environmental health and behavior-change for CARE in Peru; 4) collaboration with Action against Hunger and the International Rescue Committee in an urban environmental health program in the Democratic Republic of the Congo; 5) urban health planning with Counterpart International for Ahmedabad, India; 6) collaboration with Interchurch Medical Assistance (IMA) and Eglise du Christ au Congo (ECC) in the Democratic Republic of the Congo on the water supply and sanitation component of a rural health project.

- **Partnerships to develop and promote C-IMCI:** EHP, with the CORE Group's C-IMCI Working Group and Basic Support for Institutionalizing Child Survival (BASICS), provided assistance in the design and organization of an Expert Consultation on C-IMCI in the Latin American region held in Managua, Nicaragua; 75 participants from 7 countries reviewed the role that PVOs can play in scaling up C-IMCI. In addition, EHP launched activities in Peru and Nicaragua to develop training materials on behavior change for hygiene improvement for NGO partners with PAHO, ministries of health, and PVO and NGO partners. Finally, EHP participated in WHO/UNICEF sponsored Inter-Agency Working Group meetings on C-IMCI and wrote the hygiene section for a CRS handbook on IMCI.
- **Hygiene improvement monitoring:** EHP worked to strengthen hygiene improvement monitoring at the international level through collaboration with MEASURE DHS+, the CORE Group, and the JMP (WHO-UNICEF). In addition, EHP supported a policy meeting on monitoring and evaluation in December 2001 in Delft, Netherlands. At the meeting, 15 professionals from WHO, UNICEF, Water and Environmental Health at London and Loughborough (WELL), LSHTM, IRC reached consensus on establishing a monitoring network to advance the state of the art in monitoring.
- **Partnerships for environmental sanitation policy:** Partnerships were forged among UNICEF; WSSCC; Water, Engineering and Development at Loughborough (WEDC); WELL II; WHO; PAHO; USAID; IRC; Department of Water and Sanitation in Developing Countries of the Swiss Federal Institute for Environmental Science and Technology (SANDEC/DAWAG); and the World Bank for input to sanitation policy guidelines.
- **University of Kinshasa School of Public Health:** Three urban environmental health pilot projects in the Democratic Republic of the Congo focused on diarrheal disease prevention (toilets, showers, water storage, water points, etc., and hygiene education) were carried out in seven Kinshasa markets.
- **Forum for information-sharing among PVOs in Nicaragua:** PVOs involved in a rural water, sanitation, and health reconstruction project in Nicaragua in 2000 shared knowledge, experiences, and insights to improve the implementation, impact, and sustainability of their project activities in a forum that led to increased coordination and partnership among the PVOs and with the government of Nicaragua.
- **Interactive information-exchange network:** EHP's Information Center established a network of 120 professionals in hygiene. The network provides a forum for dialogue and the forging of partnerships between field practitioners and researchers. e-bulletins on hygiene are disseminated biweekly to network members.

## ECHO/Cross-Sectoral Surveillance (XS) Achievements to Date

**ECHO/XS Result:** Methods for cross-sectoral surveillance (i.e., collection and integrated analysis of epidemiological, environmental, and demographic data) developed, promoted, and adopted by national control programs for malaria and other infectious diseases of major public health importance.

**Innovation:** Achievements relate to the development of tools, methods, and approaches.

- **Refinement and development of cross-sectoral methods:** The concept of cross-sectoral surveillance was refined to include risk stratification, epidemic risk forecasting, and data collection and analysis for evaluating vector-control interventions. In Year 4, an EHP working group reviewing cross-sectoral surveillance program activities endorsed the focus on risk mapping, epidemic forecasts, and routine surveillance.
- **Data collection and analysis methods:** Through its activities in Eritrea, Mozambique, and Nepal, EHP has tested methods for data collection (entomological and epidemiological studies; meteorological monitoring; compilation of historical records for malaria cases and control interventions; and qualitative knowledge-attitudes-practices—KAP studies) and integrated analysis (malaria risk stratification, baseline assessment of risk factors for kala-azar).
- **Sentinel surveillance systems and capacity building:** EHP is supporting the development of sentinel surveillance systems in Eritrea, Nepal, and South Asia. Control programs in Nepal, Eritrea, and Mozambique have increased their capacity to carry out surveillance and to use data in decision making, through the use of mapping and other tools. For Eritrea, the International Research Institute for Climate Prediction (IRI) prepared several draft versions of malaria risk maps.
- **Operational research studies:** Four studies have improved the information base for strengthening program operations in Eritrea: *Activity Report #111: Malaria Vector Studies in Eritrea*; *Activity Report #112: Eritrea: Field Studies on Efficacy of Bacterial Larvicides for Use in Malaria Control*; *National Survey of Malaria Parasite Prevalence in Eritrea 2000-2001*; and *Malaria Risk Stratification in Eritrea*

**Partnerships/Leveraging:** Achievements describe when, where, and with whom partnerships occur and how they foster the ECHO/XS agenda.

- **Collaboration with WHO's Africa Regional Office (WHO/AFRO):** EHP supported WHO/AFRO in the formation of the African Network for Vector Resistance (ANVR), the goal of which is to develop a cadre of ministry of health personnel capable of using WHO's insecticide susceptibility assays to monitor vector resistance to insecticides.

- **Support for the Vector-Borne Disease Research and Training Center (VBDRTC) in Nepal:** EHP’s support to the VBDRTC has improved it institutionally and has led to improvements in surveillance, as follows:
  - Pilot activities—consisting of behavior change, training, and health system improvements—have been implemented in two districts (Dhanusha and Mahottari) for the prevention and control of malaria and kala-azar.
  - The data collection and analysis functions of the Early Warning and Response System (EWARS) have been improved.
  - Kala-azar drug trials are underway at a local research institution.
  - The policy environment has been improved so that key changes in kala-azar control and treatment may be made.
  - Cross-border collaboration with Bihar State, India, has been initiated to improve surveillance and control of kala-azar.
  - Partnerships with the Armed Forces Research Institute for Medical Sciences (AFRIMS) and other institutions have been established and strengthened through joint collaboration on operations research with the Nepal Ministry of Health.
  
- **Bangladesh, Bhutan, India, and Nepal (BBIN) Network:** EHP created the BBIN Network for vector-borne disease cross-border initiatives. Activities have included establishment of a Malaria Drug Resistance Surveillance Network Secretariat for BBIN in Nepal; preparation of an inventory of malaria drug resistance in BBIN; creation of a BBIN website; a workshop on standardization of cross-border surveillance of priority vector-borne diseases; and information-sharing on kala-azar between Nepal (Dhanusha and Mahottari Districts) and India (Bihar State). BBIN’s key accomplishment is establishment of general agreement among BBIN countries to harmonize their surveillance methods and specific agreements on the use of standard case definitions, diagnostic methods, and reporting protocols for Japanese encephalitis and anti-malarial drug resistance. EHP’s work on BBIN has helped establish closer coordination and greater momentum on cross-border issues for vector-borne diseases among national and regional institutions, including WHO’s South East Asia Regional Office (WHO/SEARO).
  
- **Interactive information-exchange networks:** EHP’s Information Center created a network of 650+ malaria experts as a forum for dialogue among researchers and field practitioners.
  
- **Partnerships for cross-sectoral surveillance:** EHP has worked in partnership with the following organizations to develop and test methods for cross-sectoral surveillance: the International Center for Insect Physiology and Ecology (ICIPE)

in Nairobi, Kenya; the IRI at Columbia University; and the Danish Bilharziasis Laboratory.

## **ECHO/Integrated Vector Management (IVM) Achievements to Date**

**ECHO/IVM Result:** The effectiveness of vector-control methods for particular settings in Africa determined, appropriate strategies for integrated vector management developed, and their use promoted.

**Innovation:** Achievements relate to the development of tools, methods, and approaches.

- **Larval control methods for African malaria vector.** EHP is conducting field studies and leading an international collaboration to determine the settings in which larval control methods are cost-effective for reducing malaria transmission in Africa. Specifically, EHP performed field trials in Eritrea; characterized larval sites in Maputo, Mozambique; and performed entomological and parasitological surveys to establish baseline data for four sites in Uganda, two in Kampala and two in Jinja.
- **Guidelines for integrated vector management.** EHP collaborated with WHO/AFRO to develop integrated vector management guidelines for use by national malaria control programs; formed a technical working group on community-based malaria vector management and prepared a background document on malaria vector control methods; and identified vector control methods appropriate to six distinct ecological settings in Africa. AFRO's initiative has convinced the malaria staff at WHO headquarters to consider adopting integrated vector management as a framework for controlling vectors of human disease.
- **Best practices for dengue prevention and control:** In recognition of the increasing importance of dengue fever as a public health problem, EHP prepared *Strategic Report #7: Best Practices for Dengue Prevention and Control in the Americas*. The document is available in English and Spanish.

**Partnerships/Leveraging:** Achievements describe when, where, and with whom partnerships occur and how they foster the ECHO/IVM agenda.

- **WHO/AFRO:** Integrated vector management guidelines were drafted for use by WHO/AFRO, in collaboration with the LSHTM. Additionally, EHP funded case studies in Uganda, Zimbabwe, Cameroon, and Senegal in support of a regional consultative meeting in Harare, Zimbabwe, to develop a strategy for strengthening the capacity of national ministries of health in vector ecology and control in Africa.

- **Roll Back Malaria:** EHP prepared a vector-control needs assessment protocol for use in developing recommendations to reduce the use of DDT in several African countries and for possible adoption as part of the Roll Back Malaria situation analysis.
- **Consultative Group of International Agricultural Research/ System-Wide Initiative on Malaria and Agriculture (CGIAR SIMA):** WHO supported organizational meetings for CGIAR SIMA for East and Southern Africa and West and Central Africa.
- **Collaboration with PVOs:** EHP collaborated with CARE, the Asia Foundation, and the Canadian Center for International Studies and Cooperation (CECI) in providing training in malaria prevention and control, operations research, and design of community-based activities for the prevention and control of kala-azar, Japanese encephalitis, and malaria. In addition, EHP supported the November 2001 meeting in Kenya for African PVO malaria control program managers.
- **International symposium on larval control:** EHP sponsored an international symposium on larval control methods in Year 3. This yielded an invitation to participate in two prominent sessions of the American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting in December 2003 in Philadelphia.
- **University of Durham (United Kingdom):** EHP is working in partnership with the University of Durham to advance technical investigations and policy discussions on integrated vector management, especially concerning the use of chemical and environmental methods for controlling larval populations of malaria vector mosquitoes. The University of Durham laid the groundwork for new field trails, which will start in Year 5.

## **ECHO/Integrated Programs (IP) Achievements to Date**

**ECHO/IP Result:** Lessons learned in integrating field activities in community-based natural resource management and population and health in Madagascar designed, evaluated, and disseminated.

**Effectiveness:** Achievements relate to the effectiveness of tools and field approaches.

- **Baseline data:** Under subcontract to EHP, the National Institute of Statistics (INSTAT) conducted a baseline survey in March–April 2001 in the project area. Overall, communities targeted for health-population-environment integration face poor outcomes in all three areas: only one in seven households produces sufficient food; almost half of all children under five are chronically malnourished (stunted); deleterious slash and burn practices are admitted by over half of all households; the contraceptive prevalence rate of 9% for modern methods is low; the vast majority of households do not have access to safe water and appropriate sanitation; and less than 40% of children under five years are fully vaccinated. A

major gap exists between knowledge and actual practice. Important barriers to appropriate health, population, and environmental behaviors seem to be related to household income and technical competence. Progress will be measured through a follow-up survey in 2003–2004. Currently, the program works through NGOs in 160 communities reaching approximately 120,000 people.

**Innovation:** Achievements relate to the development of tools, methods, and approaches.

- **Pilot program on an integrated health, population, and environment approach:** Integrated approaches to improve health, reduce pressure on natural resources, and increase income were used by NGOs in four environmental corridors in a pilot program; and systems for monitoring the approaches and for gathering lessons learned were put in place. Voahary Salama Integrated Programs Initiative (VS) partners, including EHP, have developed and implemented key social marketing and capacity-building approaches and materials for integrating activities at the community and program levels. The key approaches include community champion and child-to-child and farmer-to-farmer education. The effort has included capacity-building of NGO partners to conduct these activities in target communities. Three issues of the *Voahary Salama Gazety* have been published to support integrated approaches (tree nursery, reforestation and vegetable gardens). Information about the pilot program has been widely disseminated and well received. VS is now recognized in the international community as an example of an integrated approach in the international community. USAID has increased its field support to EHP for this program, and the Office of Population has agreed to provide an additional \$200,000 from the Flexible Fund for Population Activities. Integrated activities are now being implemented in communities with a total population of 120,000 people.

**Partnerships/Leveraging:** Achievements describe when, where, and with whom partnerships occur and how they foster the ECHO/IP agenda.

- **VS Association—a partnership between local NGOs, USAID projects, and private foundations:** EHP has been instrumental in developing a partnership of 24 organizations in Madagascar committed to the integration of health, population, and environment activities. VS became a legally registered Malagasy association entitled to accept funds and become a sustainable organization. The partnership approach in Madagascar has tripled programming resources.

