PD-ABP-716

INTERIM EVALUATION OF THE ENVIRONMENTAL HEALTH PROJECT (EHP)

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OCTOBER 1997

This evaluation was prepared under the auspices
of the U.S. Agency for International Development (USAID).

The report was written and revised by the
Health Technical Services (HTS) Project
of TvT Associates and The Pragma Corporation.

The opinions expressed herein are those of the authors and do not necessarily reflect the views of TvT, Pragma, or USAID.

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Acknowledgments

Evaluating the Environmental Health Project has been a gratifying experience. The evaluation team had the opportunity in Washington and abroad to interview extremely talented development professionals, both American and foreign, who are dedicated to promoting the cause of environmental health. It is fair to say that every interviewee gave generously of his or her time, knowledge, and insights to the team. They willingly answered our numerous questions and, in Slovakia and Haiti, took us on extensive tours during our brief visits to see how the project was addressing various mixes of environmental and health problems. In Egypt, such tours were not practical, but the information supplied to the team was ample for our needs.

The team is most grateful to everyone, both in Washington and overseas, who so promptly met our needs for documents, for help in scheduling interviews, for hotel and airline reservations, for ground transportation, and for the other kinds of help that a team needs to function effectively. Particular thanks go to Linda Sanei and Dierdre Gilmore at HTS, to John E. Borrazzo and John H. Austin at USAID, and to many members of the EHP staff for the sustained and willing support they rendered to the team.

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Acronyms

AED	Academy for Educational Development
AIMI	Africa Integrated Malaria Initiative
AKF	Aga Khan Foundation
ALRI	acute lower respiratory tract infections
AMREF	African Medical and Research Foundation
ARD	Associates in Rural Development (EHP resource subcontractor)
ARI	acute respiratory infections
BASICS	Basic Support for Institutionalizing Child Survival project
BHR/PVC	Bureau for Humanitarian Response, Office of Private and Voluntary Cooperation
CADEPA	Centrale Autonome pour la Distribution d'Eau Potable et d'Assainissement (community-based water and sanitation utility), Cité Soleil, Haiti
CAMEP	Centrale Autonome Métropolitaine d'Eau Potable (Urban Water Supply Agency), Port-au-Prince, Haiti
CARE	Cooperative for Assistance and Relief Everywhere
CDC	Centers for Disease Control and Prevention
CDM	Camp, Dresser & McKee (EHP prime contractor)
CDS	Centre pour le Développement et la Santé, Haiti
CFED	Center for Financial Engineering in Development (EHP resource subcontractor)
CH2M-Hill	Cornell, Howand, Hayes, Merryfield-Hill (Cairo Sewerage II project contractor)
CIMEP	Community Involvement in Managing Environmental Pollution
CO	contracting officer
COTR	contracting officer's technical representative
DID	Department of International Development (U.K.)
EEAA	Egyptian Environmental Affairs Agency
EH	Environmental Health Division of G/PHN/HN
EHP	Environmental Health Project
ENI	Bureau for Europe and the New Independent States
EPA	Environmental Protection Agency
EPAT	Environmental Policy and Training project

EPIQ	Environmental Policy and Institutional Strengthening Indefinite Quantity Contract
ERIDs	emerging and re-emerging infectious diseases
FAR	Federal Acquisition Regulations
FYI	FYI Information Resources (EHP resource subcontractor)
G/ENV/UP	Bureau for Global Programs, Field Support and Research, Center for Environment, Office of Environment and Urban Programs
G/PHN/HN/EH	Bureau for Global Programs, Field Support and Research, Center for Population, Health and Nutrition, Office of Health and Nutrition, Environmental Health Division
GIS	Geographic Information System
GOSD	General Organization for Sanitary Drainage, Cairo, Egypt
GreenCOM	Environmental Education and Communication project
GRET	Group for Research and Technology Exchange
HN/EH	G/PHN Office of Health and Nutrition, Environmental Health Division
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development (World Bank)
ICMA	International County Management Association
ICU	EHP's Information and Communication Unit
ISO	International Standards Organization
ISTI	International Science and Technology Institute (EHP core subcontractor)
JHU	Johns Hopkins University, School of Hygiene & Public Health (EHP resource subcontractor)
JICA	Japanese International Cooperation Agency
JSI	John Snow Inc. (EHP core subcontractor)
KAP	knowledge, attitudes, and practices
LAC	Bureau for Latin America and the Caribbean
LEAP	Lead Exposure Abatement Plan, Egypt
LSGAC	Local Self-Government Assistance Center, USAID/Slovakia
LSHTM	London School of Health and Tropical Medicine
M&E	monitoring and evaluation
Manoff	The Manoff Group (EHP resource subcontractor)
MERGE	Managing the Environment and Resources with a Gender Perspective (a program consortium)
MOHP	Ministry of Health and Population (Egypt)
NCIH	National Council for International Health
NEHA	National Environmental Health Association (EHP resource subcontractor)
NGO	nongovernmental organization

NRC	National Research Centre (Egypt)
OYB	operational year budget
PACT	Private Agencies Collaborating Together
PAHO	Pan American Health Organization
PHN	Center for Population, Health and Nutrition, Global Bureau
PPC	Bureau for Policy and Program Coordination
PVO	private voluntary organization
RTI	Research Triangle Institute (EHP core subcontractor)
RUDO	Regional Urban Development Office
SC&A	S. Cohen & Associates, Inc. (EHP resource subcontractor)
SO	strategic objective
SOW	scope of work
SSZU	State Specialized Health Institute, Slovakia
STA	senior technical advisor
TAG	technical advisory group
TDRC	Tropical Disease Research Centre, Zambia
TRG	Training Resources Group (EHP core subcontractor)
TULANE	Tulane University, School of Public Health & Tropical Medicine (EHP resource subcontractor)
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
VAK	Water and Sewer Authority, Slovakia
VBC	Vector Biology and Control project
VBDC	Vector-Borne Disease Centre, Nepal
WASH	Water and Sanitation for Health project
WAWTTAR	Water and Wastewater Treatment Technologies Appropriate for Reuse (a computerized program for making urban water and sanitation technology choices)
WHO	World Health Organization
WS&S	water supply and sanitation
ZMOS	Association of Towns and Villages, Slovakia

Executive Summary

The evaluation team's overall assessment of the Environmental Health Project (EHP) is as follows: EHP is staffed with a wide range of skilled professionals who have made effective and innovative contributions toward the achievement of disease prevention, have enhanced urban environmental quality, and have improved municipal services in developing countries worldwide. The team believes that the issues identified in this paper are readily within the means of the contractor and USAID to resolve. Their resolution will make the project operationally even more effective and will lead to greater recognition of the project's potential for multi-disciplinary service in the health and environment sectors.

A. BACKGROUND

EHP was authorized in 1993 for a ten-year period to carry forward and expand upon the work of two prior environmental health projects: Water and Sanitation for Health (WASH) and Vector Biology and Control (VBC). EHP is one of the worldwide projects managed by the Global Bureau's Center for Population, Health and Nutrition, Office of Health and Nutrition (G/PHN/HN).

Two five-year contracts — core and requirements — were signed in September 1993 with Camp, Dresser & McKee (CDM). Activities began in April 1994 after a delay caused by a protest of the award. CDM engaged five core subcontractors and eight resource subcontractors to supplement its own roster of specialists; the core staff includes both CDM and subcontractor personnel.

The core contract ceiling is $28.2 million. As of August 1997, 13 months before the end of the contract, core funding had reached $19.27 million,[1] or 32 percent below the ceiling. Annual funding shortfalls have led EHP to trim some core personnel work schedules and limit proactive field activities and the dissemination of publications. Requirements contract funding had reached $10.41 million as of August.

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[1] The core funds include $3.7 million in transfers to EHP (e.g., field support, OYB transfers) from other centers within the Global Bureau, other USAID/Washington bureaus, and field missions.

EHP provides services in a broad range of technical and cross-cutting areas related to environmental health. The services address problems of underdevelopment, such as lack of sanitation, and problems related to development, such as industrial pollution.

EHP's basic mandate is twofold: to support G/PHN/HN's strategic objectives of child survival and maternal health via eight results areas, and to provide other environmental health services. USAID/Washington bureaus, other Global Bureau centers, and field missions may procure services of either kind. Funds attributed to PHN priorities as of August totaled $11.7 million.[2] Funds applied to other activities totaled $7.8 million.[3]

The latter activities include infrastructure and industrial assistance to Central and Eastern Europe, for which $4.7 million was obligated through the requirements contract at the beginning of the project. Recent trends, however, show a preponderance of funding related to PHN priority results areas. These were established in March 1995, during the time that the Agency was reengineering its programming system to concentrate on achieving results and strategic objectives. The eight areas include:

- Two focused directly on disease prevention: diarrhea and malaria
- Five concerned with development and use of cross-cutting approaches in support of the first two areas: risk assessment, community involvement, behavioral change, strengthening of institutions serving the urban poor, and strengthening of institutions supporting environmental health
- One promoting environmental sanitation policies.

A given activity may involve several of these interrelated results areas.

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[2] The $11.71 million includes $6.86 million from core funds and $4.86 million from requirements contract funds.

[3] Of the $7.8 million, $2.25 million came from core funds and $5.55 million from requirements contract funds.

B. EVALUATION OBJECTIVES AND METHODS

The objectives of this mid-term evaluation are to:

- Evaluate the effectiveness and accomplishments of the contractor
- Examine the appropriateness of the design and scope of the contract in light of the Global Bureau's strategic objectives and its missions of field support, innovation, and global leadership
- Develop recommendations for the balance of the current contract
- Consider programming issues for the balance of the ten-year life of the project.

The evaluation was conducted from June 23 to October 17, 1997. The team drafted its report in August, based on review of EHP and USAID documents; interviews with personnel from USAID, the contractor, the client, other donors, and NGOs; responses to e-mail questionnaires sent to field missions and regional urban development offices (RUDOs); and brief visits to Egypt, Haiti, and Slovakia to get a firsthand view of the project in different settings. USAID and contractor review of the draft, final editing, and presentation were carried out during September and October.

C. PROJECT ACCOMPLISHMENTS

The project has been underway for three-and-a-half years, including two-and-a-half years devoted increasingly to activities under the G/PHN/HN results framework. The principal accomplishments are the following:

1. Diarrhea Prevention and Sanitation Policy. EHP's approach to primary prevention is to interrupt the transmission of infectious and vector-borne diseases and contact with pollutants through community-based action and hygiene promotion. These actions are complementary to preventive health measures fostered by other projects, including breastfeeding and immunization. In Zambia, Ecuador, Bolivia, Jamaica, and Haiti, EHP has gained varying degrees of acceptance for primary prevention through a community-based approach to sanitation and improved hygiene. In Zambia and Bolivia, the activities are being carried out in conjunction with child survival programs. EHP has helped CARE to increase community participation in its approach to water supply and sanitation,

and with UNICEF has co-published a handbook for sanitation programming. EHP also has published a primary prevention cost-effectiveness study that has gained international attention.

2. Malaria Prevention. In Zambia, EHP introduced a Geographic Information System (GIS) risk mapping system, demonstrated and gained national policy support for community-based health planning and action, conducted chloroquine sensitivity testing that led to changes in treatment policy, and prepared guidelines for assessing the feasibility of insecticide-impregnated bednets. EHP helped plan AIMI (Africa Integrated Malaria Initiative) activities in Malawi and Kenya; is undertaking malaria activities in Bolivia, Peru, and Eritrea; and is expected to launch an activity in Nigeria. EHP also provides technical assistance to the Vector-Borne Disease Control Center (VBDC) in Nepal.

3. Risk Assessment. In India, EHP worked with urban planners in two regions on environmental health risk assessments; replication is expected. Risk assessment also played a key role in EHP's community-based work in Zambia, Ecuador, and Bolivia.

4. Community Participation. Applying its CIMEP approach (Community Involvement in Managing Environmental Pollution), EHP succeeded in catalyzing new partnerships, collaborative efforts, and dialogue on environmental health issues in urban areas of Tunisia and at rural sites in Ecuador. Plans are underway for a CIMEP activity in Benin. EHP used a community-based participatory approach to curriculum development in Romania. Community-based approaches were also successfully used in Slovakia, Haiti, and Jamaica.

5. Behavior Change. EHP has achieved or anticipates results in behavior change in 11 countries as well as the Central American region.[4] Important progress has been achieved in developing behavioral indicators and tracking results in Tunisia and Ecuador. Field collaboration between EHP and behavior change–focused projects has been synergistic and has had a positive impact on child survival/health and peri-urban activities.

6. Institutional Strengthening. EHP has contributed significantly to environmental and health institutions serving the urban poor and has assisted with sector decentralization and privatization. Among the tools used by EHP are computerized water management models, GIS, monitoring and evaluation, and

[4] Source: Summary Section, EHP Interim Results Report, June 1997. The summary is attached as Annex F.

training of government staff in improved service delivery and community collaboration. EHP has facilitated institutional strengthening in 19 countries.[5]

7. Linkages and Partnerships. Despite funding and contracting constraints, EHP has developed a broad range of linkages and partnerships with multilateral institutions, donors, and community-based organizations. This networking has helped USAID and host-country clients in setting priorities and planning activities and has advanced the field of environmental health.

8. Monitoring and Evaluation. USAID missions and RUDOs report high levels of satisfaction with EHP's work in developing indicators, results packages, and evaluations for other programs and activities. EHP recommendations have influenced program and priority changes within portfolios. EHP's work on indicators is found in a number of EHP field reports and other documents (e.g., on Haiti and Ecuador and in the CIMEP manual).

9. Information Dissemination. EHP has established an Information and Communication Unit (ICU) that provides a comprehensive range of library and information services to EHP, USAID, and the wider environmental health community. The services are lauded by users.

10. Other Accomplishments. EHP has furnished a wide range of assistance to USAID missions and host governments outside of the G/PHN/HN results framework. Three examples are assistance to Egypt in the area of abatement of lead exposure, assistance to Slovakian cities in addressing environmental health issues, and an emergency assessment of environmental risk factors contributing to a cholera outbreak in Gaza.

D. PRINCIPAL ISSUES AND RECOMMENDATIONS

D.1. Issues for Contractor Action

1. Need for Synthesis Documents. During the time remaining under the contract, EHP needs to synthesize the lessons learned from the activities it has carried out in many countries and in a variety of settings. The contractor has stated its intention to prepare syntheses in accordance with the terms of the core contract. Experience with all results areas will need to be covered. Among the

[5] Summary Section, EHP Interim Results Report, June 1997.

items that will require treatment are guidance on integrating primary prevention of diarrhea and malaria with child survival programs, experience on indicators and monitoring that can be drawn from material contained in EHP country reports and manuals, and lessons learned from work with the urban poor and in community participation.

2. Prevention of Malaria. EHP should build on its activities in Zambia, continue to expand its work in Africa, and continue to respond to requests from missions in Latin America and Asia. At the same time, the project should continue to develop its links with the World Health Organization (WHO), Pan-American Health Organization (PAHO), and United Nations Children's Fund (UNICEF) to promote its approach.

3. Risk Assessment. EHP should continue with community-based risk assessment and mapping and should prepare guidelines and manuals. A workshop on its approach or a broader workshop on primary prevention for nongovernmental organizations (NGOs) could afford an effective means of promotion. NGO interest will likely be keen, provided USAID policy offers strong support for the approach.

4. Community Involvement. EHP's expertise at the community level is a strong asset for USAID. CIMEP's experience with implementing participatory approaches could reach new audiences through documentation that addresses and references its theoretical underpinnings and methodological roots. EHP may want to consider ways to develop an ongoing participation dialogue with other organizations and USAID projects that focus on participation in the environment and health sectors — for example, Clark University, Managing the Environment and Resources with a Gender Perspective (MERGE), Coastal Resource Management Project, and GreenCOM, among others.

5. Behavior Change. EHP should engage in increased dialogue with behavior change specialists, including CDM subcontractors. Its work needs to be more clearly linked to behavior change models found in the literature and used by other USAID contractors. Greater clarity is needed on the issue of individual versus community behaviors.

6. Monitoring and Evaluation. EHP's upcoming report on environmental health indicators should be used as a vehicle to stimulate dialogue among USAID projects, other environmental health donors, and implementors. Development of indicators for behavior change by individuals in households, communities, and institutions needs to be considered. In addition to its existing outcome indicators (e.g., cost-efficiency and recovery), index indicators should be considered to

measure progressive changes within institutions over time as they take steps to adopt structural or procedural changes.

7. Collaboration with the Private Sector. EHP should work with other USAID projects and offices — such as the Basic Support for Institutionalizing Child Survival project (BASICS) or the Bureau for Humanitarian Response in the Office of Private and Voluntary Cooperation (BHR/PVC) — to explore additional opportunities and strategies for them to increase private-public partnerships in their field activities and among their partners in countries where they work.

D.2. Issues for USAID or Joint USAID–Contractor Action

1. Mainstreaming EHP into Child Survival Programming. EHP collaborates well on individual activities with BASICS and other projects of USAID's Global Bureau that are concerned with child survival. However, EHP has not been accepted in Washington and in many field posts as a full partner in strategic planning and systematic programming for child survival. One reason is that the strategic framework of the Center for Population, Health and Nutrition (G/PHN) within which EHP operates makes no reference to environmental health. Another is that many health officers are unfamiliar with environmental health and/or doubt the cost-effectiveness of primary Environmental health prevention methods. To mainstream EHP, the Office of Health and Nutrition (G/PHN/HN) should establish a joint planning process leading to a comprehensive, model results framework that would demonstrate how to integrate environmental health into child survival programs. Further cost-effectiveness studies should also be funded. EHP, for its part, should tie its message more explicitly to child health and should seek better understanding of how to address the skepticism about environmental health.

2. Emerging and Re-Emerging Infectious Diseases (ERIDs). South Asia is afflicted with ERIDs including malaria, dengue, visceral leishmaniasis, and Japanese encephalitis. The Vector-Borne Disease Center (VBDC) in Hetauda, Nepal, is well-situated to help combat ERIDs in the region. G/PHN/HN, in consultation with USAID/Nepal, should consider expanding EHP's current small-scale technical assistance to VBDC to cover program planning, training, collaborative studies, and development and testing of control strategies.

3. EHP-AIMI Collaboration. EHP specialists have collaborated with the Africa Integrated Malaria Initiative on several limited activities. USAID's Environmental Health Division (G/PHN/HN/EH) should explore the possibilities

for intensified collaboration, including the use of substantial AIMI funds currently assigned to EHP but not yet programmed.

4. Reshaping the Results Framework for EHP's Next Phase. The evaluation team believes the framework can be reconfigured to clarify the relationships and distinctions among the results areas, to simplify reporting on results, and to better reflect the anticipated needs of USAID. Risk assessment is a tool used effectively in five of the other current results areas and would no longer need a separate area. The sanitation policy area would be broadened to provide policy support to all EHP activities. Malaria prevention would be broadened to include other ERIDs. The proposed reshaped framework would thus have seven results areas named as follows:

- Diarrhea Prevention
- Emerging and Re-emerging Disease Prevention
- Community Involvement
- Behavior Change
- Institutional Capacity Building (Strengthening Institutions Supporting Environmental Health)
- Institutional Capacity Building (Strengthening Public Sector Institutions and NGOs Working in Peri-Urban Areas)[6]
- Environmental Health Policy Support

The results areas should be designed with explicit emphasis on the promotion of child survival and maternal health. If the focus on peri-urban areas is maintained, greater attention should be paid to service equity issues with regard to institutions receiving EHP assistance.

5. Prioritization. The project underwent considerable tightening in its early years when annual core funding was severely cut, four new subsectors of activity were dropped,[7] and EHP's mandate was revised to concentrate a major part of its effort on child survival and maternal health. At the same time, the project has maintained its capacity to respond to a variety of other service demands from field

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[6] The words "Working in Peri-urban Areas" would replace the words "Serving the Urban Poor" in the present title to reflect the fact that EHP seeks to provide service equity by geographic area — the poor/peri-urban neighborhoods — rather than by targeting the poorest households within those neighborhoods.