# Chapter 3. Year 4 Activity Highlights

## Task Order 1

### Task 1: Workplan

*Overview:* Task 1 under Task Order 1 provides for the development of annual workplans. A yearly workplan is a deliverable under EHP's contract with USAID. The workplan for project year five (July 1, 2003–June 30, 2004), was EHP's fifth submission to USAID.

#### Highlights

- Followed the regular steps and schedule for preparation of the Year 5 workplan: preplanning and information gathering (April 2003), reaching agreement on the outline and content (May), and preparation of draft and submission to USAID (June).
- Submitted last year's workplan in its final version to USAID in June 2002 and received formal approval in the second quarter of Year 4.

### Task 2: Lessons Learned and Policy

*Overview:* Task 2 includes a range of activities designed to influence policy, develop partnerships, provide quality management for EHP, and capture and disseminate lessons learned. Activities are organized under five headings:

- *Performance monitoring:* to ensure that management and evaluation plans are developed for all EHP programs, that systems are in place to track activities, and that appropriate reviews and progress monitoring take place.
- *Indicators:* to improve the validity and reliability of existing water, sanitation, and hygiene indicators and data-collection methods and to develop new ones when necessary.
- *Policy meetings and reports:* to participate in at least six major international environmental health meetings, conferences, or workshops, including playing a major role in organizing two such meetings, in order to promote environmental health as a component of other tools used for policy formulation.
- *Partnerships:* to develop specific collaborative activities with USAID cooperating agencies, United Nations (UN) and other international agencies, PVOs and NGOs, and the USAID/Bureau of Humanitarian Response/ Private-Voluntary Cooperation (BHR/PVC).

- *Lessons learned*: to capture insights from EHP’s experience and keep USAID up-to-date on the project’s progress.

Naturally, many activities under these headings overlap with CESH or ECHO activities.

### **Highlights — Performance Monitoring**

- Carried out routine activities: reviewed scopes of work and detailed activity plans, provided technical support to activities, and responded to information requests on monitoring and evaluation.
- Reported Year 3 achievements and progress on performance indicators.

### **Highlights — Indicators**

- Reprogrammed several monitoring and evaluation activities under CESH: the hygiene improvement assessment guide, survey instruments to monitor Vision 21 targets, work with MACRO/Measure DHS+ to improve indicators for water, sanitation, and hygiene, focusing on collecting data on the urban poor. (See *Task 3: CESH.*)
- Supported monitoring and evaluation activities in the Democratic Republic of the Congo, the Dominican Republic, Nicaragua, Peru, India, and the West Bank.
- Provided input on monitoring and evaluation to several publications and groups: the Sanitation Programming Guide (see CESH), the WHO/UNICEF, the Safe Household Water Treatment Network’s Research Working Group, the DHS Urban Working Group, and the Measure Evaluation Technical Advisory Group for improving water, sanitation, and hygiene indicators for the Child Survival Indicators Handbook.

### **Highlights — Policy Meetings and Reports**

- Participated in the 30<sup>th</sup> Annual Conference of the Global Health Council, Washington, DC, May 27–30: organized two panels (“Mainstreaming Prevention of Diarrhea in Child Health” and “Improving Maternal and Child Health in Urban Slums and Squatter Settlements”); participated in two panel discussions (“Malaria, Dengue, Cholera: Environmental Strategies for Control and Prevention” and “Healthy Families, Healthy Forests: Integrated Programs”); and provided logistical support via EHP’s Information Center.
- Produced a second policy document: Strategic Report #7: Best Practices for Dengue Prevention and Control in the Americas.
- Continued to search for an appropriate topic for a policy paper, after two topics proved to be unfeasible.

- Continued to explore (with UNICEF) the link between water and sanitation in high-risk HIV/AIDS households.
- Assisted the Aga Khan Development Network (AKDN) to design and facilitate a four-day workshop in February in Mombasa, Kenya, for 24 country-level water and sanitation staff from seven countries in Asia and East Africa to improve availability of environmental health in the AKDN Built Environment; drafted workshop report.

### **Highlights — Partnerships**

- Maintained regular contact with and carried out joint activities with the following partner organizations: the World Bank, UNICEF, WHO, PAHO, the CORE Group, the U.S. Coalition for Child Survival, and local PVOs and NGOs.
- Participated in numerous meetings on C-IMCI: plenary and country-cluster meetings of USAID’s Global Health Working Group on C-IMCI with other cooperating agencies and PVOs; the CORE Group’s Working Group on IMCI; the Interagency Working Group on C-IMCI; and the Latin America Regional Expert Consultation on C-IMCI.
- Assisted CRS with the development of a module on hygiene improvement to be included in the C-IMCI handbook used by CRS in the Philippines and Kenya, through drafting a chapter on integrating hygiene into diarrhea case management.
- Participated as a member of the World Bank Steering Committee for a Global Initiative for Public-Private Partnership in Handwashing and drafted a monitoring framework to be used for initiative activities.
- Reviewed the Child Survival Detailed Implementation Plans for three PVOs (IRC—in the Democratic Republic of the Congo, CARE in Ethiopia, and Populations Services International (PSI) in India) and participated in the review process with the PVO program managers, support staff, and USAID.
- Prepared and ran a training session on hygiene improvement for 25 PVO staff and program managers at the First Annual Child Survival and Health Grants Program Mini-University, organized by Child Survival Technical Services (CSTS).

### **Highlights — Lessons Learned**

- Kept USAID current on project activities, coordinated staff activities, and captured lessons learned, through regular staff meetings (weekly—senior management, project management and USAID Office of Health staff, and project management team; monthly—entire staff), ad hoc meetings of EHP staff with USAID staff, and communication through email and e-rooms.

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

*Overview:* CESH is one of two broad core areas of EHP. It consists of developing, using, and disseminating tools that help NGO and government program managers and communities identify local environmental health priority conditions and behaviors and guide selection and evaluation of actions to reduce the incidence of diarrhea in children under five years of age. CESH activities are expected to contribute to USAID Office of Health results 6 and 7 by developing a project approach to diarrhea prevention. CESH works in four major areas.

- *Operations research:* to address key questions related to environmental interventions for diarrheal disease prevention in community-based environmental sanitation and hygiene programs.
- *Environmental sanitation policy:* to develop tools (presentations, guidelines, policy workshops, etc.) to assist in the promotion of safe disposal of excreta as national policy and apply them in three USAID-assisted countries.
- *Development of tools for diarrheal disease prevention:* to develop tools that help NGO and government program managers and communities carry out effective diarrheal disease prevention activities and programs.
- *Field application:* to apply the programmatic tools in at least three countries with Population, Health, and Nutrition (PHN) programs.

### **CESH Core Activities**

#### **Highlights — Operations Research**

- Reviewed and revised a report on the safe disposal of children's excreta being prepared by the IIN in Peru.
- Initiated an activity to evaluate the point-of-use water chlorination project in Zambia (July 1, 2003–May 31, 2004), implemented by the Society for Family Health (SFH) (PSI's local affiliate); results will be of direct use to the Safe Water System program in Zambia as well as similar programs in other countries.

#### **Highlights — Environmental Sanitation Policy**

- Facilitated application of the assessment guidelines for national sanitation policies: by PAHO in Honduras; by WaterAid and UNICEF in Madagascar as part of the WSSCC's Water, Sanitation and Hygiene campaign (WASH); and by the World Bank's Water and Sanitation program in Laos.

## **Highlights — Development of Tools for Diarrheal Disease Prevention**

- Reached agreement with USAID on the exact contents of the Hygiene Improvement Framework advocacy document and prepared sixth draft of the document.
- Began drafting training and field guides that will be part of an “Action Learning Package: Behavior-Centered Programming for Hygiene Improvement and Diarrheal Disease Prevention,” being prepared under contract by the Manoff Group.
- Submitted the third draft of the Hygiene Improvement Assessment Guide to EHP and USAID staff for review.
- Finalized subcontract with the PVO NicaSalud in Nicaragua for implementation of a community-based participatory monitoring and evaluation methodology, consisting of a manual for organizations, community tools, and a training module; and identified the four NGOs that will implement the work in four regions in Nicaragua: Project Concern International (PCI), Plan international, Instituto de Promocion Humana (INPRHU), and Asociacion Nicaraguense para el Agua y Saneamiento Ambiental (ANASAM).
- Reached agreement on the outline for a revision of the 1997 UNICEF Sanitation Programming Guide with key partners (UNICEF, the WSSCC, the World Bank, and PAHO) and began the revised draft.

## **Highlights — Field Application of Tools**

See next section.

## **CESH Field Activities**

### **Asia/Near East (ANE) Urban Health Initiative/Cairo Healthy Neighborhood Program**

*Overview:* The Asia/ Near East (ANE) region is characterized by rapid population growth and high urbanization rates. The urban population of Asia is expected to increase dramatically, from 1.2 billion in 1995 to 2.5 billion in 2025, with more than 400 million residing in cities of 10 million or more. The region is also characterized by high infant and child mortality, high maternal mortality, low female literacy, low status of women, high rates of malnutrition, and the rapid spread of HIV/AIDS. Concerned that USAID’s health programming is not keeping pace with the reality of rampant urbanization and the dire conditions of small children in the region’s slums, USAID’s ANE Bureau developed a three-phased urban health activity, which EHP will implement. The purpose of the activity is to persuade PHN officers in USAID’s ANE missions to direct resources toward programs designed to meet the health needs of the urban poor, by assessing the state of current knowledge of urban slum

populations, by contributing to that knowledge through additional research, increasing program experiences through country-level efforts, and by offering practical guidelines for urban slum health program development and implementation.

*Phase 1*, completed in EHP Year 3, was a desktop literature review of child health status and determinants (EHP Activity Report #109). *Phase 2* is a community health and hygiene improvement activity in the slum neighborhood Ezbat El Nawar in Cairo. The project is conceived as intensified urban slum program experience that will eventually inform an overall regional effort. *Phase 3*, which is just getting underway, is an advocacy effort to use experiences and research to write guidelines to assist USAID health officers to develop health programs in urban slums. The Guidelines will be the basis for an urban health workshop to be held in Agra, India in February 2003

## **Highlights**

### **Phase 2**

- Conceptualized and initiated an Egypt urban health activity—the Cairo Healthy Neighborhood Program: carried out the situation analysis, conducted a DHS in the project area (using a slum environmental health module prepared by a USAID working group), and applied for and was awarded a Making Cities Work grant for improvements in water supply and sanitation.

### **Phase 3**

- Met, along with the USAID technical director for EHP, with representatives from three USAID bureaus: the Economic Growth, Agriculture, and Trade Bureau, Urban Programs (EGAT/UP); the ANE Bureau, PHN Office; and the Global Health Bureau to discuss and define the overall approach to Phase 3 of this activity.
- Identified a consultant to draft the ANE-wide urban health guidelines.
- Agreed to organize an ANE-wide conference in India, in early 2004 to promote urban slum health programming using the guidelines.

## **Benin: GESCOME II**

*Overview:* GESCOME II is the continuation of GESCOME I, an EHP I activity, which ran from 1997 to 1999. Benin program activities consisted of refining EHP's community-based approach, applying it in the field, conducting operations research and scale-up activities, and promoting environmental sanitation policies. Project activities were essentially completed May 1, 2001. However, lessons learned activities were carried out under a new scope of work.

## Highlights

- Completed and disseminated final reports: Strategic Report #5: The GESCOME Difference. Lessons Learned from Gestion Communautaire de Sante Environnemental; Activity Report #113F: Rapport de Fin de Projet du CESH au Benin. Resume Analytique.
- Closed the activity.

## Democratic Republic of the Congo (DRC): Technical assistance to SANRU III

*Overview:* EHP is assisting the SANRU III project in implementing the water supply and sanitation component. SANRU III is a five-year \$25 million rural health project, which includes a wide range of primary health care interventions and operates in 63 of 300 health zones. The goal of EHP assistance is twofold: develop the hygiene promotion component of SANRU to bring about an increase of diarrheal disease incidence and strengthen the management capacity of zonal water and sanitation coordinators to carry out their roles. .

## Highlights

- Developed a two-year action plan for hygiene improvement in the water supply and sanitation component of SANRU III and began its implementation: carried out formative research (under contract with the University of Kinshasa School of Public Health), developed a behavior change strategy and communications materials based on key messages, designed and carried out training for zonal staff and C-IMCI teams, collected baseline data to measure changes in hygiene behavior.
- Assisted in a presentation on this activity at the Global Health Council meeting in Washington, DC, May 2003.

## Democratic Republic of the Congo (DRC): Urban Environmental Health Assessments

*Overview:* With funds provided by the Regional Urban Development Office (RUDO) in South Africa, EHP helped to develop a proposal to update and expand an environmental health strategy for the Democratic Republic of the Congo. The goal was to develop a fundable proposal that would be implemented under the Making Cities Work initiative.

## Highlights

- Developed, reviewed, revised and finalized an environmental health strategy for the DRC.

- Closed the activity.

## **Dominican Republic: Community-Level Hygiene Behavior Change**

*Overview:* The purpose of this 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 the maximum project health impact. EHP is providing assistance to Entrena (a group of NGOs involved in water supply and sanitation reconstruction efforts) and the Ministry of Health to design and implement a strategy to prevent diarrheal disease through improved hygiene behaviors. The basic approach is to strengthen the capacity of the participating NGOs to design and implement behavior change activities. A pilot activity in Hato Mayor Province was to conclude on December 31, 2001, with preparation of the final report; however, EHP and USAID/Global Health agreed to provide additional CESH core support to allow for two more follow-up assessments in Hato Mayor to be compared with baseline data to monitor long-term behavior change and for expanding the approach to other organizations. A select group of representatives from NGOs and the National Water Supply and Sewerage Institute (INAPA) who were involved in the pilot project are serving as local resources for technical assistance in hygiene behavior change and are training others to scale up hygiene behavior change capacity in the Dominican Republic. The scale-up process is being coordinated through the umbrella NGO Alianza. These activities will be coordinated with technical assistance for community-level behavior change in the areas of nutrition and social mobilization for vaccinations, and ultimately the behavior change approach will be incorporated into the Dominican IMCI model.

### **Highlights**

- Rewrote the final report of the Hato Mayor pilot project.
- Finalized a report comparing the baseline and mid-project assessment data for the Hato Mayor project.
- Conducted a third monitoring event in Hato Mayor (June 2003).
- Completed training of a cadre of Dominican trainers in Nicaragua (January 2003) and Peru (February 2003).
- Assessed current activities and developed a workplan through December 2003.

## **Dominican Republic: Decentralization of Rural Water and Sanitation Services**

*Overview:* USAID/Dominican Republic and INAPA, the national water utility, agreed to work together and co-finance a pilot rural water supply and sanitation project in Hato Mayor Province. The joint effort allowed INAPA to develop and test

approaches to implement its decentralization strategy, which will subsequently be scaled up to the national level. The pilot project applied the total community participation model and constructed sanitation systems and water supply infrastructure. USAID provided INAPA with technical assistance and training. Entrena (a local contractor) managed the NGO contracts under the pilot project, and EHP provided technical assistance to help develop and strengthen INAPA's capacity to implement the decentralization strategy. The activity officially ended on December 31, 2001. However, EHP and USAID/Global Health agreed to use CESH core funds to write an EHP report describing the work in the Dominican Republic over the last four years and placing it in the context of the hygiene improvement framework

## Highlights

- *Published final report of the activity:* Strategic Report #4: Creating an Enabling Environment for Community-Based Rural Water Supply, Sanitation, and Hygiene Promotion Systems—Case Study: Reforming the Rural Department of the National Water Agency (INAPA) in the Dominican Republic.
- Began providing ongoing assistance support to INAPA through a local coordinator.
- Fostered team building within INAPA's Community Labor Team as it implements the decentralization strategy through individual and team meetings.
- Held a mini-conference for over 60 participants from around the country to elect a new, larger, and more diverse working group to re-activate the rural water association network.

## Ghana: Urban Health Assessment

*Overview:* USAID/Washington EGAT/Urban Programs, the Global health Bureau and the USAID/Ghana Mission asked EHP to carry out an assessment of the health needs of the urban poor in Ghana and provide a road map for future mission interventions. The assessment includes a desktop study with original interviews both in Ghana and in the United States. Targeted cities were Accra and Kumasi. The idea for the assessment grew out of a visit to Ghana by staff from USAID/Global Health Bureau and the EHP Technical Officer. The assessment information will be used in the development of the mission's country health program strategy.

## Accomplishments

- Two external and two Ghanaian consultants completed the assessment: Activity Report #114: Ghana Urban Health Assessment.
- Closed activity.

## **Honduras: Development of Supervisory System for Environmental Health Technicians**

*Overview:* USAID has been working with the Honduran Ministry of Health since 1993 in the development of an integrated environmental health program to address the prevention and control of malaria, dengue fever and tuberculosis. The ministry has trained 450 environmental health technicians (TSAs) and 50 supervisory TSAs. Because of the growth in the program, EHP provided an advisor in environmental health to assist the ministry to develop a working model for TSA supervision, task definition, evaluation and reporting.

### **Highlights**

- Assessed effectiveness of the TSAs: they are generally successful in their new roles; however, the consultant found inequities in logistical support, lack of information sharing, need for formal civil service recognition of the TSA job classification, and the need for a field reference manual.
- Conducted third and final visit of the EHP consultant in June 2003.

## **India: Child Health and Nutrition among the Urban Poor**

*Overview:* In November 2000, a team of child survival and nutrition specialists from Washington, DC, and Delhi outlined how a modest level of resources could be invested in India to achieve USAID/India's Strategic Objective 3: Improved child survival and nutrition in selected areas of India. The team found that in urban areas of the country, the health conditions of infants and children and the priorities for intervention are similar to those in rural areas: nutrition, neonatal health, immunization, and reduction of childhood illness and death due to acute respiratory infections (ARI), and diarrhea. Based upon the severity of the health conditions and the existence of successful urban health activities investigated, the team recommended that improved child health and nutrition among the urban poor in selected cities be one of four intermediate results for the strategic objective. Subsequently, in June and July 2001, EHP developed an approach, strategy, and workplan for an urban health program in support of the intermediate result and, in January 2002, developed a draft action plan for a five-year urban slum child health program. The RUDO Program Officer, the USAID Child Survival Advisor, and the newly hired EHP Urban Health Program Director, as well as the directors of the USAID/India PHN and RUDO offices contributed to the development of the plan.

The plan aims to increase water and sanitation coverage; foster adoption of key health behaviors; improve the capacity of NGOs, community-based organizations (CBOs), and private and public-sector health providers; develop replicable models for urban child health programs; formulate improved policies; and increase resources for urban slum health. The city of Indore was chosen for the project launching. The Indore Urban Slum Child Health Program has four components: 1) a city-based urban health

program; 2) collaboration with CARE's Integrated Nutrition and Health Program (INHP II); 3) a knowledge inventory; and 4) advocacy. Project activities are also underway in Jharkhand, Madhya Pradesh, and in Uttaranchal, where EHP/India has been asked to provide technical assistance to the government of Uttaranchal in the development of an urban health strategy and a proposal to the government of India for funds under the Reproductive and Child Health II program.

## **Highlights**

### **Indore**

- Launched the Indore program: held urban stakeholders meetings, conducted workshops for slum-based NGOs and CBOs, carried out a situation analysis report and slum vulnerability assessment, agreed on a screening process for NGO pre-proposals and created a screening committee, held pre-proposal workshops for NGOs and CBOs, conducted a needs assessment of the Indore Municipal Corporation, hired program coordinators for Indore and Jamshedpur, and awarded subcontracts to five NGOs or CBOs.
- Held a two-day workshop on finance and administration and monthly and quarterly reporting formats, June 2–3, for heads and finance managers of NGOs and representatives of CBOs.
- Collected training and behavior-change communication materials from various sources and held a workshop of NGO program coordinators to assess the materials according to seven criteria.
- Provided technical assistance in health information and operations and maintenance to the Indore Municipal Corporation.
- Held an immunization camp in Shubham Nagar on June 12 and a follow-up camp in Ganesh Bagh on June 25.
- Selected an organization to conduct the child health survey in Indore from among proposals received from eight organizations.
- Assisted the Indian Journal of Pediatrics with a special issue on child health in urban slums.
- Held the National Urban Health Conference, June 30–July 1 in Bangalore: 83 delegates attended; the workshop received extensive media coverage; 15 organizations provided materials on urban health, including infant feeding practices, child malnutrition, communicable diseases, health delivery systems, poverty and vulnerability assessments, and water, sanitation, and hygiene issues.
- Made a presentation on the Indore program at the Global Health Council in Washington, DC, in May 2003.

## **Jharkhand**

- Completed chapter on urban health for inclusion in Jharkhand Vision 2010 to be published by the government of Jharkhand.

## **Madhya Pradesh**

- Met with lay and government officials in Madhya Pradesh and created a task force to develop a state-level plan for urban health.

## **Uttaranchal**

- Held a one-day training workshop with Center for Development Studies (CDS) members and Angan Wadi Workers (AWW) for vulnerability assessment of slums in Dehradun and Haridwar on June 18 and met with municipal officers to facilitate their planning, based on the vulnerability assessment.
- Held first public-sector stakeholders meeting in Haridwar on June 21.
- Held a meeting in the last week of June with NGOs in Dehradun to assist them to understand their present role and to identify possible areas of partnership.
- Submitted a draft action plan for review and feedback.

## **LAC: Decentralization of Water Supply and Sanitation Systems**

*Overview:* The primary purpose of this activity is to promote decentralized management of water supply and sanitation systems in Latin America. In 2001, EHP developed six case studies and widely disseminated them. With the remaining funds in the activity, EHP initiated an activity to develop guidelines for creating an institutional support mechanism to provide backup to rural water supply and sanitation systems—one of the main themes of the case studies.

### **Highlights**

- Published Strategic Report #6: Institutional Support Mechanisms for Community-Managed Rural Water Supply and Sanitation Systems in Latin America and translated it into Spanish (Strategic Report #6S).
- Presented the institutional support mechanism concept at a meeting on scaling up community management organized by the IRC in London and to a group at the World Bank that is looking at post-construction support as one of the key factors affecting sustainability of rural water supply and sanitation.

## **LAC: Sanitation in Small Towns**

*Overview:* EHP is developing practical guidance for USAID missions and contractors on improving sanitation in small towns. This activity builds on EHP's previous decentralization work in Latin America and the Caribbean that focused on small towns and rural areas. EHP has developed a methodology that can be used to develop a plan to improve sanitation services in small towns.

### **Highlights**

- Completed field tests of the methodology in Jamaica, Ecuador, and Panama.
- Published *Strategic Report #3: Improving Sanitation in Small Towns in Latin America and the Caribbean*.
- Published an article on sanitation in small towns in the July 2002 issue of *Waterlines*.
- Conducted regional workshops in Cuzco, Peru, for 50 participants (October 2002) and in Tela, Honduras, for 50 participants (November 2002) and issued *Activity Report #117: Sanitation in Small Towns, Summary Report on Sub-Regional Workshops, Environmental Health Project, Water and Sanitation Program, Pan American Health Organization*.
- Identified Paraguay and Panama as the two countries for follow-on assistance.

## **Nepal: Technical Support to the Asian Development Bank and Initiation of EHP Support to the Public-Private Partnership for Handwashing with Soap Initiative**

*Overview:* EHP assisted the Asian Development Bank (ADB) in supporting the Community-Based Water Supply and Sanitation Project in Nepal, an integrated water supply, sanitation, and hygiene promotion activity that will be eligible for financing through the ADB's sector loan modality. EHP's role is to ensure that the strategy takes into consideration the importance of health outcomes and the multi-sectoral linkages between a rural water supply and sanitation strategy and the improvement of child health. In addition to its work with the ADB, EHP is developing a partnership between USAID/Nepal and UNICEF/Nepal for the promotion of handwashing as a public health initiative.

### **Highlights**

- Identified issues related to water supply and sanitation in Nepal using EHP's hygiene improvement framework.

- Signed onto a memorandum of understanding with UNICEF, USAID, and the World Bank for implementing an initiative to promote handwashing for the prevention of diarrheal disease.
- Developed section on health, hygiene, and sanitation, as part of a draft national rural water supply and sanitation sector strategy for Nepal.
- Subcontracted with Howard Delafield International for social marketing expertise and with a consumer research firm to begin the consumer survey.

## **Peru: Support to Public-Private Partnership for Handwashing with Soap Initiative**

*Overview:* USAID/EHP and the Water and Sanitation Program of the World Bank have developed a partnership for the promotion of handwashing as a public health initiative in Peru. A local coordinator, hired by the World Bank, is working out the details of the collaboration with EHP. EHP will support the costs of the consumer and health research to be carried out as the first step in launching the initiative.

### **Highlights**

- Finalized the terms of reference for the research.

## **Peru: Urban Environmental Health Services and Hygiene Behavior**

*Overview:* The purpose of this activity is to reduce health risks associated with exposure to locally generated contaminants and pathogens in peri-urban residential neighborhoods and communities through four types of interventions: 1) helping Peruvian agencies with environmental health responsibilities to improve their policies; 2) carrying out pilot projects to demonstrate innovative ways of addressing environmental health needs; 3) providing technical assistance, training, and local institutional strengthening; and 4) developing capacity in environmental health risk monitoring. EHP provided support to the General Directorate of Environmental Health (DIGESA) and to the implementing PVOs and local authorities. The activity grew out of an earlier effort to reduce lead exposure in slum areas of Callao through behavioral change.

### **Highlights**

- Finalized an assessment of the national environmental health surveillance system in Peru.
- Closed the activity.