[7] The subsectors were food hygiene, hazardous materials, occupational health, and injury.

missions and other USAID bureaus and Global Bureau centers. Two approaches are offered to facilitate maintenance of this pattern during a time of restricted core funding:

- In the event of conflicting demand for limited EHP technical resources, G/PHN/HN results area work should take priority over other work, barring a special agency requirement in favor of the latter.
- The current EHP team should proceed with its assignment to undertake initial planning of an acute respiratory infections (ARI) initiative. However, considerable research will be needed before such an initiative is ready for implementation. During EHP's second five-year phase, ARI planning and research might be consigned to a separate contract, leaving EHP free to concentrate on field activities in the above results areas, using existing technologies and approaches. Once ARI is ready for implementation, a supporting field activity could be considered.

6. International Outreach. Contacts with environmental health professionals outside of USAID are vital for development of environmental health policy and expansion of environmental health programming internationally. EHP's ICU has much greater dissemination capacity than resources to disseminate its publications. Funds are also scarce for increased person-to-person contacts by EHP. In support of the Global Bureau's global leadership function, G/PHN/HN should allocate a modest amount of additional funds (through increased authorization or reprogramming) to allow greater dissemination of EHP publications and intensified networking with potential NGO and donor partners.

7. Advisory Groups. The next contract should formalize advisory groups to provide dialogue and technical leadership on particular environmental health topics.

8. Staffing. To meet the increasing and potential demands for services in the areas of institutional strengthening, community participation, and behavior change, EHP and G/PHN/HN may want to strategize how to expand available expertise through an appropriate combination of core staff and consultant assignments under the present and future contracts.

9. Strengthened Cross-Sectoral Links. Both EHP and the Global Bureau should intensify efforts to unite the health and environment sectors. EHP should seek opportunities to foster new NGO relationships and cross-ministerial cooperation in the field, and G/PHN/HN and the Center for Environment (G/ENV) should consider involving EHP in a shared intermediate result in support of their respective strategic objectives. Closer EHP links with democracy and governance offices should also be promoted.

10. Policy Links within USAID. To afford USAID greater benefit from EHP's experience, the project should have stronger links with policy activities in both G/PHN and G/ENV.

11. Contract Extension. The current EHP contract should be extended for six months within the current core ceiling to make up for the six-month delay at the outset and to allow more time for the experienced staff to contribute to G/PHN/HN objectives.

I. Scope, Objectives, and Methods of the Evaluation

A. Evaluation Scope and Objectives

The Environmental Health Project (EHP) was authorized in March 1993 for a ten-year period, with a ceiling of $50 million in core funds and no ceiling for requirements funding (buy-ins). EHP is one of the worldwide projects managed by G/PHN/HN — the Office of Health and Nutrition in USAID's Global Bureau, Center for Population, Health and Nutrition. The firm of Camp, Dresser & McKee (CDM) was awarded two companion contracts (core and requirements) as the principal mechanism to implement the project during its first five years ending in September 1998.[8] (A protest of the award delayed initiation of contractor activities until April 1994.)

The objectives of this mid-term evaluation are as follows:

1. Evaluate the effectiveness and accomplishments of the contractor, considering such factors as:

- Design of the project and the strategic objectives it supports
- Technical approaches and strategies for the eight results packages
- Technical innovation, operations research, and evaluation/documentation of project experience

[8] The project has also financed an agreement with the U.S. Centers for Disease Control and Prevention (CDC) and several grants. These activities are not a subject of this evaluation.

- Technical capabilities
- Linkages of technical expertise with field implementation
- Relationships with USAID operating units (G/PHN, other bureaus, field missions)
- Interactions with other international organizations
- Quality and appropriateness of field services, including short- and long-term technical assistance
- USAID management, administrative, and contract procedures and funding
- Monitoring of project implementation and results.

2. Examine the appropriateness of the design and scope of the contract, in terms of the contribution to G/PHN/HN strategic objectives and support of each of the three function areas of Global Bureau within USAID:

- Field support — contribution to program development and implementation by USAID field missions
- Innovation — development, testing, and introduction of innovative methods and approaches
- Global leadership — influence on international environmental health policy and program direction.

3. Develop recommendations for building on areas of greatest effectiveness and improving effectiveness in other key areas, during the remaining life of the current contract.

4. Consider programming issues for the balance of the ten-year project life, taking into account the evolution of USAID program objectives, relationships to other USAID and external projects and organizations, and availability of funds.

These issues — and the related questions listed in Annex A — were formulated by the Environmental Health (EH) Division of G/PHN/HN and are addressed in Sections III to VI.

B. EVALUATION METHODS AND TEAM MEMBER RESPONSIBILITIES

This project evaluation was conducted from June 23 to October 17, 1997. During initial team planning meetings, the team developed an interview guide and e-mail questionnaire. After field visits to three countries (Slovakia, Haiti and Egypt), the team drafted this evaluation report. Following review by USAID and the project

contractor, the final report will be submitted and presented in a briefing to USAID.

The team members and their responsibilities were as follows:

- The team leader was Walter Sherwin, a design and evaluation consultant and former USAID program officer and manager. He coordinated the team effort, assessed the contractor's performance in information dissemination, evaluated contractor and USAID management of the project, and organized and edited the final report.

- The public health/environmental specialist was Alfred W. Hoadley, a Ph.D. in civil engineering and bacteriology with broad international technical and management experience in environmental health. Dr. Hoadley evaluated the technical aspects of EHP activities.

- The institutional specialist, was Nancy K. Diamond, a Ph.D. environmental social scientist who has carried out a wide range of research and evaluation assignments for USAID. Dr. Diamond focused on EHP efforts related to institutions, community involvement, behavior change, the urban poor, linkages and partnerships, and monitoring and evaluation.

- The senior advisor was Margaret Catley-Carlson, president of the Population Council, former chairperson of the Water Supply and Sanitation Collaborative Council, and former president of the Canadian International Development Agency. She participated in the start-up and review phases of the evaluation and examined the project's links to other institutions working internationally in environmental health.

The evaluation's conclusions and recommendations represent the collective judgment of the team based on information gathered and analyzed through:

- Review of documents selected by either USAID, the contractor, and/or the team relating to EHP accomplishments, activities, operations, and management

- Meetings and interviews with EHP contractor staff and representatives of relevant operating units of USAID, including the EHP management team (G/PHN/HN/EH); with other key informants and stakeholders within G/PHN; and with key informants and stakeholders representing other USAID Global centers and other bureaus, as appropriate

- Brief visits to three countries — Egypt (five days), Haiti (three days), and Slovakia (five days) — where EHP has been involved in diverse activities. The team visited selected project sites and interviewed USAID personnel, host-country counterparts, and representatives of host-country organizations that are interacting with the project.

- Phone interviews or e-mail exchanges with USAID field missions, regional urban development offices (RUDOs), CDM subcontractors, and former EHP clients

- Phone interviews with representatives of international organizations with which the project has interacted.

II. Project Background

A. Historical Overview

A.1. Initial Concept

The Environmental Health Project grew out of USAID's experience with two predecessor projects: Water and Sanitation for Health (WASH I, II, and III, 1980–1994), and Vector Biology and Control (VBC I and II, 1983–1993), which centered on environmental management of tropical disease vectors. EHP was designed with a broader concept. The project would continue interventions and research in the four WASH and VBC subsectors of tropical disease, water supply and sanitation, wastewater management, and solid waste management. However, five new subsectors were added: air pollution (outdoor and indoor), food hygiene, hazardous materials, occupational health, and injury. Moreover, to ensure the sustainability of technical interventions in environmental health, the project design placed emphasis on development of host-country institutional capacity (planning, management, technical, financial), policy reform, private sector involvement, community participation, and behavior change.

As stated in the project paper dated March 11, 1993, the goal of EHP is to improve the health status of developing country populations exposed to environmental health risks. The purpose is to strengthen the capacity of developing country governments and organizations to develop, implement, and monitor effective strategies, programs, and projects in the area of environmental

health throughout the world by facilitating the exchange and application of technology and information.

The logical framework set forth indicators for achievement. These may be summarized as calling for adoption of improved environmental health policies, strategies, systems, and technologies; improved environmental health implementation capacity; and improved access to environmental health services. These achievements would be the result of wide-ranging technical assistance. The assistance would be furnished to 10–50 countries, depending upon the type of assistance involved.

The project was designed to address a broad range of problems that fall into two basic categories:

- Problems characteristic of underdevelopment, such as inadequate access to potable water, lack of sanitation, indoor air pollution from cooking fires, and conditions that favor the spread of tropical vector-borne diseases, such as malaria[9]

- Problems brought about by the process of development, such as air pollution from industry and motor vehicles and pollution of water and soil from hazardous and toxic wastes and pesticides.

A.2. Changes in Funding and Focus

The five-year contracts with CDM were drafted in accordance with the project paper plan. The core contract was negotiated at a ceiling level of $28.2 million. Very soon after the project was launched, however, a number of changes took place that resulted from USAID financial constraints and the reengineering of USAID's programming system:

- Substantial shortfalls in annual funding necessitated cost-cutting measures such as placement of some core personnel on less than full-time schedules and reduction of selected information/communication services. As of August

[9] Such conditions are favorable to the spread of diarrheal disease, malaria, and acute respiratory infections (ARI) — three diseases that account for high mortality and morbidity rates for infants and children in many countries. While malaria kills mainly children (more than 2 million child deaths annually in Africa alone), it also can put pregnant women at greater risk and increase their chances of spontaneous abortion or having low-birthweight babies. Thus, these environmental problems are closely related to child survival and, to a lesser extent, to maternal health.

1997, 13 months before the scheduled end of the project, total core funding had reached $19.27 million, or 32 percent below ceiling (the total includes $15.55 million in G/PHN funds and $3.72 million in transfers from the field, other bureaus, and other Global Bureau centers). Requirements contract funding had reached $10.41 million as of August.

- Investment of core funds in the newly added subsectors, except for air pollution, was halted during the start-up phase of the project — both for lack of funds and because of the change in EHP's mandate (discussed next).

- During the course of reengineering, EHP's mandate was revised to focus a major part of its effort on two new USAID strategic objectives (SOs) — "Reduce maternal mortality" and "Reduce infant and child mortality" — and on the supporting PHN Center SOs of "Increased use of key maternal health and nutrition interventions" and "Increased use of key child health and nutrition interventions." These SOs make no specific mention of environmental health. G/PHN/HN worked with the contractor to develop eight results areas tied to these SOs (see Figure 1). The child survival/maternal health emphasis now applies to the majority of EHP's activities. Field missions are encouraged to pursue similar objectives in the services that they procure from EHP with their own funds through the requirements, or "Q" contract, or through transfers to the core contract. However, they may also procure services that are not related to G/PHN/HN's priorities.

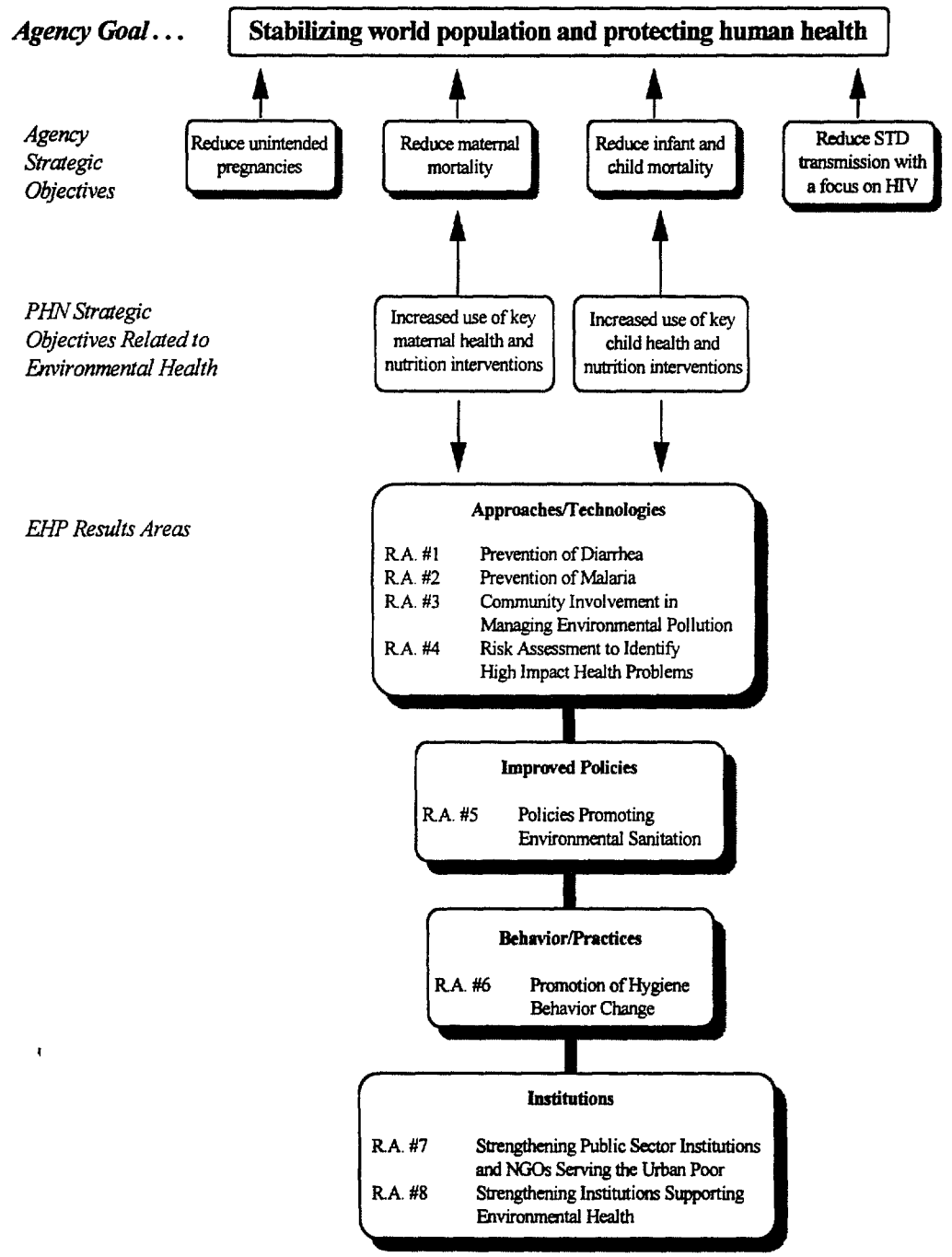
B. PROJECT OBJECTIVES

EHP defines environmental health as a branch of public health devoted to preventing illness through managing the environment and changing peoples' behavior to reduce exposure to biological, physical, and chemical agents of disease and injury. Under the strategic framework established in March 1995, EHP's objectives are as follows:

1. Identify or develop practical and effective methods for assessing environmental health problems, setting priorities, taking action, and evaluating progress, and for promoting public participation in all of these activities.

2. Develop new and strengthen existing institutions for the purpose of stimulating and responding to local demand for environmental health services. The institutions include government entities, nongovernmental organizations (NGOs), community groups, and private sector organizations.

Figure 1. EHP Results Areas for PHN Strategic Objectives



3. Develop, test, and evaluate approaches and models to integrate environmental health interventions/services with basic health care (preventive and curative) through collaboration among local institutions, communities, donors, and NGOs.

4. Demonstrate the severity of environmental health problems and their underlying causes in urban and peri-urban areas and develop innovative solutions leading to a healthy urban environment.

5. Promote the concept of environmental health within USAID, external support agencies, and other governmental and nongovernmental organizations.

C. ANTICIPATED RESULTS

Following are the results expected from EHP within G/PHN's strategic framework:

- Packages of environmental and behavioral interventions for the primary prevention of diarrhea defined, tested, and integrated into child survival projects

- Environmental interventions for the primary prevention of malaria developed, tested, and integrated into malaria programs

- A methodology to enable municipalities to diagnose environmental health problems in poor urban areas and to plan and implement appropriate interventions with full community involvement field-tested and disseminated

- Environmental health risk assessment methods appropriate for use in developing countries developed, field-tested, disseminated, and applied

- Effective policies promoting environmental sanitation (including solid waste removal, wastewater collection, excreta disposal, drainage, community hygiene, and household hygiene) adopted and supported by international organizations and host-country institutions

- Feasible, low-cost interventions to improve personal and domestic hygiene developed, evaluated, and implemented

- Local NGOs and communities gaining increased capacity to identify high-risk behaviors, design behavior change programs, and implement these programs

- NGOs with increased capacity to ensure delivery of key environmental health services, such as water supply, sanitation, solid waste management, and drainage in poor urban areas

- National and local governmental institutions demonstrating increased capacity to promote and facilitate the delivery of key environmental health services.

Progress toward achievement of these results is assessed in Sections III and IV.

D. CONTRACTOR STAFFING AND TYPES OF ASSISTANCE OFFERED

Given the breadth of sectors and activities covered by EHP, the contractor, CDM, was authorized to engage a multi-disciplinary core staff and to maintain a roster of supporting staff and consultants. The latter are available on call to carry out a wide range of assignments as they arise. Both the core and supporting staffs include employees of firms subcontracted by CDM to provide specialized services to the project (see Figure 2).

Utilizing this staff, EHP provides short- and long-term technical assistance and short-term training; conducts operations research and demonstration activities; holds workshops; and participates in policy dialogue and activities with other international assistance organizations. The contract offers access to the following areas of assistance:

- Technical Areas — water and sanitation, wastewater, solid waste, tropical disease control, air pollution, occupational health, food hygiene, toxic and hazardous wastes, and injury

- Cross-Cutting Areas — public health, risk assessment, epidemiology, engineering, technology transfer, institutional and human resources development, policy formulation, community participation, financial management, health information system development, evaluation and operations research, information services, and procurement of equipment and commodities

FIGURE 2. EHP CONTRACTOR AND SUBCONTRACTOR PROFILE	
Prime Contractor	Camp, Dresser & McKee (CDM): Overall project management and environmental engineering, particularly as related to water, wastewater, and solid waste. Fourteen employees on the EHP staff (four professionals, ten support).
Core Subcontractors	International Science and Technology Institute (ISTI): Health, policy dialogue, information services. Five employees on the EHP staff (three professionals, two support). John Snow Inc. (JSI): Maternal and child health, diarrheal disease control, acute respiratory illness, and health information systems. One employee on the EHP staff (professional). Radian International LLC: Air, land, and water pollution and occupational health therapy. No employees on the EHP staff. Research Triangle Institute (RTI): Policy support, comparative risk assessment, environmental policy development and dialogue, and community participation in environmental management. Two employees on the EHP staff (both professionals). Training Resources Group (TRG): Management training and organizational development. One employee on the EHP staff (professional).
Resource Subcontractors	Associates in Rural Development (ARD): Rural development, land use, organizational development, natural resources, and environmental affairs. Center for Financial Engineering in Development (CFED): Project financing, financial decision-making, privatization, and economic restructuring. FYI Information Resources (FYI): Technical assistance for development interactions with the former Soviet Union. Johns Hopkins University School of Hygiene and Public Health (JHU): Tropical/vector-borne diseases. The Manoff Group (Manoff): Social marketing. National Environmental Health Association (NEHA): Professional society dedicated to environmental health issues. S. Cohen & Associates (SC&A): Environmental safety and health, environmental impact assessment, computer applications, regulatory analysis, and indoor air assessment. Tulane University School of Public Health and Tropical Medicine (Tulane): Tropical/vector-borne diseases. One employee on the EHP staff (professional).

FIGURE 3. EHP PROFESSIONAL STAFF

Project Director	CDM
Deputy Project Director/Operations Director	CDM
Deputy Project Director/Senior Technical Specialist	Tulane
Operations Director/Technical Director, Institutional Development	TRG
Senior Technical Director	CDM
Technical Director, Risk Assessment/Risk Management	RTI
Technical Director, Engineering/Technology	CDM
Technical Director, Community Participation	RTI
Technical Director, Marketing/Information Services	ISTI
Technical Director, Tropical Disease	ISTI
Technical Director, Public Health	JSI
Librarian	ISTI

III. Significant Overall Accomplishments of EHP

This section summarizes EHP's major accomplishments in terms of its contributions to the environmental health field, its influence on USAID and international programming, and its involvement in field activities. Subsection B focuses on activities related to the G/PHN/HN results framework for EHP.

The term "primary prevention" as used in this section (and elsewhere in the report) refers to actions designed to interrupt transmission of infectious and vector-borne diseases and contact with pollutants. These actions are complementary to preventive health measures fostered by other projects, such as breastfeeding and immunization.