## **Peru and Nicaragua: PAHO/C-IMCI — Behavior Change for the Prevention of Diarrheal Diseases**

*Overview:* In collaboration with PAHO, ministries of health, and PVO and NGO partners, USAID launched a hygiene behavior change activity in two countries in the Latin American and the Caribbean region (LAC): Nicaragua and Peru. Technical assistance will focus on a C-IMCI module developed by EHP and used recently in the Dominican Republic. EHP is assisting the NGOs that will use the module to design and implement a strategy to prevent diarrheal disease through improved hygiene behaviors. The activity further cements the partnership between EHP, USAID, PAHO, the NGOs involved, and the ministries of health in both countries. The first four phases of the activity (planning and development) are scheduled for EHP Year 4; the fifth and sixth (implementation), for Year 5.

### **Highlights**

- Assisted participants from the NGOs and ministries of health to conduct formative research, the results of which were incorporated into the project's strategic plan.
- Continued field work: second phase of activities—applied research to test the concepts and the strategy, implemented trials of improved practices (TIPs), developed materials, and refined strategy; third phase—pre-tested materials, prepared the quantitative baseline, produced the manual for promoters, and appointed a cadre of promoters; and fourth phase—trained promoters, prepared a monitoring and follow-up plan, and set date for launch of the project.
- Began implementation phase in both countries.

### **West Africa Water Initiative (WAWI)**

*Overview:* Ghana, Mali, and Niger have been selected as beneficiary countries for a \$41 million West Africa Water Initiative. The initiative is supported by a public-private partnership led by the Conrad N. Hilton Foundation and USAID; the other partners include World Vision; UNICEF; WaterAid; the Cornell International Institution for Food, Agriculture, and Development; Winrock International; Lion's Club International; the World Chlorine Council; the International Trachoma Institute, and the Desert Research Institute. The initiative's objectives include increasing the level of access to sustainable, safe water and environmental sanitation services among poor and vulnerable populations; reducing the prevalence of waterborne diseases, including trachoma, guinea worm, and diarrheal diseases; and ensuring ecologically and financially sustainable management of water quantity and quality. In addition, the initiative hopes to foster a new and potentially replicable model of partnership and institutional synergy that ensures technical excellence, programmatic innovation, and long-term financial, social, and environmental sustainability in water resources management. EHP's role is to help strengthen the water and sanitation component of

the initiative, to ensure that health outcomes are achieved, and to provide technical assistance, as needed.

### **Highlights**

- Attended partners meeting at which it was decided that EHP would be charged with monitoring activities against agreed goals.
- Launched activity: began initial research on the monitoring and evaluation systems and state of the art monitoring and evaluation practices of partners.
- Continued to collaborate with key initiative partners on the development of monitoring and evaluation indicators.
- Attended the start-up workshop in Bamaka, Mali, June 30–July 3.

### **Task 4: Environmental Change and Health Outcomes (ECHO)**

*Overview:* This task includes efforts to develop and promote cross-sectoral surveillance (ECHO/XS) and integrated vector management (ECHO/IVM), with a focus on malaria prevention and control. *ECHO/XS* activities are designed to develop methods for performing the 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. XS work consists of 1) developing and testing methods for cross-sectoral surveillance, 2) creating tools to promote cross-sectoral surveillance as national policy and applying them in three PHN countries, and 3) institutionalizing cross-sectoral surveillance approaches in three PHN countries. Most work is conducted in the context of field activities. *ECHO/IVM* activities determine the effectiveness of particular vector-control interventions and identify the particular settings in which they are likely to be effective in urban and rural settings in Africa. IVM approaches are promoted as part of official national malaria control plans and procedures. The emphasis is on developing better tools for vector control, including promoting the use of environmental management and larval control, developing IVM strategies appropriate to particular settings, and promoting community participation in vector-control programs. These goals are to be achieved through both core and field activities funded through missions and bureaus.

### **ECHO/XS and IVM Core Activities**

#### **Highlights**

- Organized a technical working group to establish a partnership with Columbia University's IRI (September 2002).

- Initiated a new activity to examine World Bank pipeline projects that might inadvertently increase malaria breeding sites; identified 75 possible projects and then narrowed down the number to about ten.
- Initiated a new activity to conduct field trials to demonstrate the impact of larval control methods on malaria transmission in urban, highland, and desert fringe settings; started a field trial in Kenya to study the use of larval control methods in a highland setting; and made arrangement to visit other candidate sites in Dares Salaam, Tanzania, and Ethiopia.
- Prepared draft terms of reference for EHP support to convene a WHO technical advisory panel on malaria vector control in fall 2003.
- Made a presentation on ECHO activities to USAID New Entry Professionals, International Centers for Tropical Disease Research Network, and the Global Health Council Annual Meeting in Washington, DC, in May 2003.

## **ECHO/XS and IVM Field Activities**

### **Asia/Near East (ANE): Workshop on Standardizing Surveillance for Vector-borne Disease in BBIN Countries**

*Overview:* EHP is providing technical support to help establish common surveillance procedures for priority vector-borne diseases in Bangladesh, Bhutan, India, and Nepal (BBIN), as part of the regional strategy for infectious diseases of USAID's ANE. The BBIN network was formed in July 2000 at a workshop on cross-border issues of surveillance and control of vector-borne diseases organized by EHP/Nepal. Participants agreed to work towards standardizing vector-borne disease surveillance methods and sharing information on insecticide susceptibility and drug resistance. A key aspect of the regional strategy is to build on existing national initiatives and strengthen linkages among national programs. The work is currently focused on initiating a regional network of sentinel sites for monitoring resistance to anti-malarial drugs and standardizing diagnosis and reporting procedures for Japanese encephalitis.

### **Highlights**

- Prepared two draft reports and disseminated them for review: "An Inventory of Insecticide Resistance for Malaria, Kala-Azar, and Japanese Encephalitis Vectors in Bangladesh, Bhutan, India and Nepal" and "An Inventory of Malaria Drug Resistance in Bangladesh, Bhutan, India and Nepal."
- Held a workshop on standardizing diagnostic and surveillance methods for Japanese encephalitis in Pune, India, March 2003, with the co-sponsorship of the Program for Appropriate Technology in Health/Child Vaccine Program (PATH/CVP) and the participation of representatives from BBIN, the Indian

Council of Medical Research, the National Anti-Malaria Program, and AFRIMS; and prepared workshop report.

- Met with officials in India and Nepal and the WHO/SEARO to coordinate planning for clinical trials to evaluate resistance to anti-malarial drugs in areas along the Indo-Nepal border.

### **Central Asian Republics (CAR): Environmental Review for Use of Pesticides in Malaria Control**

*Overview:* The USAID mission to the Central Asian Republic requested technical support from EHP to review the current and proposed practices for using pesticides in the WHO-supported malaria control program centered in Osh, Kyrgyzstan. The assistance consists of preparing a Pesticide Evaluation Report and Safe Use Action Plan, which is necessary to complete the environmental review process mandated by U.S CFR 216.

#### **Highlights**

- Consultant traveled to the Central Asian Republics on June 23 to provide the requested support.

### **Eritrea: Technical Assistance to the Eritrea National Malaria Control Program**

*Overview:* EHP is providing technical assistance to the Eritrea National Malaria Control Program to help strengthen its operational research, surveillance systems, and vector-control activities. The four-year-long activity will 1) build capacity for entomological surveillance through a national survey of vector distribution and abundance and through longitudinal studies of larval ecology and adult mosquito biting behavior (first year), 2) continue entomological studies, conduct a national survey of parasite prevalence, and use data to identify sentinel surveillance sites and to define protocols for routine surveillance (second year), and 3) strengthen surveillance, evidence-based decision-making, and vector-control interventions as sentinel sites (second and third years). Activities during the current year are focused on improving surveillance systems, developing malaria risk maps, and conducting a larval control pilot program in four pairs of treated and control villages.

#### **Highlights**

- Provided assistance to the National Malaria Control Program to improve surveillance: defined objectives and protocols for sentinel sites, designed and delivered software routines for extracting malaria data from the national health information management system, revised draft malaria risk maps, and liaised with other government ministries and support agencies.

- Identified a consultant to provide technical support for malaria surveillance, help define objectives and protocols for sentinel sites, analyze historical data, and assist field staff in making better use of surveillance data.
- Attended and supported the National Malaria Control Program's annual program evaluation and workshop (March 2003) and prepared a summary report.
- Completed field operations for the first year of the larval control pilot study in four pairs of treatment and control villages; compiled and analyzed data collected; wrote a report on the experience of the first year.
- Prepared plans for the second year of the larval control pilot study.
- Finalized arrangement for a field test of the vector control needs assessment protocol to be conducted in Eritrea with leadership from the WHO/AFRO.
- Completed maps showing the geographic distribution of malaria risk in Eritrea.
- Completed analysis of historical data on the malaria epidemics of 1997–1998, wrote an epidemic preparedness and response manual, compiled six years of data on malaria cases, and continued work on an historical database of malaria control interventions.
- Published *Activity Report #111: Malaria Vector Studies in Eritrea* and *Activity Report #112: Eritrea: Field Studies on Efficacy of Bacterial Larvicides for Use in Malaria Control*.

## **Latin America and the Caribbean (LAC): Best Practices in Dengue Control and Treatment**

*Overview:* In the past ten years, the number of cases of dengue and dengue hemorrhagic fever (DHF) has increased dramatically in Latin America and the Caribbean. *Aedes aegypti*, the mosquito that transmits dengue, had been largely eradicated but has returned due to a range of factors including a lack of surveillance, poor prevention, control, and treatment programs, increased urbanization, lack of resources, and inadequate public education efforts. In recognition of the increasing importance of dengue fever as a public health problem, the LAC Bureau requested EHP to prepare a summary of best practices for the control and prevention of dengue.

### **Highlights**

- Identified best practices, drafted report, revised after internal and external review, published *Strategic Report # 7: Best Practices for the Prevention and Control of Dengue in Latin America and the Caribbean*, and translated the report into Spanish (*Strategic Report #7S*).
- Completed dissemination of the English and Spanish versions.

- Presented the best practices at the Global Health Council Meeting in Washington, DC, in May.

### **Mozambique: Technical Assistance to the National Malaria Control Program**

*Overview:* EHP provided technical assistance to the Ministry of Health in Mozambique (MISAU) to improve malaria surveillance in Maputo, develop MISAU's capacity for using geographic information systems (GIS), and identify areas of Maputo with the highest risk of malaria. Local health officials were to use this information to target malaria control interventions in Maputo. The activity supported the USAID mission's efforts to design an expanded program of technical assistance for the National Malaria Control Program. Work began under the EHP Phase I (EHP I) contract and continued until March 2002 when EHP funding was exhausted. USAID/Mozambique decided to cancel the procurement for follow-on work that EHP had been negotiating since October 2001. As a result, all activities in Mozambique have been completed, and no further work is anticipated except preparation of the final Activity Report.

#### **Highlights**

- Organized materials for preparation of the final report.

### **Nepal: Program for the Prevention and Control of Selected Infectious Diseases**

*Overview:* EHP is providing assistance to help strengthen the institutional capacity of the Vector-Borne Disease Research and Training Center (VBDRTC) at Hetauda, Nepal, and to assist the Ministry of Health in improving its surveillance and control programs for malaria, kala-azar, and Japanese encephalitis. Comprehensive information on this activity may be found in the trimesterly reports prepared by EHP's project office in Nepal. The project was initiated in 1998 and will continue through the end of the EHP II contract period.

#### **Highlights — VBDRTC Institutional Capacity**

- Carried out the following training activities: two sessions of training on malaria for maternal and child health and village health workers from Udayapur District, health workers from Saptari District, and peripheral health workers from Mahottari District; training of trainers on microscopy and refresher training on Japanese encephalitis diagnosis organized by the national Public Health Laboratory and EHP; training on malaria microscopy and control of vector-borne diseases.
- Recruited four additional personnel for the VBDRTC: deputy director for management, laboratory assistant, social scientist, and computer assistant.
- Assisted the VBDRTC board to reach consensus on a plan of action.

## Highlights — Improving Surveillance of the Ministry of Health

- Continued to improve EWARS: monitored activities at eight pilot sites, began analyzing EWARS data (first data period, April 28–August 30, 2003), published *EWARS Bulletin* on a regular basis, conducted two training sessions for medical records, statistical assistance, and laboratory personnel from hospitals and public health offices in EWARS pilot sites; and carried out a monitoring and supervision visit jointly with the Epidemiology and Disease Control Division (EDCD) and VBDRTC.
- Improved Japanese encephalitis diagnosis and surveillance: put in place a system for laboratory diagnosis in the 24 endemic areas and for coordination, collection, storage and transfer and testing of specimens; held workshop on standardization of surveillance approaches at the National Institute of Virology in Pune, India; reviewed Japanese encephalitis laboratory diagnosis, coordination, and results for 2002 and to plan for the 2003 transmission season (participants were the Department of Health Services; the national Health Information Education and Communication Center; district health officers and public health officers; WHO; the Britain Nepal Medical Trust; and medical superintendents and laboratory technicians from district and zonal hospitals).
- Distributed 400 K39 dipstick test strips and 24 chase buffers to various institutions for diagnosis of kala-azar.