A. Contributions to the Environmental Health Field

The Environmental Health Project has made a significant contribution to the environmental health field and to the support of USAID's efforts to improve health in developing countries. EHP's benefits have extended to other sectors, including environment and democracy and governance. Its strength owes much to its multi-disciplinary team, which brings together a wide range of core specialties, skills, and experience to contribute to the development and implementation of its activities. Further depth and resources are provided by the EHP subcontractors, including specialized consulting firms, individual consultants, and universities that are in the forefront of thinking and experience in their respective fields.

This multi-disciplinary team, backed by an effective management system, has provided innovation, strong backstopping, adaptability, an ability to respond rapidly and effectively, an ability to learn continually from and build upon past

experience, and access to current thinking. At the same time, the team has retained a practical focus on results. Adding to the project's strength is a close professional working relationship with its USAID counterparts.

The result has been that in a matter of three-and-a-half years, the project has advanced fundamental thinking about environmental health and its practical application. This has occurred, for example, through the application of community involvement in risk assessment and primary prevention of diseases related to the environment and through development of indicators. EHP has made its contributions available to a broad audience through information dissemination and collaboration with international organizations and NGOs, while at the same time responding to the immediate needs of USAID missions and regional urban development offices (RUDOs). Nearly all of EHP's activities influence or have the potential to influence policy at various levels — international, national, and local.

Other resources with an environmental health perspective exist internationally and in U.S. institutions. However, none offers the focus on environmental health, breadth of scope, emphasis on application, critical mass of multi-disciplinary skills and experience, and response capability provided by EHP. Environmental health resources in universities are subject to the limitations imposed by teaching obligations and the focus on research. The International Water and Sanitation Research Centre (IRC) in The Hague is a research and training center with an interest in environmental health, but it has neither the breadth and depth of EHP nor the capacity to respond to immediate needs. The one institution that most closely resembles EHP is WELL — Water and Environmental Health at London and Loughborough. WELL was recently created by the British Department of International Development (DID) through two academic institutions with long records of accomplishment in environmental health, and it provides service to DID and other clients.

B. FIELD ACCOMPLISHMENTS AND CONTRIBUTIONS TO USAID AND INTERNATIONAL PROGRAMMING

B.1. Diarrhea Prevention and Sanitation Policy

EHP has defined a concept of primary prevention that can be planned and implemented at the community level and has begun to establish primary prevention as an effective tool in health and child survival programming. In Zambia, Ecuador, Jamaica, and Haiti, EHP has gained varying degrees of acceptance for the community-based approach to sanitation and improved

hygiene. In Zambia, EHP broadened its involvement from malaria control to include community-based sanitation work. In Ahmedabad, India, initial planning financed through the RUDO has been followed by mission support for implementation. Cholera was successfully controlled in a pilot EHP effort in Ecuador. In Bolivia, community-based diarrheal-disease-control activities, integrated with a child health project, incorporate efforts to encourage replication.

CARE, with help from EHP, has refocused its water supply and sanitation policies to place more emphasis on community-based action. The project has helped UNICEF to review past evaluations of programs, define its water supply and sanitation strategy, and prepare a handbook for better sanitation programming.

The project also has prepared a study that has gained international attention, challenging a long-held concept that environmental interventions and behavior change aimed at interrupting transmission of diarrheal disease are not cost-effective.

B.2. Malaria Prevention

EHP has contributed to the integration of malaria control with child health and survival. The most wide-ranging program has been carried out in Zambia, where EHP has operated within the framework of the Zambia Child Health project and collaborated with the Global Bureau's Basic Support for Institutionalizing Child Survival project (BASICS). EHP technicians, in collaboration with the U.S. Centers for Disease Control and Prevention (CDC), conducted an assessment of chloroquine resistance in Zambia which led to a change in national treatment policy. EHP prepared guidelines for use of insecticide-impregnated bednets and introduced a Geographic Information System (GIS) risk mapping system for Kitwe (and later for Lusaka) for use in malaria control. Community-based activities in Zambia have mobilized community involvement, obtained national policy support, and stimulated the interest of at least one other major donor. They have also resulted in development of capacity within national institutions. As part of its program, EHP introduced environmental management of swampy areas for the control of mosquitoes. Before expanding the use of this approach, USAID/Zambia has requested that EHP examine further its cost-effectiveness and the role of urban transmission of malaria.

Under the Africa Integrated Malaria Initiative (AIMI), EHP has helped launch activities in Malawi and Kenya, prepared guidelines for rapid assessment of the feasibility of insecticide-impregnated bednets, and drafted a framework for monitoring and evaluation covering both case management and prevention.

Based on its collaboration with EHP in Zambia, BASICS has requested EHP participation in child survival work in Lagos, Nigeria. EHP also has contributed to malaria and other vector-borne disease control efforts in Eritrea, Bolivia, Guatemala, Peru, and Nepal.

B.3. Risk Assessment

Risk assessment has been incorporated by EHP as an integral part of planning at all levels. In India, risk assessments have been carried out in two urban areas using existing data to develop environmental health plans. There is strong commitment to the plans and the planning process, prompting RUDO/South Asia to request further EHP assistance in assessment and planning to be undertaken in India and Bangladesh.

As demonstrated in Zambia, Ecuador, and Bolivia, EHP's most innovative and effective application of risk assessment has involved community members in identifying and mapping risks and in planning their amelioration through behavior changes and use of the community's own resources.

B.4. Community Participation

EHP is widely perceived as a creative source of expertise for working with households, NGOs, and municipalities on community-level environmental health issues. In some instances, EHP has been able to convince USAID staff members to completely reorient their technical approaches so that community participation is an important element or the guide for the direction of the activity. EHP's promising CIMEP approach — Community Involvement in the Management of Environmental Pollution — combines the most important elements learned from the contractor's years of experience at the community level, and it is creative, valuable, and iterative. If CIMEP and other community participation approaches can be successfully promoted among policymakers and can be scaled up for cities, regions, or entire nations, then this work could have a great impact on USAID field programming.

Under the CIMEP rubric, EHP succeeded in catalyzing new partnerships, collaborative efforts, and dialogue on environmental health issues in peri-urban work (e.g., Tunisia) and in rural settings (e.g., Ecuador). EHP also has recognized that scaling up and sustainability will be achieved through the creation of stronger links between those who work at the local level and those who make environmental health funding and program decisions.

B.5. Behavior Change

Although staff capacity is limited in this area, EHP remains USAID's primary provider of expertise on behavior change related to the environmental health nexus and fills the gap between behavior change–focused projects working exclusively on either child survival/health or environmental issues. Field collaboration between EHP and the behavior change–focused projects (e.g., GreenCOM, BASICS) has generally been very synergistic and has had a positive impact on the approaches used for child survival/health and peri-urban activities.

EHP accomplishments include measurable change in behavior and attitudes on the part of institutional actors from both governmental and nongovernmental organizations and among community members. EHP has recognized that changes in behavior and attitudes are critical to the success and sustainability of environmental health investments.

B.6. Institutional Capacity Building: Environmental Health, Urban Poor

Institutional capacity building cuts across almost every EHP activity. EHP has succeeded in improving institutional performance for governmental and nongovernmental organizations and in creating new and effective committee structures at the neighborhood and community levels. While supporting change in individual institutions, EHP has provided assistance in sectoral reform, particularly in relation to decentralization and privatization. Tools are one important element of EHP's assistance, e.g., computerized water management models, GIS, and monitoring and evaluation. In addition, process-oriented approaches to organizational development are also critical to EHP's effectiveness. EHP also has helped its clients to improve their linkages and partnerships with other local, national, and international organizations.

EHP has made a significant contribution to the environmental and health institutions serving the urban poor and broader clienteles in seven countries. As a result of EHP's unique abilities to provide sound advice in technical, financial, and organizational issues, USAID has been able to experiment with innovative and financially viable institutional arrangements (e.g., NGO–run water utilities) and to support host-country efforts in sector decentralization and privatization. At the same time, these new arrangements have improved service quality and access in underserved areas.

Institutions in 21 countries have benefited from EHP capacity-building services (see the matrix in Annex F for a listing of activities by country).

B.7. Linkages and Partnerships

Despite constraints resulting from USAID contracting requirements, EHP has successfully developed and maintained a broad range of linkages and partnerships that benefit USAID/Washington, the field missions, and host-country clients, as well as the field of environmental health. EHP's partners range from multilateral institutions and donors such as UNICEF and PAHO to community-based organizations. In some instances, these field partnerships have enabled USAID to better identify priority activities and to focus its funding activities on topics or locations where it will have a significant impact and a comparative advantage.

B.8. Monitoring and Evaluation

EHP was one of the first G/PHN activities to develop its own results framework and served as a leader to other G/PHN projects in this area. Monitoring, including indicator development, is a fairly consistent element of EHP's work, and these results have been extremely helpful to mission/RUDO reporting and programming (e.g., in Tunisia, Jamaica, and Egypt). Missions generally report high levels of satisfaction with EHP's work in developing indicators, results packages, and evaluations for other programs and activities. EHP recommendations have influenced staff and program changes for other projects and prioritization of activities within program portfolios. EHP recently convened a technical advisory group (TAG) meeting on the subject of environmental health indicators, and their report should support their leadership in this area. USAID benefits greatly from EHP's role as a leader in indicator development for the field of environmental health.

C. OTHER ACCOMPLISHMENTS

C.1. Contribution to Pollution Control in Egypt

EHP helped the Egyptian government with risk assessment in preparing a lead exposure abatement plan (LEAP) and an environmental report and assisted USAID program planning by identifying sources of airborne particulates. EHP played a role in bringing together the health and environment sectors to focus jointly on shared problems. Already, policy with regard to lead has been influenced positively. These efforts form part of USAID's support to Egypt's environmental policy planning and contribute to further USAID activity development.

C.2. Contribution to Democracy and Governance

EHP activities in Slovakia demonstrate how environmental health interventions can strengthen local governance and community participation in a country where these concepts are new. For example, EHP inputs helped to motivate municipal staff and politicians from Trnava and Banska Bystrica to develop activities related to the Healthy Cities initiative of WHO. In Martin, the State Health Institute consulted parents, teachers, and children about childhood exposure to heavy metals and launched a community-based prevention program.

C.3. Information Dissemination

EHP has established an Information and Communication Unit (ICU) that provides a comprehensive range of library and information services to EHP itself, to USAID, and to the wider environmental health community. The quality of the service is greatly appreciated. The only major complaint is that resources are lacking to reach out to a wider audience.

In support of environmental health implementation and policy development, EHP has published six applied studies, including three that bear particularly on the issue of integration of environmental health into child survival programming:

- *Prevention: Environmental Health Interventions to Sustain Child Survival* (Applied Study 3)

- *Child Survival and Environmental Health Interventions: A Cost-Effectiveness Analysis* (Applied Study 4)

- *Better Sanitation Programming: A UNICEF Handbook* (Applied Study 5), jointly published with UNICEF.

IV. Detailed Review of Project Implementation

This section provides a detailed examination of the Environmental Health Project's activities to date. It is organized as follows: Subsection A, with eight parts, deals with activities under the G/PHN/HN results framework. Subsection B covers selected other environmental health activities. Subsections C–G are concerned with functions related to activity implementation: monitoring and evaluation, linkages and partnerships, outreach to international organizations, dissemination of information, and EHP as bridge between the health and environment sectors. Each discussion is organized into findings, conclusions (including positive assessments and issues), and recommendations.

The eight G/PHN/HN results areas are closely interrelated, making it necessary to discuss some activities from different perspectives in several parts of Subsection A. These interrelationships are pointed out where they occur. They are also graphically presented in Annex F, which comprises a matrix listing EHP activities by name and location against their respective and often multiple results areas.

A. ENVIRONMENTAL HEALTH INTERVENTIONS UNDER THE G/PHN/HN RESULTS FRAMEWORK

A.1. Diarrhea Prevention

A.1.a. Findings

1. EHP has developed community-based interventions and applied them within child health projects. This approach involves communities in collecting data for assessing perceived risks; planning and implementing home- and community-based interventions such as protection of water supplies, proper disposal of feces, clean-up campaigns, and hygienic practices; and monitoring. EHP applied the approach on a pilot basis in several areas of Ecuador that suffer from persistent cholera. The project involved Ministry of Health personnel and was structured to be replicable.

2. A follow-up survey in Ecuador nine months after the end of EHP's initial involvement documented significant increases in practices that reduced the risks of diarrheal and related diseases. Two communities began latrine and sewerage projects. Cholera virtually disappeared in the project communities in 1995 and the first half of 1996, compared to the rest of the state, where incidence rates were reduced at most by half and were often unchanged from 1994 to 1995. A subsequent visit by a Bolivian team found that the target communities remained actively involved but that the interventions had not been replicated in other communities.

3. The community-based process pioneered in Ecuador has been employed and expanded in Bolivia for primary prevention of diarrheal disease. More rigorous baseline data was collected during the planning and start-up phases. The activity is located in an area where USAID has made extensive investments in water and sanitation infrastructure but where reported cases of diarrheal disease remain high. The Bolivian activity will provide another opportunity to evaluate the "software" component of the community-based primary prevention strategy, i.e., involvement of communities in assessing risks and identifying and implementing ways to improve hygiene.

4. The primary prevention activities in Bolivia are being carried out jointly with the USAID mission's Community and Child Health project. The national Secretariats of Health, an association of Bolivian NGOs, and local municipalities are participating in developing plans to replicate the effort in other communities in conjunction with family/child health and child survival programs.

5. In Zambia, EHP was initially involved in community-based activities related to control of urban malaria in Kitwe. At the request of the Zambian government and the USAID mission, the project was broadened to include diarrheal diseases in support of Zambia's water and sanitation health emphasis. The project promoted the concept of safe handling of excreta and the principle of community-based interventions to change high-risk behaviors related to sanitation. Communities participated in developing detailed implementation plans. The process was accepted as a model to be replicated in other townships and has been launched in Lusaka, the capital. The model seeks to make interventions sustainable, to develop local implementation capacity, and to achieve effective collaboration among all concerned parties.

6. EHP has worked closely and well with USAID/Zambia, the Zambian Central Board of Health, the Kitwe District Health Management Team and its Urban Health Programs Working Committee, neighborhood health committees, NGOs, donors, and BASICS.

7. In several countries in Central America, EHP has collaborated with BASICS to help private soap manufacturers expand their markets by promoting the use of soap for handwashing as a means to prevent diarrheal disease.

8. In Jamaica and Haiti, EHP has participated in innovative projects that involve the urban poor in improving water and sanitation infrastructure and community hygiene. (The Haiti project, which the evaluation team observed firsthand, is described in Annex G.)

9. EHP has helped UNICEF develop a strategy for water supply and sanitation (WS&S). EHP also assisted in preparing UNICEF's *Handbook for Better Sanitation Programming* by providing evaluation material, case studies, notes, wall charts, bibliographies, manuals, and guidelines. The handbook is designed for use by donors and other organizations in programming and project design.

10. EHP has also published applied studies entitled *Prevention: Environmental Health Interventions to Sustain Child Survival* and *Child Survival and Environmental Health Interventions: A Cost-Effectiveness Analysis.* The latter study outlines the cost-effectiveness of hygiene promotion in preventing diarrheal disease where WS&S infrastructure exists or is being constructed.[10] A review and a further set of guidelines for primary prevention are planned.

[10] EHP cost-effectiveness calculations assume that the normal health sector budget would fund treatment for diarrheal disease and WS&S-related behavior change programs but would not finance WS&S infrastructure, as posited in the Walsh and Warren study of 1979 which EHP is challenging.

A.1.b. Conclusions

1. Efforts to control diarrheal disease among poor populations exposed to multiple channels of transmission often have limited success because a) the interventions are too limited in scope (e.g., providing only a safe water supply), b) the target populations do not understand how to take full advantage of the new installations, and c) communities are not fully involved in implementation. EHP has effectively involved communities in developing and implementing activities to block multiple routes of transmission and to achieve sustainable reductions in diarrheal disease. As EHP has demonstrated in several countries, applying this approach as part of child survival projects can relieve the burden of disease among poor populations and reduce the costs of secondary prevention and treatment.

2. The project has issued valuable studies and guidelines on primary prevention and its integration with child survival programs. EHP's work with UNICEF and, in particular, the cost-effectiveness study have gained international attention. EHP plans to issue guidelines for diarrheal disease control, which are needed for wider application of the EHP methodology.

3. Notwithstanding the success of some of its publications and the demonstrated benefits of integrating primary prevention into child survival programs, EHP has had only limited success in "mainstreaming" its approach within USAID (see Section V.B.2.).

4. USAID policy has shifted away from financing water supply and sanitation hardware. However, the success of the EHP's activities suggests that missions' health programs could better take advantage of existing water and sanitation facilities to promote improved hygiene.

A.1.c. Recommendations

1. G/PHN/HN should take a more active role in promoting the integration of primary prevention of diarrheal disease with child survival programs and should encourage collaboration between EHP and BASICS wherever possible. (Specific recommendations are offered in Section V.B.2.c.)

2. USAID should consider establishing a policy to encourage wider use by field missions of existing water and sanitation facilities for community-based hygiene programs to interrupt multiple routes of disease transmission.

3. To increase support among international donors and development entities for primary prevention of diarrheal disease, EHP should expand publication of

results, widen contacts with donors in the field, and broaden linkages with NGOs. EHP should consider inviting NGOs when strategy discussions are convened.

4. EHP should look for additional opportunities to scale up activities by building on initial successes in its country activities and on the wider programs of international agencies and NGOs.

5. If sufficient funds can be made available, EHP should undertake field studies on the cost-effectiveness of primary prevention as a means of controlling diarrheal disease.

A.2. Malaria Prevention

A.2.a. Findings

A.2.a.i. Activities Undertaken

1. EHP has undertaken malaria activities in response to individual requests and funding from USAID field missions and has worked with USAID's Africa Integrated Malaria Initiative (AIMI).

2. A primary focus of EHP's malaria activities has been in Zambia in the context of the Zambia Child Health (ZCH) project. Most of the funds were provided by the mission, although a small portion came from AIMI. Activities in Kitwe have been carried out in close collaboration with national and local agencies and organizations as well as BASICS and CARE.

- EHP conducted chloroquine sensitivity tests in 1996 in coordination with the U.S. Centers for Disease Control and Prevention (CDC). The tests revealed a high level of drug resistance and led to changes in Zambia's drug policy. Malawi, with AIMI support, had led the way with a similar change in policy that contributed to a 20 percent reduction in child deaths.
- EHP assisted the Tropical Disease Research Center (TDRC) in planning and implementing a rapid environmental and community assessment of urban malaria in Kitwe to identify factors influencing transmission.
- EHP worked with the district and with neighborhood health committees in Kitwe to select target areas for start-up activities, to establish an organizational and management structure, and to develop a framework for integrated health planning.
- Based on the results of a survey, a three-pronged plan was adopted that included standardized case management, environmental management of *dambos* (swampy depressions) and other swampy areas, and a campaign to promote use of insecticide-impregnated bednets, particularly in low-income residential areas. Managing *dambos* has a history of success.

However, implementation of the plan awaits the outcome of studies discussed below. The interventions would be community-based and would require a commitment to planning and execution. Partnerships would be established between the communities and outside organizations, which would work together to construct and maintain drainage works and plant trees in those *dambo* areas identified as breeding sites.

- At the time of this evaluation, AIMI and the mission raised questions about the extent of urban transmission in Kitwe (as opposed to transmission via rural people entering Kitwe) and the cost-effectiveness of proposed environmental control measures versus other measures. AIMI's approach includes proven case management and use of impregnated bednets but no other environmental measures. At a meeting of representatives of EHP, USAID/Zambia, and G/PHN/HN/EH, it was agreed that EHP would undertake studies to clarify the role of urban transmission of malaria in Kitwe and the issue of cost-effectiveness. The cost to EHP of the studies will be about the same as the cost of the planned intervention in Kitwe — approximately $20,000 each. The mission will use the results of the studies to make future programming and funding decisions relative to Kitwe and other areas.
- EHP has built capacity at all levels, including within TDRC, through its training and other activities.
- EHP has developed a mapping system using Geographic Information System (GIS) technology for the Lusaka District which is being employed for planning and monitoring malaria prevention. The district is seeking Japanese assistance to expand use of the system. The Zambian Ministry of Health plans to extend the approach to all areas of the country.

3. EHP is also undertaking malaria control activities in Bolivia, Peru, and Eritrea. BASICS seeks EHP's participation in child survival work in Lagos, Nigeria.