## Highlights — Developing Sustainable Intervention Strategies for Prevention and Control

- Continued to advance the vector-borne disease program in Dhanusha-Mahottari Districts: completed baseline data collection; assessed available human resources; oriented communities; initiated health education programs for patients and caretakers in the kala-azar wards of the hospitals; developed key behavior change messages based on the Nepal social marketing and distribution behavior change strategy; developed communication materials to raise awareness of kala-azar and malaria; developed and applied training materials on kala-azar for field assistants, health facility staff, and female community health volunteers; assessed the therapeutic efficacy of anti-malarial drugs in five sites; strengthened existing referral system for kala-azar through development of a new record-keeping card
- Took over responsibility for intervention activities in Dhanusha and Mahottari Districts previously carried out by CECI. This change came about in order for EHP to have more direct control on the quality of the implementation of the interventions.
- Began preparations for a phase IV trials of Miltefosine, an oral drug for treatment of kala-azar, to be implemented by B. P. Koirala Institute for Health Sciences with EHP support: in-country tasks are underway in India and Nepal, facilitated by WHO/Tropical Disease Research and the Banaras Hindu University, and

training for investigators is being planned at the Rajendra Memorial Research Institute of Medical Sciences, Patna.

### **Highlights — Cross-Border Linkages**

- Held meetings with health service representatives from Bihar State, India, and Nepal district health officials to initiate community-based cross-border collaboration on the prevention and control of kala-azar and developed an action plan for information sharing, laboratory diagnosis, and case management.
- Organized a meeting of health officials from Bihar State, India, and Nepal on kala-azar and malaria prevention and reached consensus on six follow-up implementation activities.

### **Uganda: Reducing Urban Malaria Transmission**

*Overview:* Malaria is a critical health problem in Uganda and has a dramatic impact on the health status of Uganda's rural population. Recent data indicating that malaria is also a problem in Kampala, Uganda's capital, are part of a growing body of evidence that local malaria transmission is a problem in many African cities. The Uganda urban malaria activity identified areas in Jinja and Kampala that appear to be at higher risk for malaria. In this past year EHP confirmed local transmission, identified and characterized anopheline breeding sites in areas where transmission has been confirmed, and involved stakeholder groups in a participatory process for preparing an action plan to eliminate or manage productive breeding sites. The action plan was developed in partnership with the local governments. The ultimate result expected from implementation of the action plan will be a measurable reduction in malaria transmission in the intervention areas. The initial phase ran from September 2002 to July 2003. Phase II for the year beginning July 2003 is now in preparation.

### **Highlights**

- Initiated the activity: subcontracted with Med Biotech Laboratories to provide local coordination and data collection; confirmed selection of Kampala and Jinja as study sites.
- Collected two rounds of clinical and three rounds of entomological data in Kampala and Jinja.
- Completed action plans for the two sites.

### **Task 5: Grants/ECHO/Integrated Programs (IP) Madagascar**

*Overview:* Task 5 was originally intended as a grant-making program (using the EHP indefinite quantity contract (IQC) grants-under-contract mechanism) for activities exploring the interface between natural resource management, population, and health programs and outcomes, testing in the field more effective approaches to program

integration. The country focus has been Madagascar. The original Task 5 to provide grants for integrated programs has been dropped and replaced by a specific task to continue work started under ECHO/IP—Task 4) in 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, population, and health. The primary vehicle for carrying out this task is an activity in Madagascar. EHP is subcontracting with local organizations in key environmental corridors to support integrated activities. Because of USAID programs in population and health and natural resource management, Madagascar is an ideal country to conduct this activity. The activity concentrates on strengthening the capacity of the VS/IPI to plan, implement, monitor, and evaluate integrated approaches as well as on developing and testing model approaches. VS also disseminates information about the integrated approach to partner organizations on the national and international levels.

## **Highlights**

- Established VS as a legally registered association and conducted a two-day workshop to assist VS to develop a long-term vision and strategy for institutionalization.
- Secured \$200,000 for VS from the Flexible Fund for Family Planning Activities and developed a plan for its use.
- Held training-of-trainers workshop for community development workers for cross-training in health, population, and environment.
- Conducted mid-term evaluations for the Department of Development, Church of Jesus Christ (SAF) and Action Sante Organisation Secours (ASOS).
- Provided ongoing support and developed communication materials for implementation of the community-champion, farmer-to-farmer, and child-to-child approaches.
- Began discussions with INSTAT for the post-intervention survey in the fall of 2003.
- Facilitated a visit to the United States of two officials from VS (the executive director and the coordinator for information, education, and communication—IEC) to participate in and make presentations at the Global Health Council meeting in Washington, DC, in May, and to meet with NGO representatives and potential sources of funding at the Ecosystems Approach to Health meeting in Montreal.
- Subcontracted with SAF and NY Tanintsika (a Malagasy NGO) for ongoing integrated activities.

## Task 6: Information Center

*Overview:* The Information Center supports all other tasks by disseminating contract products and deliverables. Its basic strategy is to make documentation and dissemination an integral part of EHP activities; the principal modes for information sharing and dissemination are the Internet and email using existing and new technologies, information products, and partners. The Center's activities, which are closely aligned with other tasks under Task Order #1, are organized under three subtasks: 1) strategic support to Tasks 2, 3, 4, and 5; 2) partnerships for information exchange, sharing of technologies, and reach to an expanded audience, and 3) provision of information and dissemination services.

### Highlights — Strategic Support

- Prepared EHP Workplan for Year 4, annual report for Year 3, and quarterly reports for Year 4.
- Conducted literature searches and obtained articles for EHP and USAID staff on the following topics: water and sanitation coverage by country, cholera outbreaks in Africa, private-sector water and sanitation activities in LAC, dengue prevention, indoor air pollution, arsenic pollution, hygiene promotion, HIV/AIDS and water, privatization of water utilities, water and sanitation-related diseases, household treatment of drinking water, and other topics.
- Received 49 Reports for the File for archiving.
- Published the following Strategic Reports:
  - #3: Improving Sanitation in Small Towns in Latin America and the Caribbean: Practical Methodology for Designing a Sustainable Sanitation Plan (English and Spanish)
  - #4: Creating an Enabling Environment for Community-Based Rural Water Supply, Sanitation and Hygiene Promotion Systems: Case Study: Reforming the Rural Department of the National Water Agency (INAPA) in the Dominican Republic.
  - #5: The GESCOME Difference. Lessons Learned from Gestion Communautaire de Sante Environnementale (GESCOME).
  - #6: Institutional Support Mechanisms for Community-Managed Rural Water Supply and Sanitation Systems in Latin America.
  - #7: Best Practices for Dengue Prevention and Control in the Americas.
- Published the following Activity Reports:

- #110: Support for Phase II of the Peru Lead Project to Determine Blood and Ambient Lead Levels in Metropolitan Lima and to Manage the Lead Exposure Problem in Critical Areas.
- #111: Malaria Vector Studies in Eritrea.
- #112: Eritrea: Field Studies on Efficacy of Bacterial Larvicides for Use in Malaria Control.
- #113: End of Project Report. Environmental Health Project CESH Benin Activity. Gestion Communautaire de la Sante Environnemental II (GESCOME II).
- #114: Ghana Urban Health Assessment.
- #115: Integration of Health, Population and Environmental Programs in Madagascar. Midterm Progress Report.
- #116: Urban Environmental Health Pilot Activities: Evaluation of Progress and Lessons Learned, USAID: Democratic Republic of the Congo.
- #117: Sanitation in Small Towns, Summary Report on the Sub-regional Workshops, Environmental Health Project, Water and Sanitation Program, Pan-American Health Organization.
- #118: Lessons Learned from Assessment of the Environmental Health Project Website.
- #119: Urban Environmental Health Strategies: Three Community-Based Environmental Sanitation and Hygiene Projects Conducted in the Democratic Republic of the Congo.
- Published the following Joint Publications:
    - #5: USAID Village and Sanitation Program, West Bank of Palestine: Environmental Health Assessment, Phase I (with USAID and Safe the Children).
    - #6: USAID Village Water and Sanitation Program, West Bank — Environmental Health Assessment, Phase II (with USAID and Save the Children)..
  - Translated the following reports: *Strategic Reports #2, #3, #6, and #7* (Spanish), *Activity Report #113* (French).
  - Provided support for EHP conference participation—through assembling information packets and reports, preparing PowerPoint presentation, producing CD-ROMs of topical materials, etc.—for several conferences and meetings: the African Sanitation Conference in Johannesburg, South Africa; the Water Supply and Sanitation Collaborative Council Conference in Johannesburg, South Africa;

LAC workshops in Peru and Honduras; the Expert Consultation on C-IMCI in Latin America in Nicaragua; the Aga Khan Workshop on the Built Environment in Mombasa, Kenya; the World Water Forum in Kyoto, Japan; the Sixth Annual Malaria Program Assessment Workshop in Massawa, Eritrea; the 2003 CORE Group Spring Meeting in Portland, Oregon; the Global Health Council Annual Meeting in Washington, DC; USAID orientation for entry-level professionals in Washington, DC; and the West Africa Water Initiative Workshop in Bamako, Mali.

### **Highlights — Partnerships**

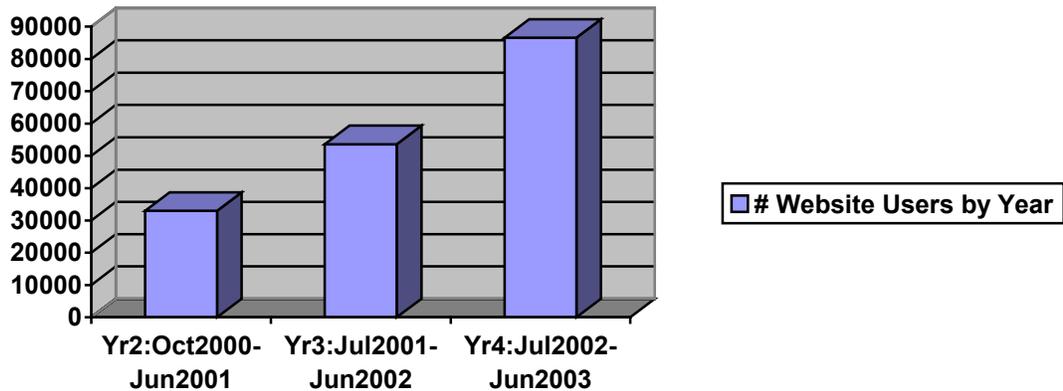
- Prepared materials for the Population and Health Materials Working Group Meeting.
- Shared materials with BASICS library and staff.
- Continued collaboration with the Partnership in Social Science for Malaria Control.
- Participated in the HIPNET Conference at Johns Hopkins University and presented the findings of the EHP website assessment.

### **Highlights — Information and Dissemination Services**

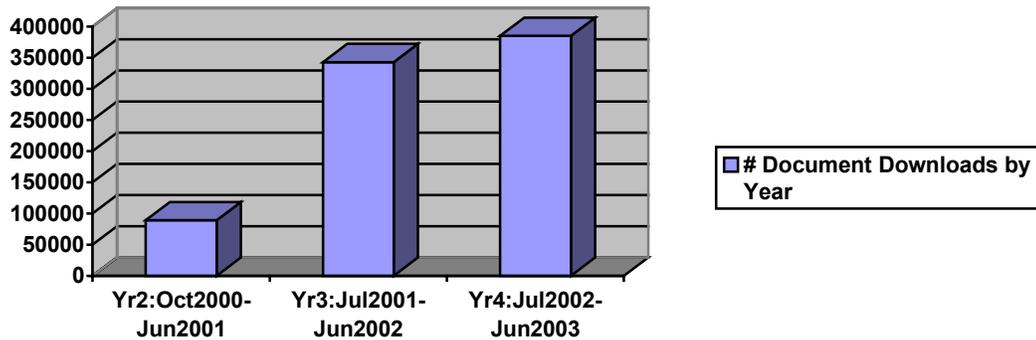
- Published 30 issues of the e-newsletter, *Malaria Bulletin* for 600+ subscribers.
- Published 18 issues of the e-newsletter, *Hygiene Bulletin* for about 150 subscribers.
- Published the biweekly e-newsletter, *Environmental Health Updates* for 220 subscribers.
- Published 5 issues of the e-newsletter, *EHP News*.
- Published the following EHP Briefs:
  - #6: Improved Hygiene in Kinshasa Markets, Democratic Republic of Congo.
  - #7: Improving Small Towns' Sanitation in Latin America and the Caribbean.
  - #8: Malaria Control in Eritrea.
  - #9: Integrated Vector Management for Malaria Control in Africa.
  - #10: Nepal Vector-Borne Disease Program Update.
  - #11: A Framework for Action. Child Diarrhea Prevention

- #12: Local Government Support to Community Management of Environmental Health in Benin.
  - #13: Best Practices in Dengue Control in the Americas..
  - #14: Urban Poor Child Health in Asia and the Near East.
  - #15: Water for War-Torn West Bank; the Emergency Water Operations Center (EWOC).
  - #16: Improving Urban Environmental Health in the Democratic Republic of Congo.
- Maintained, refined, and expanded the reach of the EHP website, as shown by the following usage data:
    - Visitors to the website: Over 800,000 visitors visited the EHP website in Year 4.
    - Files or reports viewed or downloaded: Nearly 400,000 document downloads occurred in Year 4. These annual increases (visitors & document downloads), are believed to be a result of regular updating and promotion of the website as well as regular uploading of new EHP publications.

**Number of Website Users by Year**



## Number of Document Downloads by Year



- Disseminated EHP’s reports through the USAID Development Experience Clearinghouse website: first quarter = 1,148; second quarter = 1,003; third quarter = 976; and fourth quarter = 1,075.
- Redesigned the home page of EHP’s website and added a new “current feature.”
- Responded to 600–675 information requests per quarter, from staff and consultants, USAID, international and non-governmental organizations, developing countries, and others.
- Completed an inventory of existing environmental health web rings and gateways and decided not to create a new environmental health web ring because it would duplicate existing resources.
- Analyzed the lessons learned from the evaluation of the EHP website (see *Activity Report #118, above*).

## Task Order 2: Malaria Vaccine Development Program (MVDP)

*Overview:* Support for the USAID Malaria Vaccine Development Program (MVDP) is conducted by EHP through Task Order 2 under its contract with USAID. The task’s planned duration is five years (August 1, 1999–July 31, 2004).

### Accomplishments

- Supported the MVDP through the work of the MVDP technical advisor (and through a subcontract with Dr. Tony Holder at the National Institute for Medical Research, London, England).

- Provided support to regular vaccine team meetings, including preparation of agendas and minutes and follow-up activities.
- Prepared for, participated in, and followed up on the May 2002 and January 2003 Scientific Consultants Group semiannual meetings.
- Drafted a new investigational new drug application to the U.S. Food and Drug Administration for the *Escherichia coli* Apical Membrane Protein 1 (AMA1) vaccine target antigen.
- Prepared for, attended, and followed up on the European Malaria Vaccine Initiative Meeting in Geneva, Switzerland, September 2002.
- Prepared for, attended, and followed up on the GSK-WRAIR-MVI-USAID Meeting in Brussels, Belgium, October 2002.
- Supported the formal evaluation of MVDP by USAID’s Monitoring, Evaluation, and Design Support (MEDS) Project.

## **Task Order 801: El Salvador: Legal and Regulatory Reform of the Water Sector**

*Overview:* Support to the legal and regulatory reform of the water sector in El Salvador, including both the water resources and the water supply and sanitation sub-sectors, was provided in two phases. In Phase I (May–December 2000), EHP assisted in reviewing and discussing key elements of two draft laws—one for water resources and the other for regulation of water supply and sanitation. However, these draft laws were put on hold by the National Aqueduct and Sewerage Administration (ANDA) and may not be resurrected. Phase II (January–May 2001) was originally intended to assist the Legislative Assembly in reviewing the laws but instead focused on the more immediate issue of developing an institutional model to provide back-up support to rural communities after the water and sanitation systems are operational. The activity was extended to September 2002 to allow for delays caused by earthquakes.

### **Highlights**

- Wrote final summary report.
- Closed task order.

## **Task Orders 802, 803, and 804: West Bank: Village Water and Sanitation Program**

*Overview:* The original purpose of USAID’s West Bank Village Water and Sanitation Program (VWS) was to provide safe and sustainable water and sanitation services to

44 rural towns serving a population of 135,000 in the West Bank. The program was to focus on communities in the West Hebron and South Nablus areas. The VWS program was to support one of the strategic objectives of USAID/West Bank: to provide greater access to and more effective use of scarce water resources. Work was to be carried out in collaboration with the Palestinian Water Authority, as well as the Ministries of Agriculture, Environmental Affairs, Health, Local Government, and Planning.

Implementation was to be carried out under three separate task orders:

- Task Order 802: Engineering Studies. The preparation of engineering feasibility studies for new and rehabilitated water distribution networks, new and rehabilitated wastewater treatment, and water reuse (initiated September 17, 2002; duration—3 months; extended for 3 additional months—to March 22, 2002).
- Task Order 803: Health, Governance, Wastewater Reuse Studies, Designs, and Program. The preparation of feasibility studies and the design of programs for improved community education and governance to improve water, sanitation, hygiene, and agricultural practices (initiated September 27, 2002; duration—2 years).
- Task Order 804: Engineering Designs. Development of designs and procurement packages for all of the proposed facilities (initiated March 22, 2002).

In April 2002, the scope of EHP's work was expanded to include coordination of USAID response to a humanitarian crisis brought about by the invasion and prolonged occupation of major Palestinian municipalities by the Israeli Defense Forces beginning on March 20, 2002. Task Orders 803 and 804 were converted to an emergency operation consisting of providing emergency water supplies and assessing water needs and availability. (Task Order 802 had already been completed.) Most of the planned activities were deferred.

### **Highlights**

- Amended the task order to provide for expanded support for emergency water and sanitation efforts, including commodity procurement.
- Conducted an environmental health survey of 600 households in Southern Nablus and Western Hebron, including stool sampling, water quality analysis, and assessment of KAP, and report the results.
- Implemented emergency water distribution programs with assistance from Save the Children, CARE International, and the American Near East Refugee Aid (ANERA) organization in three especially vulnerable areas: Jenin, Tubas, and Nablus.

- Held management workshop to review and revise procedures of the Emergency Water Operations Center (EWOC) and formed a EWOC planning committee.
- Continued work on the design of new water supply infrastructure in West Hebron and Southern Nablus.
- Continued to procure emergency water supply commodities, including stand-by generators and motors.
- Completed a major well rehabilitation program.
- Prepared engineering designs for new and rehabilitated networks in West Hebron and Nablus governates.
- Prepared management systems for use after the conclusion of the activity.
- Carried out final work, preparatory to closing these task orders.

## **Task Order 805: Jordan Watershed/Water Quality Program**

USAID/Jordan is funding an initiative to protect and improve water sources in Jordan and thereby safeguard previous infrastructure investments and protect public health. The first phase of the initiative, the Jordan Water Quality Management Project, was implemented by Camp Dresser & McKee (CDM) from March 2002 to January 2003, in close partnership with the Ministry of Water, the Water Authority of Jordan, and the Ministry of Health. The first phase focused on problem analysis of Jordan's water management system and identified areas for improvement. EHP (through CDM) is currently implementing the second phase of the initiative, based on priority problems identified in Phase I. Phase II, which was initiated in June 2003, comprises three tasks: 1) watershed protection, including the implementation of a pilot program; 2) laboratory quality assurance/quality control; and 3) operations and maintenance at selected Water Authority treatment facilities.

### **Highlights**

- Initiated task order.

# Annex 1. Year 4 Milestones

Shaded cells indicate target date for completion; an “x” indicates that the target was achieved

Task/Milestone	1stQ	2 <sup>nd</sup> Q	3 <sup>rd</sup> Q	4 <sup>th</sup> Q	Comments
Task 1: Workplan					
• Finalize and submit workplan to USAID				x	
Task 2: Lessons Learned & Policy					
• Host WSSCC M&E Task Force meeting.		x			Took place in 2 <sup>nd</sup> Q
• Organize one technical meeting to review Vision 21 monitoring tests. (Revised version: Participate in an international technical meeting related to monitoring water, sanitation, and hygiene.)				x	
• Annual performance and milestone report		x			
• Support to the WSSD meeting in Johannesburg, South Africa.	x				
• Support to Kyoto meeting.			x		
• Abstracts submitted for Global Health Council Conference.	x				
• Active participation in Global Health Council Annual Meeting.				x	
• Three policy documents published or in draft.					Postponed to Y5.
• Develop an agenda and implement a C-IMCI workshop for LAC with BASICS and the CORE IMCI working group.			x		
• Participate in a USAID request for a mission partnership activity for scaling up of C-IMCI, with a concrete EHP role established in at least one country.	x				
• Compile and document successful EHP partnerships in a short advocacy brief.					Postponed to Y5.
Task 3: CESH					

Task/Milestone	1stQ	2 <sup>nd</sup> Q	3 <sup>rd</sup> Q	4 <sup>th</sup> Q	Comments
• Dedication of core funds to support a field-based operations research project in partnership with local specialists.	x				
• Assessment guidelines published by EHP.	x				
• Quantitative assessment tool refined based on findings from field application.					Postponed to Y5, Q1.
• Community-based monitoring tool developed and field opportunities identified for its application and testing.					Postponed to Y5, Q1.
• Working draft of the CESH programming guide for behavior change for diarrheal disease reduction completed.					Postponed to Y5, Q1.
• Draft of situation analysis tool completed (background paper completed by H. Lockwood).					Cancelled.
• Minutes of meetings of stakeholders and activity managers involved in CESH produced and widely distributed.	x				
• Core CESH funds to facilitate hygiene improvement dedicated in one or more targeted countries as part of a GDA partnership.			x		Currently for M&E under WAWI Partnership
• Two-year action plan to provide technical assistance to SANRU finalized and supported.	x				
• Substantive progress made in the field, working with NGOs to develop draft diarrheal disease prevention modules.				x	
• Opportunity for focused effort in Nepal to assist the ongoing long-term work of sectoral partners identified and supported.		x			Opportunity identified.
• Focused program of support to NicaSalud developed and supported.			x		
• Focused program of support to local partners in the Dominican Republic developed and supported.	x				
• EHP reports on urban environmental health activities in the DRC and behavior change activities in the Dominican Republic published and disseminated.				x	Dissemination postponed to Y5, Q1.
Task 4A1: ECHO/XS					
• XS TWG meeting and report.	x				

Task/Milestone	1stQ	2 <sup>nd</sup> Q	3 <sup>rd</sup> Q	4 <sup>th</sup> Q	Comments
• XS: Concept paper: Improving information for malaria control decision.					Deferred to Y5.
• Malaria risk stratification: methods and applications.					Deferred to Y5.
Task 4A2: ECHO/IVM					
• Draft guidelines for IVM.					Deferred pending further direction from WHO/AFRO.
• Session on larva control at the Third Pan-African Conference on Malaria.		x			
• Field test of the vector control needs assessment protocol.		x			
ECHO/XS & IVM: Nepal					
• Review of VBDRTC progress in implementation of the workplan.					Deferred to Y5 at USAID's request.
• Recommendations from the Meeting on Standardization of Community-Based Kala-azar Surveillance and Case Management in Dhanusha/Mahottari, Nepal, and the Adjoining Districts of Bihar State, India.			x		
• Evaluation report of improved EWARS strategy in eight sentinel sites..					Deferred to Y5, Q2.
• Recommendations on SO4, interventions 1 through 4, prepared in draft for further adjustments in Year 5.					Deferred to Y5, Q3.
ECHO/XS & IVM: Eritrea					
• Protocols and training for sentinel site staff.	x				
• Complete review of the malaria vector control program.		x			
• Report of results for larva control pilot programs.			x		
• Support to midterm review of the NMCP Five-Year Plan for Rolling Back Malaria.			x		

Task/Milestone	1stQ	2 <sup>nd</sup> Q	3 <sup>rd</sup> Q	4 <sup>th</sup> Q	Comments
ECHO/XS & IVM: Uganda					
• Situation analysis completed.				x	
ECHO/XS & IVM: ANE					
• Regional workshop on Japanese encephalitis surveillance.			x		
• Regional workshop on kala-azar surveillance.					Cancelled.
ECHO/XS & IVM: LAC- Dengue Fever					
• Best practices document completed.			x		
• Presentation to the LAC regional PHN SOTA meeting.			x		
Task 4B: ECHO/IP/Madagascar					
• General assembly meeting of Voahary Salama.	x				
• Institutionalization of VS as a legal entity.	x				
• Training-of-trainers workshop for community development agents.	x				
Task 6: IC					
• Changes to the website implemented, based on assessment recommendations, and report prepared.	x				
• A series of web-based bibliographies on diseases related to water supply and sanitation and certain vector-borne diseases developed.		x			
• One joint e-conference facilitated.					Deferred to Y5. Q2.
• EH web ring established with other relevant websites.				x	Survey determined that it is not feasible or needed.



## **Annex 2. EHP Products, Year 4 by Quarter**

### **2.1. Year 4, Quarter 1, July–September 2002**

#### **Task Order 1**

#### **Task 2: Policy and Lessons Learned**

- Revised list of hygiene improvement survey questions

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

##### **Environmental Sanitation Policy**

- EHP Strategic Report 2: Guidelines for the Assessment of National Sanitation Policies.

##### **Latin America and the Caribbean: Sanitation in Small Towns**

- EHP Strategic Report 3: Improving Sanitation in Small Towns in Latin America and the Caribbean.
- Article on sanitation in small towns published in July issue of Waterlines.