4. EHP has prepared a handbook for program managers with guidelines for use of insecticide-impregnated bednets.

5. At the Vector-Borne Disease Centre (VBDC) in Hetauda, Nepal, EHP supports a malariologist/entomologist who serves as a part-time advisor. Under the prior VBC project, USAID provided assistance in installing laboratory equipment, training staff in its use, training trainers, and initiating an epidemiological surveillance system.

A.2.a.ii. EHP–AIMI Relations

1. The AIMI program focuses on improving management of fever and anemia, improving prevention and management of malaria in pregnancy, and increasing use of insecticide-treated materials such as bednets. An EHP specialist helped lay the groundwork for an AIMI bednet activity in the Blantyre district of Malawi, but EHP was subsequently told it would play a supporting rather than a leading role in the activity. The new role has not yet been defined. The AIMI coordinator told the evaluation team that EHP should have focused on promotion of community behavior relative to bednets and insecticide use rather than on the bednets' effect on mosquitos. EHP staff advised the evaluation team that they would undertake a broad range of activities in Malawi, including community behavior promotion, if given the chance.

2. EHP received more than $1 million for AIMI work in Kenya; however, more than half was deobligated, and only $67,000 of the remainder has been approved by AIMI for EHP's use for a workshop and related support to the African Medical Research Foundation (AMREF).

3. The AIMI coordinator told the team that the EHP role is difficult to work into AIMI. Other than bednets, environmental health measures are not on the AIMI agenda, and the coordinator believes that mosquito source reduction has not been proven to be cost-effective. EHP staff, on the other hand, believe that their expertise can be helpful in planning and implementing a range of AIMI activities. They also contend that environmental health measures, requested and funded by missions, would complement AIMI's case management approach.

4. As Figure 4 shows, more than half the funds that EHP received in FY1994 and FY1995 for AIMI activities in Africa remain to be programmed. EHP is awaiting AIMI approval and guidelines for programming the funds.

FIGURE 4. STATUS OF AIMI FUNDS IN THE EHP CORE CONTRACT

Year Received	Source	Type of Fund	Amount	Authorized to Date*	Amount Remaining*
1994	G/PHN/HN	Core	$320,000	$194,000	$126,000
1995	Kenya	Field Support	485,000	67,000	418,000
1995	Africa Bureau	OYB Transfer	500,000	296,000	204,000
1995	Malawi	OYB Transfer	250,000	192,000	58,000
Total			$1,555,000	$749,000	$806,000

* as of September 1997

Note: In addition to the above, $585,000 in Kenya field support funds under AIMI were put into the EHP contract during FY1996 and were deobligated six months later.

A.2.b. Conclusions

1. EHP's malaria work has demonstrated the project's interdisciplinary capabilities, its effectiveness in mobilizing and consolidating technical and community resources, and its ability to work with other organizations.

2. The project has applied effective techniques for mapping high-risk areas and laying the basis for targeted community action. Through its drug resistance testing, EHP has made an important contribution to malaria prevention and treatment policies in Zambia.

3. With its innovative approaches and the experience it has gained, EHP constitutes an important resource for USAID in providing technical and management support to malaria control programs. EHP can rapidly mobilize its own resources and those of CDC. The project is particularly important given the rising significance of malaria as a cause of childhood morbidity and mortality.

4. Relations between EHP and AIMI need to be improved. AIMI is skeptical of EHP's approach and the cost-effectiveness of its interventions, while EHP is seeking more active collaboration with AIMI in malaria work using both AIMI and non–AIMI funding. Meanwhile, a substantial proportion of AIMI resources

that were provided to EHP in recent years remain unprogrammed for lack of approval and guidelines for use.

5. There is potential for EHP to assist VBDC in developing an expanded program for control of malaria and other emerging and re-emerging diseases in South Asia, particularly in the Gangetic Plain.

A.2.c. Recommendations

1. The mission in Zambia and EHP should foster support among other donors to build upon the activities begun in Kitwe and Lusaka.

2. USAID should approve and support replication of the approach used in Zambia to Nigeria and other countries.

3. G/PHN/HN/EH, which supervises both EHP and AIMI, should seek to quickly resolve the problems that limit collaboration and prevent the programming by EHP of AIMI funds.

4. G/PHN/HN, in consultation with USAID/Nepal, should consider having EHP assist VBDC in efforts to control emerging and re-emerging diseases. EHP could help expand VBDC's capabilities by assessing its program and facility needs, assisting in program planning, training center staff, collaborating on studies, developing and testing control strategies, and assisting with regional training.

5. EHP needs to develop generic materials to facilitate planning and the integration of its approaches into child survival programs.

6. EHP should use the results of the Kitwe cost-effectiveness study in preparing future guidelines on environmental interventions for malaria control.

A.3. Community Involvement: CIMEP Methodology and Other Community Participation Activities[11]

A.3.a. Findings

1. EHP has achieved or anticipates results related to CIMEP in five countries.

2. CIMEP's work under EHP evolved from earlier thinking and work under WASH. Given the evaluation's time constraints and its focus on EHP rather than WASH, it was not possible to review WASH documents regarding CIMEP. A review of EHP CIMEP documents and published articles yielded few references to community participation theory or methodology. The choice and mix of methods is neither explained nor attributed to experiences outside of EHP's.

3. Building on the WASH experience, EHP core staff members have fused together a variety of participatory and organizational development methodologies. The CIMEP methodology includes participatory data collection; stakeholder motivation for community members, NGOs, and service providers; policymaker dialogue; and introduction of improved service delivery approaches for environmental health services.

4. Through a buy-in, EHP invested significant levels of effort and resources in CIMEP work in Tunisia to improve peri-urban environmental services in two neighborhoods in Sousse and Kasserine. The governor of Kasserine is interested in scaling up the CIMEP work, and a new World Bank loan finances a CIMEP–style activity. The Tunisian experience was monitored, and EHP has tried to quantify the financial value of participatory CIMEP alternatives. A video was produced in English and French with a modest amount of core funds; a manual is also available in French. Community-level risk/hazard work also was conducted in Tunisia and was the first field-level collaboration of these two EHP activities.

5. The CIMEP approach was applied to health-related issues (cholera) in rural communities in two Ecuadorian provinces and to diarrheal disease in Bolivia. Plans are underway for work in Benin and nearby West African countries with an impressive extent of donor collaboration and coordination.

6. Scaling up has not yet occurred on the ground, although each CIMEP activity has had a national track to complement the local work. In meetings and

[11] This section focuses primarily on the community-level activities conducted under the CIMEP methodology (Community Involvement in the Management of Environmental Pollution) and how this work influences participatory approaches in other community-level EHP work.

workshops, policymakers have interacted with community-based field teams. However, this model has not yet resulted in much political commitment to the geographic spread of the CIMEP approach to communities, provinces, and/or governorates beyond the pilot areas.

7. CIMEP represents EHP's efforts to refine its community-level approaches for use by environmental and health service delivery organizations, but EHP also has worked with a number of actors at the community level in several other countries, including Slovakia, Haiti, and Romania.

8. The number of EHP staff members and consultants who have been trained to manage CIMEP activities is fairly limited. A core staff member has worked with one junior staff member and a small number of consultants, both American and foreign. One consultant from Tunisia is working with the Benin activity.

9. In discussions about the linkages between environmental health and G/PHN's child survival strategic objective, some G/PHN staff members noted that other PHN projects under this SO strategically document their work with children as well as their results. EHP's documentation tends to focus on the participation of adult men and women in community environmental health activities.

A.3.b. Conclusions

1. The CIMEP approach appears to be effective in engaging some community members in cost-effective environmental civic improvements; in motivating some politicians, bureaucrats, and field technicians to work in a more consultative manner with clients/community members; and in positively influencing individual health behaviors. Those who have been closely involved in CIMEP field work, particularly those from the RUDOs, gave it high marks for matching the needs of RUDO programs and successfully experimenting with methodology, concepts, and institutional relationships. Some evaluation informants remain more skeptical of the value of this participatory approach and the possibilities for recreating its success under different conditions.

2. Because EHP's documentation for CIMEP does not refer much to the literature on community participation from environmental health or related work, the guiding conceptual and methodological principles are not obvious. Newer audiences may be left with the impression that CIMEP is only driven by the empirical experience of WASH and EHP.

3. The work in Tunisia on financial savings that resulted from the CIMEP approach in micro-projects is valuable but is probably much too limited in scale (e.g., only one type of activity in one setting) to be used as a broad justification for potential cost savings for similar projects elsewhere.

4. For purposes of improved sustainability, USAID clients of CIMEP suggested that EHP pay further attention to scaling up localized pilots to larger geographic/political units and better institutionalizing CIMEP training capacity at the national level. EHP's CIMEP staff members are aware of these issues and concerns and are attempting to address them in the new activities in Benin/West Africa.

5. The CIMEP video and the manual should be reworked for broader dissemination. The video needs an American English soundtrack and a clearer itemization of specific activities and results. The manual should be translated and be made more visually interesting (e.g., using graphic arts and pictures).

6. EHP's CIMEP work could be synergistic with its work on comparative risk methodologies, and more field collaboration is needed.

7. Community approaches used by EHP in Slovakia and Haiti encompass some elements of the CIMEP approach. Politicians, government workers, and NGOs were trained to engage community members in new ways, for example, by soliciting community input for a Healthy Cities report in Slovakia and by creating community committees for water fountains and sanitation in Haiti.

8. The wider replication of CIMEP and the broader integration of community participation approaches into other EHP activities require either additional core staff capacity or more extensive use of a broader pool of consultants who are conversant with EHP's perspective.

9. CIMEP and EHP's other activities in community participation are an asset to G/PHN and to its child survival activities. Under the child survival strategic objective, EHP competes for funding with other projects that can more easily document their results with children. Although it would appear that EHP has an additional opportunity to highlight its contribution to child survival work through participatory community activities, these results are not often documented.

A.3.c. Recommendations

1. EHP's CIMEP work and its work in participatory governance would likely benefit from a more explicit articulation of CIMEP's guiding conceptual frameworks (collective action, political behavior, organizational behavior) and methodological criteria. Any such articulation should enhance, rather than distract from, field implementation.