#### **Task 4: Environmental Change and Health Outcomes (ECHO)**

##### **Task 4A: ECHO: Cross-Sectoral Surveillance (XS) and Integrated Vector Management (IVM)**

##### **ECHO/XS and IVM Field Programs**

##### **Eritrea: Technical Assistance to the Eritrea National Malaria Control Program**

- Malaria Vector Control Studies in Eritrea (activity report ready for editing).
- Malaria Vector Studies in Eritrea (activity report ready for editing).

##### **Nepal: Inter-Country Linkages for Cross-Border Prevention and Control**

- CD-ROM on the vector-borne disease program
- Year V Workplan for EHP Nepal.

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

- IEC materials supporting integrated activities.

## **Task 6: Information Center**

### **Products Published**

- Two issues of EHP News (EHP's e-newsletter)
- Activity Report 112. *Eritrea: Field Studies on Efficacy of Bacterial Larvicides for Use in Malaria Control*. English. Josephat I. Shililu. 26568/E.X.ER2.LARVCTRL. 12/01/01
- Activity Report 111. *Malaria Vector Studies in Eritrea*. English. Josephat I. Shililu. 26568/E.X.ER.IMPLEMENTATION. 12/1/01
- Activity Report 110. *Support for Phase II of the Peru Lead Project to Determine Blood and Ambient Lead Levels in Metropolitan Lima and to Manage the Lead Exposure Problem in Critical Areas*. Carlos, Alberto Zavaleta. 26568/IC.YR4.SERV. 07/02/02
- EHP Brief 7: *Improving Small Towns' Sanitation in Latin America and the Caribbean*. EHP Staff. 26568/IC.YR4.SERV. August 2002.
- EHP Brief 6: *Improved Hygiene in Kinshasa Markets, Democratic Republic of Congo*. EHP Staff. 26568/IC.YR4.SERV. July 2002.
- Joint Publication 5. *USAID Village and Sanitation Program West Bank of Palestine—Environmental Health Assessment—Phase I*. English. Ali Sha'Ar, Eckhard Kleinau, Patrick Kelly. 26568/IC.YR4.STRAT.SUP.7/2/02
- Strategic Report 3S. *Mejoramiento del saneamiento en las ciudades pequeñas de América Latina y el Caribe \* Metodología práctica para diseñar un plan de saneamiento sostenible*. Spanish. Scott Tobias, Jeanine Corvetto, Eduardo A. Perez, Fred Rosensweig. 26568/OTHER.LACSAN.METHODOLOGY.8/2/02
- Strategic Report 3. *Improving Sanitation in Small Towns in Latin America and the Caribbean — Practicle Methodology for Designing a Sustainable Sanitation Plan*. English. Scott Tobias, Jeanine Corvetto, Eduardo A. Perez, Fred Rosensweig. 26568/OTHER.LACSAN.METHODOLOGY.8/2/02

### **Products Archived**

- Report for the File 406. *Estudios Comunitarios Comparativos Sobre Cambios de Comportamientos Higienicos Sanitarios (Documentos Anexos)*. Spanish. EHP Staff. 27052/NIC.MANAGUA.12/1/02

- Report for the File 405. *Trip Report, AFRICAN, African Sanitation and Hygiene Conference*. English. Eduardo A. Perez. 26568/CESH.SANITATION.AFRICA. 8/7/02
- Report for the File 404. *Preliminary Design Report for the West Hebron Service Area Distribution System Network, Final Report*. English. EHP Staff. HRN-I-802-99-00011-00. 2/10/02
- Report for the File 403. *Feasibility Report for Water Systems in the South Nablus Area, Final Report*. English. EHP Staff. HRN-I-802-99-00011-00. 2/10/02
- Report for the File 402. *Village Wastewater System Feasibility Report for the West Hebron and South Nablus Clusters, Final Report*. English. EHP Staff. HRN-I-802-99-00011-00. 2/11/02
- Report for the File 401. *Trip Report Nepal: Review CECI Intervention Activities, Nepal Year V Workplan*. English. Lisa Nichols. 26568/NEPAL.E.X.NE4.INTERVENTION. 7/2/02
- Report for the File 400. *EHP II Year 3 Quarterly Report 3, January-March 2002*. English. EHP Staff. 26568/LLP.ME.Y3.PE. 7/24/02
- Report for the File 399. *EHP II Year 3 Quarterly Report 2, October-December 2001*. English. EHP Staff. 26568/LLP.ME.Y2.PE. 7/24/02
- Report for the File 398. *EHP Trip Report: Development of a Supervisory System for Environmental Health Technicians--Honduras, May 26, 2002*. English. Dennis Kalson. 26568/OTHER.HONDURAS.TSA. 7/10/02
- Report for the File 397. *EHP II Trip Report: WSSCC: Task Force on Monitoring and Strategic Planning Meeting*. English. Sandy Callier, Eeckhard Kleinau. 26568/LLP.PART.Y3. 6/27/02
- Report for the File 396. *Manual de Recursos para la Participacion Comunitaria en Proyectos de Agua Potable, Saneamiento, y Cambio de Comportamiento en la Higiene: Tomo 4: Sostenibilidad del Sistema de Agua*. Spanish. Unidad Ejecutora de Acueductos Rurales, Instituto Nacional de Aguas Potable, EHP Staff. 26568/OTHER.DO2.INAPA.HATOMAYOR. 12/1/02
- Report for the File 395. *Manual de Recursos para la Participacion Comunitaria en Proyectos de Agua Potable, Saneamiento, y Cambio de Comportamiento en la Higiene : Tomo 3: Saneamiento y Cambio de Comportamiento en la Higiene*. Spanish. Unidad Ejecutora de Acueductos Rurales, Instituto Nacional de Aguas Potable, EHP Staff. 26568/OTHER.DO2.INAPA.HATOMAYOR.12/1/02
- Report for the File 394. *Manual de Recursos para la Participacion Comunitaria en Proyectos de Agua Potable, Saneamiento, y Cambio de Comportamiento en la*

*Higiene: Tomo 2: Organizacion Comunitaria*. Spanish. Unidad Ejecutora de Acueductos Rurales, Instituto Nacional de Aguas Potable, EHP Staff. 26568/OTHER.DO2.INAPA.HATOMAYOR. 12/1/02

- Report for the File 393. *Manual de Recursos para la Participacion Comunitaria en Proyectos de Agua Potable, Saneamiento, y Cambio de Comportamiento en la Higiene: Tomo 1: INAPA/UEAR y la Comunida Rural*. Spanish. Unidad Ejecutora de Acueductos Rurales, Instituto Nacional de Aguas Potable, EHP Staff. 26568/OTHER.DO2.INAPA.HATOMAYOR.12/1/02
- Report for the File 392. *EHP II Year 3 Quarterly Report 1 July -September 2001*. English. EHP Staff. 26568/LLP.ME.Y3.PE 6/2/02
- Report for the File 391. *The Environmental Health Project Website Assessment*. Adam Shannon. 26568/IC.YR3.SERV. 07/02/02

## **Task 7: Urban Health**

- PowerPoint presentations on India urban health program.
- Information sheet on how to calculate overhead and fringe benefits for small NGOs that are potential subcontractors.

## **ANE Urban Health Initiative**

- Concept Paper: Cairo Urban Slum Child Health Program.

## **Ghana: Urban Health Assessment**

- Draft report: “Ghana Urban Health Assessment.”
- PowerPoint presentation on assessment findings.

## **‘Other’ Tasks**

### **Dominican Republic: Decentralization of Rural Water and Sanitation Services**

- EHP Strategic Report #4: Creating an Enabling Environment for Community-based Rural Water Supply, Sanitation, and Hygiene Promotion Systems – Case Study: Reforming the Rural Department of the National Water Agency (INAPA) in the Dominican Republic.

### **Latin America and the Caribbean: Decentralization**

- “Creating Institutional Support Mechanisms for Rural Water and Sanitation Systems” appeared in the July edition of *Waterlines*.

## **2.2. Year 4, Quarter 2, October–December 2002**

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

- EHP Strategic Report 3. Improving Sanitation in Small Towns in Latin America and the Caribbean.
- Article on sanitation in small towns published in July issue of *Waterlines*.

### **Task 4: Environmental Change and Health Outcomes (ECHO)**

#### **Task 4A: ECHO: Cross-Sectoral Surveillance (XS) and Integrated Vector Management (IVM)**

##### **Nepal: Program for the Prevention and Control of Selected Infectious Diseases**

- BCC materials for kala-azar awareness.
- Training design for technical staff and health personnel on kala-azar
- Malaria drug resistance study.

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

- VS Bulletin No. 6

### **Task 6: Information Center**

#### **Products Published**

- One issue of EHP News (EHP's e-newsletter)
- Activity Report 115. Integration of Health, Population and Environmental Programs in Madagascar. Midterm Progress Report. 26568/EI.MG4.DISSEMINATION. 10/02
- Activity Report 114. Ghana Urban Health Assessment. Patricia Taylor, Carla Rull Boussem, Joan Awunyo-Akaba, John Nelson. 26568/UH.GHANA.ASSESS. 12/02
- Activity Report 113. End of Project Report. Environmental Health Project CESH Benin Activity. Gestion Communautaire de La Sante Environnementale II (GESCOME II). Laurie Krieger, Sheldon Gellar, Salifou Yallou, Pascal Zinzindohoue. 26568/CESH.BENIN2.PUB02. 12/02

- Strategic Report 4. Creating an Enabling Environment for Community-Based Rural Water Supply, Sanitation and Hygiene Promotion Systems: Case Study: Reforming the Rural Department of the National Water Agency (INAPA) in the Dominican Republic. English. Eric Johnson, Eduardo A. Perez. 26568/OTHER.DO2.INAPA.FINREPORT. 06/02
- Strategic Report 2S. Directrices para la evaluación de políticas de saneamiento nacionales. Myles F. Elledge, Fred Rosensweig y Dennis B. Warner con John H. Austin y Eduardo A. Pérez. 26568/CESH.SANITATION.POLTOOL 07/02
- EHP Brief 11. *A Framework for Action. Child Diarrhea Prevention*. EHP Staff. 26568/IC.YR4.SERV. December 2002
- EHP Brief 10. *Nepal Vector-Borne Disease Program Update*. EHP Staff. 26568/IC.YR4.SERV. December 2002
- EHP Brief 9. Integrated Vector Management for Malaria Control in Africa. EHP Staff. 26568/IC.YR4.SERV. November 2002
- EHP Brief 8. *Malaria Control in Eritrea*. EHP Staff. 26568/IC.YR4.SERV. November 2002

## Products Archived

- Report for the File 419. Behavior Change for Diarrheal Disease Prevention in the Context of C/IMCI Environmental Health Project Pan American Health Organization Plan International Peru Progress Report First Phase Cusco, Peru. Marco P. Torres. September 2002. 26568/ CESH.CIMCI.PAHO.Y4.01
- Report for the File 418. Environmental Health Project II: Communication and Dissemination Strategy. May Post. 26568/ICU.YR4.SERV. 12/02
- Report for the File 417. EHP Trip Report Honduras—Development of a System of Supervision For Environmental Health Technicians. October 2002. Dennis J. Kalson. 26568/OTHER.HONDURAS.TSA
- Report for the File 416. Behavior Change for Diarrheal Disease Prevention in the Context of C/IMCI Environmental Health Project. Pan American Health Organization. Plan International Nicaragua. Trip Report Second Phase, Chinandega, Nicaragua. October 2002. Marco P. Torres. 26568/ CESH.CIMCI.PAHO.Y4.01
- Report for the File 415. Behavior Change for Diarrheal Disease Prevention in the Context of C/IMCI Environmental Health Project Pan American Health Organization Plan International Nicaragua Progress Report First Phase, Chinandega, Nicaragua. August 2002. Marco P. Torres, Technical Consultant. 26568/CESH.CIMCI.PAHO.Y4.01

- Report for the File 414. *A Sanitation Plan for White Horses, St Thomas, Jamaica, W.I.*. Coordinated by: Construction Resource & Development Centre. Authored by: Stephen Hodges. Bevelyn Brodber. Heather McFarlane. September 30, 2002. 26568/OTHER.LACSAN.JAMAICA
- Report for the File 413. Trip Report: Internet Librarian 2002 Conference, Palm Springs, California, November 4-6, 2002. Dan Campbell. 26568/IC.YR4.SERV
- Report for the File 412. Seguimiento y Monitoreo “Cambios de Comportamiento en Higiene y Saneamiento Ambiental” Informe Final. Spanish. Gertrudis Medrano, Allan Hruska. 26568.CESH.NICASALUD. 8/02
- Report for the File 411. *CESH Nepal Activity Asian Development Bank Partnership for Hygiene Improvement and EHP Scoping for Handwashing Promotion*. Prepared for USAID/GH by The USAID Environmental Health Project (EHP). September 26, 2002. 26568/CESH.NEPAL.Y4
- Report for the File 410. *USAID Programming of Drinking Water Supply and Related Sectors: El Salvador*. By Lizz Kleemeier. October 16, 2002. 26568/LLP.POL.WS&S
- Report for the File 409. Plan to Integrate Hygiene Improvement into the Water and Sanitation Component of Sanru III: Democratic Republic of Congo Trip Report, September 18-October 18, 2002. Lynn Cogswell. October 2002.
- Report for the File 408. *Assessment of the EHP Website: Findings and Actions Taken*. English. Dr. May Post, Dan Campbell. 26568/LLP.ME.YR4.PERF. 10/2/02
- Report for the File 407. *EHP II Year 3 Quarterly Report 4- April–June 2002*. English. EHP Staff. 26568/LLP.ME.YR4.PERF 9/02
- Report for the File 406. Estudios Comunitarios Comparativos Sobre Cambios de Comportamientos Higienicos Sanitarios (Documentos Anexos). Spanish. EHP Staff. 27052/NIC.MANAGUA.12/1/02

## **Task 7: Urban Health**

### **ANE Urban Health Initiative**

- PowerPoint presentation on program background, proposed strategies, and approaches

### **Ghana: Urban Health Assessment**

- Activity Report 114. Ghana Urban Health Assessment

## **'Other' Tasks**

### **Latin America and the Caribbean: Decentralization**

- Strategic Report #6. Institutional Support Mechanisms for Community-managed Rural Water Supply and Sanitation Systems in Latin America

## **2.3. Year 4, Quarter 3, January–March 2003**

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

#### **CESH Field Programs**

##### **Asia/Near East (ANE) Urban Health Initiative/Cairo Healthy Neighborhood Program**

- Slum environmental health module for DHS
- SOW for Situation Analysis

##### **Benin: GESCOME II**

- Strategic Report 5. The GESCOME Difference. Lessons Learned From Gestion Communautaire de Santé Environnementale (GESCOME). The Environmental Health Project II CESH Benin Activity. English. Laurie Krieger, Sheldon Gellar, Salifou Yallou, Pascal Zinzindohoue. English. January 2003.
- EHP Brief 12. *Local Government Support to Community Management of Environmental Health in Benin*. EHP Staff. January 2003
- Activity Report 113F. Rapport de Fin de Projet du CESH au Bénin. Résumé Analytique. Projet de Santé Environnementale. Gestion Communautaire de Santé Environnementale II (GESCOME II). French. Laurie Krieger. Salifou Yallou. December 2002. 26568/CESH.BENIN2.PUB02.

##### **Latin America and the Caribbean (LAC): Decentralization**

- Strategic Report 6S. SPANISH. Mecanismos de apoyo institucional para los sistemas rurales de agua potable y saneamiento manejados por las comunidades en América Latina. Spanish. Harold Lockwood. December 2002.

##### **Latin America and the Caribbean (LAC): Sanitation in Small Towns**

- Activity Report 117. Sanitation in Small Towns, Summary Report on Sub-regional Workshops, Environmental Health Project, Water and Sanitation Program, Pan American Health Organization. Cuzco, Peru, October 1–3, 2002. Tela, Honduras, November 19–21, 2002. Eddie Perez, Fred Rosensweig. February 2003.

## **Task 4: Environmental Change and Health Outcomes (ECHO)**

### **Task 4A: ECHO: Cross-Sectoral Surveillance (XS) and Integrated Vector Management (IVM)**

- Strategic Report 7. Best Practices for Dengue Prevention and Control in the Americas. Linda S. Lloyd. February 2003.
- EHP Brief 13. *Best Practices for Dengue Control in the Americas*. EHP Staff. 26568/IC.YR4.SERV. March 2003

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

- VS Bulletin No. 7

## **Task 6: Information Center**

### **Products Published**

- Two issues of EHP News (EHP's e-newsletter)
- Activity Report 117. Sanitation in Small Towns, Summary Report on Sub-regional Workshops, Environmental Health Project, Water and Sanitation Program, Pan American Health Organization. Cuzco, Peru, October 1–3, 2002. Tela, Honduras, November 19–21, 2002. Eddie Perez, Fred Rosensweig. February 2003. 26568/OTHER.LACSAN.FOLLOWUP
- Activity Report 116. Urban Environmental Health Pilot Activities Evaluation of Progress and Lessons Learned USAID/Democratic Republic of Congo. Christopher L. McGahey. August 2001. 26568/CESH.DOC.DRCUEH.Y4
- Activity Report 113F. Rapport de Fin de Projet du CESH au Bénin. Résumé Analytique. Projet de Santé Environnementale. Gestion Communautaire de Santé Environnementale II (GESCOME II). French. Laurie Krieger. Salifou Yallou. December 2002. 26568/CESH.BENIN2.PUB02
- Strategic Report 7. Best Practices for Dengue Prevention and Control in the Americas. Linda S. Lloyd. February 2003. 26568/E.V.4.LACDENGUE
- Strategic Report 6. Institutional Support Mechanisms for Community-Managed Rural Water Supply & Sanitation Systems in Latin America. Harold Lockwood. December 2002. 26568/OTHER.LACDEC.GUIDELINES
- Strategic Report 5. The GESCOME Difference. Lessons Learned From Gestion Communautaire de Santé Environnementale (GESCOME). The Environmental Health Project II CESH Benin Activity. English. Laurie Krieger, Sheldon Gellar,

Salifou Yallou, Pascal Zinzindohoue. English. January 2003.  
26568/CESH.BENIN2.PUB01

- EHP Brief 13. Best Practices for Dengue Control in the Americas. EHP Staff. 26568/IC.YR4.SERV. March 2003
- EHP Brief 12. Local Government Support to Community Management of Environmental Health in Benin. EHP Staff. 26568/IC.YR4.SERV. January 2003

## **Products Archived**

- Report for the File 428. An investigation of Hg and heavy metal contamination due to mining in the Rio-Ramis/Lake Titicaca watershed, Peru, Final Report. Prepared by the University of Montana. February 2003. 26568/OTHER.PE.URBANEH.SURVEILLANCE
- Report for the File 427. CESH Nepal Activity : Asian Development Bank Partnership for Hygiene Improvement and EHP Support to Handwashing Promotion—Trip Report, 10 February 2003. Lisa Nichols, Christopher McGahey. February 2003. 26568/ CESH.NEPAL.Y4
- Report for the File 426. Workplan for Year 4 Task Order 1. February 2003. 26568/WORKPLAN.Y4
- Report for the File 425. EHP II Year 4 Quarterly Report 1. July–September 2002. February 2003. 26568/LLP.ME.YR4.PERF
- Report for the File 424. EHP II Year 3 Annual Report. July 2001–June 2002. February 2003. 26568/LLP.ME.YR4.PERF
- Report for the File 423. USAID-El Salvador: Water Policy Reform Efforts 2000–2002. October 2002. 29002/SV.REGULATORY.LABOR
- Report for the File 422. Perú: Sistema Nacional de Vigilancia en Salud Ambiental—Diseño y Estrategia de Implementación. Jan Mueller Volmer, Bill Jobin, Gavino Alva. 26568/OTHER.PE.URBANEH.SURVEILLANCE
- Report for the File 421: Cairo Urban Slum Child Health Scoping Trip Report, December 7–20, 2002. 26568/UH.EGYPT.SCOPE. 12/02
- Report for the File 420. Hygiene Behavior Change Training Support Materials (DR). November 2000. CESH.TOOLS.BCTRRAIN

## **2.4. Year 4, Quarter 4, April–June 2003**

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

#### **CESH Field Programs**

##### **Asia/Near East (ANE) Urban Health Initiative/Cairo Healthy Neighborhood Program**

- Guides for rapid assessment (interviews, focus groups, transect walk).

##### **India: Child Health and Nutrition among the Urban Poor**

- Global Health Council Presentation

##### **Nepal: Technical Support to the Asian Development Bank and Initiation of EHP Support to the Public-Private Partnership for Handwashing with Soap Initiative**

- Questionnaire for Consumer Survey

### **Task 4: Environmental Change and Health Outcomes (ECHO)**

#### **Latin America and the Caribbean (LAC): Best Practices in Dengue Control and Treatment**

- Strategic Report 7S: Mjores practicas para la prevencion y el control del dengue en las Americas.

### **Task 6: Information Center**

#### **Products Published**

- Two issues of EHP News (EHP's e-newsletter)
- Activity Report 119. Urban Environmental Health Strategies: Three Community-based Environmental Sanitation and Hygiene Projects Conducted in the Democratic Republic of Congo. Jill Mac Dougall, Christopher McGahey. May 2003. 26568/CESH.DOC.DRCUEH.Y4
- Activity Report 118. Lessons Learned from Assessment of the Environmental Health Project Website. May Post, Dan Campbell. April 2003. 26568/IC.YR4.SERV

- Joint Publication 6. USAID Village Water and Sanitation Program, West Bank—Environmental Health Assessment—Phase II. English. June 2003. Ali Sha'ar, Eckhard Kleinau, Patrick Kelly. 26568/IC.YR4.STRAT.SUP. EHP, USAID, Save the Children
- Strategic Report 7S. Mejores prácticas para la prevención y el control del dengue en las Américas. Linda S. Lloyd. February 2003. 26568/E.V.4.LACDENGUE
- Strategic Report 6S. Mecanismos de apoyo institucional para los sistemas rurales de agua potable y saneamiento manejados por las comunidades en América Latina. Spanish. Harold Lockwood. December 2002. 26568/OTHER.LACDEC.GUIDELINES
- EHP Brief 16. Improving Urban Environmental Health in the Democratic Republic of Congo. EHP Staff. 26568/IC.YR4.SERV. June 2003
- EHP Brief 15. Water for War-torn West Bank: The Emergency Water Operations Center (EWOC). EHP Staff. 26568/IC.YR4.SERV. May 2003
- EHP Brief 14. Urban Poor Child Health in Asia and the Near East. EHP Staff. 26568/IC.YR4.SERV. April 2003

### **Products Archived**

- Report for the File 440. EHP II Year 4 Quarterly Report 3. January–March 2003. June 2003. 26568/LLP.ME.YR4.PERF
- Report for the File 439. Trip Report, Cairo Health Neighborhoods, May 10-23, 2003, Sarah Fry. 26568/UH.EGYPT.SITAN
- Report to the File 438. Field Report Training Session on Control of Diarrheal Diseases: “ORS, what next?: How can PVOs Contribute to a Reduction in the Incidence of Diarrheal Disease?” for the USAID Child Survival and Health Grants Program. June 11, 2003. Chris McGahey. 26568/LLP.PVO.Y4
- Report for the File 437. Anti-larval Measures for Malaria Control in Low Transmission Areas in Africa, Status Report. May 2003. Ulrike Fillinger, Steve Lindsay (Institute of Ecosystem Science, School of Biological and Biomedical Sciences, University of Durham, Science Laboratories, Durham DH1 3LE, UK) 26568/ E.V.4.LCSTUDIES
- Report for the File 436. CESH Consultancy to Nicaragua. Feb. 14-25, 2003. Trip Report. Judi Aubel. 26568/ CESH.TOOLS.PM&E
- Report for the File 435. NicaSalud Network Federation CDM/EHP Sub-contract Follow-up and Monitoring of Behavioral Change with Respect to Hygiene and

Environmental Sanitation. Final Report. August 2002. Gertrudis Medrano. 26568/  
CESH.NICASALUD

- Report for the File 434. Aga Khan Development Network Workshop on the Built Environment. February 24-27, 2003, Mombasa, Kenya, Workshop Report. Dick Wall, Chris McGahey, Merri Weinger. March 2003. 26568/LLP.AGAKHAN.Y4
- Report for the File 433. Trip Report. Dominican Republic WS&S Reconstruction Hygiene Behavior/Behavior Change. Marco Polo Torres, Remedios Ruiz. September 11-15, 2000. 26568/OTHER.DR.CIMCIBEHAVIOR
- Report for the File 432. Highlights from the Sixth Annual Assessment and Mid-term Review Workshop on Malaria Control in Eritrea. May 2003. 26568/E.X.ER4.PUBS.
- Report for the File 431. EHP II Year 4 Quarterly Report 2. October–December 2002. April 2003. 26568/LLP.ME.YR4.PERF
- Report for the File 430. Improving Health of the Urban Poor Living In Slums In India: Action Plan for Implementation. Dr. O. Masee Bateman, Dr. Christopher McGahey, Pat Taylor, Ken Olivola. February 2002. 26568/  
CESH.INDIA.PROGRAMMING
- Report for the File 429. USAID’s Assistance to the Nepal PPP Handwashing with Soap Initiative. Consultancy Report. Sylvia M. Delafield. March 2003. 26568/CESH.NEPAL.Y4.HANDWASHING

## **TASK ORDER 2**

### **Malaria Vaccine Development Program (MVDP)**

- Report of the Scientific Consultants Group Meeting, January 28-29, 2003, Arlington, Virginia.

## **TASK ORDERS 803 and 804**

### **West Bank: Village Water and Sanitation Program (VWS): Health, Governance, Waste Water Reuse Studies, Designs, Program**

- Joint Publication: #6: USAID Village Water and Sanitation Program, West Bank-Environmental Health Assessment—Phase II, June 2003, with USAID and Save the Children