2. To market to USAID missions, EHP will need to clarify the advantages of CIMEP over other participatory approaches, to elaborate an identifiable set of activities or steps, and to expand on its existing efforts to document quantifiable

data on benefits/results (e.g., health benefits over time, cost savings for municipal governance). An improved video and an English-language manual also would help EHP's marketing efforts.

3. CIMEP needs to continue to move beyond being a highly localized, EHP resource–intensive pilot approach and toward scaling up at the provincial, national, and regional levels. This work will be facilitated by stronger institutionalization of training capacity at the national and/or provincial level. The Benin/West Africa buy-in can provide some opportunities to scale up, and the creative, collaborative multi-donor approach should be emulated at other CIMEP sites in the future. Municipal-level comparative risk assessments may provide other opportunities to scale up CIMEP.

4. To meet unmet demand for services that include community participation (not just CIMEP), EHP may want to develop a strategy to better utilize core staff members' capacities and to utilize an expanded roster of social scientist consultants.

5. EHP should create a document on "lessons learned in community participation" that synthesizes EHP's experiences in community-level work — both CIMEP and non–CIMEP. Having broader social science staff capacity will facilitate this important work, which will follow and expand upon relevant chapters in the lessons learned document created for WASH.

6. To help G/PHN staff members better understand how EHP's work directly contributes to the child survival strategic objective, EHP should consider documenting its work with children and youth in community participation activities (one possible format would be "success stories").

A.4. Risk Assessment

A.4.a. Findings

1. Risk assessment is a separate results area under EHP's 1996 and 1997 work plans, but it also constitutes an integral part of the planning process for many of EHP's primary prevention activities.

2. As applied by EHP, risk assessment fulfills two important functions. First, it focuses planning on priority problems based on an understanding of risks. Second, it enables communities to participate in planning and implementing activities to improve the health of their members. Community members can express their perceived needs, understand and identify both risks and the options for reducing them, and determine the actions they want to take.

3. In India, EHP helped local institutions carry out risk assessments and develop capacity in two regions in order to incorporate environmental health into the urban planning process. In Ahmedabad, EHP worked with a local counterpart to develop an environmental health plan and strengthen the capacity of the counterpart organization. The project was seen by both USAID and the municipality as a means to influence policy. In the Asansol/Durgapur Region in West Bengal, EHP helped the Department of Forests and Environment prepare an environmental management plan. These activities are to be replicated in Chennai (Madras) and Puna and at a site in Bangladesh. The projects are expected to have strong NGO involvement and will utilize CIMEP methodologies and risk assessment with mapping.

4. Both activities in India have had strong local backing. In Ahmedabad, a steering committee was established that included senior officials and influential community members. Working groups identified problems, geographic areas, and high-risk populations. The groups collected and compiled data from existing sources, set priorities, and made recommendations to the steering committee. Based on the committee's decisions, a plan was prepared and presented to governmental and external funding sources. The project had the full support of the local commissioner. USAID has funded a follow-on project.

5. In Asansol/Durgapur, it was necessary to hire a local firm to assist with data collection, and the firm ended up taking over much of the work. The state secretary originally involved in the project has since retired, and it is not known how the plan will be implemented under the new state secretary.

6. Community-based assessment of health risks also played an important role in EHP activities in Bolivia, Zambia, Tunisia, and Ecuador (these are covered in Subsections A.1.a., A.2.a, and A.3.a.).

A.4.b. Conclusions

1. EHP has been effective in responding to the needs of missions and host countries in undertaking risk assessments, building capacity, and demonstrating the utility of the community-based approach.

2. The activities in India appear to have been successful, and replication elsewhere is anticipated. However, the availability of paid staff or consultants reduced the participation of members of the working group. To address this problem, follow-on projects will use local NGOs and bring in CIMEP methodologies.

3. Risk assessment is a powerful tool in the community-based approach to primary prevention, and indeed, to primary health care in general. It is not used as

widely as it should be within health programs sponsored by USAID and other agencies.

A.4.c. Recommendations

1. EHP should continue to promote and assist community-based activities incorporating risk assessment and mapping as mechanisms for community education, community involvement, mobilizing local resources, improving sustainability, and maximizing health impact.

2. Missions and EHP should seek ways to ensure wider use of community-based risk assessment in countries where it has been successful and where resources permit (e.g., trained personnel).

3. EHP should work closely with other donors, host governments, and NGOs to broaden understanding and application of the methodology. This will require preparing and distributing guidelines and manuals on community-based risk assessment and mapping. The evaluation team understands that these actions are already being planned by EHP.

4. G/PHN/HN should assist EHP in promoting wider use of community-based risk assessment in USAID preventive health programs, particularly child survival initiatives.

A.5. Sanitation Policies

A.5.a. Findings

1. Community-based risk assessments and local activity planning in Zambia have emphasized primary prevention, and national policy now embraces sanitation of the environment and personal and community hygiene.

2. The community-based approach to improved sanitation was effective in several communities in Ecuador but did not bring about changes in national policy, and the approach has not been replicated. Its application in Bolivia has been designed to achieve wider acceptance and replication.

3. CARE, with help from EHP, has refocused its water supply and sanitation strategies to place more emphasis on sanitation and improved hygiene behavior.

4. EHP is influencing sanitation policy worldwide through its recent work with UNICEF. EHP participated in UNICEF's review of sanitation program evaluations in developing countries and helped develop the organization's

Strategies in Water and Environmental Sanitation and the *Better Sanitation Programming: A UNICEF Handbook,* which was published jointly by UNICEF and EHP.

5. Until recently, EHP did much of its international networking through the Sanitation Working Group of the Water Supply and Sanitation Collaborative Council. However, EHP staff members found that the group's meetings were not well-organized, and they concluded that, for now, active participation in this group would not be the most productive use of the project's resources. EHP does remain a member of the council and takes part in its Working Group on Urban and Peri-urban Poor.

A.5.b. Conclusions

1. To reduce the incidence of environment-related diseases and of diarrheal diseases in particular, the policies of governments, donors, and development agencies must emphasize sanitation and hygiene behavior as essential means to block fecal-oral routes of transmission.

2. EHP has successfully demonstrated the value of emphasizing "soft" interventions that empower individuals and communities to plan and take actions with locally available resources to block routes of disease transmission, rather than water and sanitation "hardware." But the project has had mixed success in influencing policy at the national level. In Zambia, the concept has been accepted as a matter of policy, but the process is not being replicated in Ecuador. EHP is attempting to facilitate policy change in Bolivia through recently initiated activities.

3. It is regrettable that the current processes of the Sanitation Working Group of the Collaborative Council prevent EHP from making effective use of this forum as a point of contact with other international agencies. As a member of the council, EHP is in a position to resume active participation in the working group if and when productive dialogue can be reestablished.

A.5.c. Recommendations

1. EHP should continue to promote the incorporation of primary prevention into national policies on sanitation. More important, EHP must seek ways to bring about a wider application of such policies through replication. EHP could facilitate national sector policy planning, for instance, through workshops and extended technical assistance. But USAID missions must accept the concept and support it financially.

2. EHP should seek every useful opportunity to expand its networks with donors and other development organizations as a way to promote sanitation policies focused on primary prevention of diarrheal disease.

A.6. Behavior Change

A.6.a. Findings

1. EHP has succeeded in changing behavior or anticipates changing behavior in 11 countries, as well as through a regional program to help soap manufacturers promote the use of soap for handwashing in Central America (see Annex F). The project has changed the behavior of individuals within communities and within organizations through health-focused activities (e.g., cholera and diarrhea prevention) and environmental improvements.

2. The project's work in both Ecuador and Tunisia included quantitative and qualitative data and suggested indicators to measure behavior change.

3. Most of EHP's work related to behavior change has been conducted by social scientists, public health specialists, and medical doctors rather than behavioral scientists. However, behavioral specialists from Manoff Group, an EHP subcontractor, were involved in efforts in Zlatna, Romania, which used a KAP survey and directed health communication messages and activities toward children.

4. It is unclear which behavior change models guide EHP's work. There are references to both individual and community behaviors. Sometimes, efforts to change individuals' behavior to make community-wide improvements are identified as being community behavior change activities. USAID's major behavior change and social marketing projects, including those working at the community level, are based on conceptual models that focus on changing individual behaviors. Recognizing that households, communities, and other social structures influence individual behavior, USAID projects and the behavior change literature do not generally support the idea of household or community behaviors.

5. EHP has plans to use social marketing in Egypt and in CIMEP risk assessment work in India and Bangladesh. In Slovakia, the radon activity focused on information dissemination.

6. EHP's capacity (i.e., through its subcontractors) in social marketing and behavior change has not been widely used.

A.6.b. Conclusions

1. Behavior change and social marketing are intrinsic elements of environmental health. EHP's work in this area could be stronger.

2. By not utilizing behavior change models, EHP is less able to adapt to different situations and risks becoming formulaic in its work.

3. EHP's work on behavioral indicators in Tunisia and Ecuador is quite useful and unique. It could be used to make the case to missions that there is a need for including this type of information in missions' indicators, results frameworks, and strategic objectives.

A.6.c. Recommendations

1. On behavior change issues, EHP needs to broaden its dialogue and interaction with the behavior change communities, explore the literature, and incorporate models of behavior change into its work. More frequent interaction with its subcontractors, other contractors, and USAID experts could be achieved through establishment of a technical working group or an advisory group that meets regularly. This interchange would help EHP in refining its thinking about individual versus community behaviors.

2. EHP should increase its use of existing contract expertise in behavior change and social marketing.

3. If funding is increased, then USAID should consider a part-time core staff position for behavior change and social marketing.

4. Missions and other USAID units are struggling with how to collect and monitor behavior change data. If generalizations can be made, EHP should consider highlighting its behavioral data collection work in Ecuador and Tunisia in one of its newsletters or in a separate report on the topic.

A.7. Institutional Capacity Building (Strengthening Institutions Supporting Environmental Health)[12]

A.7.a. Findings

1. EHP has achieved or anticipates results related to institutional capacity building in 19 country programs in addition to regional activities in Central and Latin America (see Annex F).

2. EHP institutional capacity building focuses on institutional effectiveness, sector organization/reform, and policy and includes financial, technical, and organizational development activities. There may be multiple activities in a single country, and the activities may be funded from different offices within the mission. EHP staff members estimate that approximately one-third of EHP's institutional assistance goes to government agencies, one-third to NGOs/PVOs, and one-third to community-based organizations.

3. EHP facilitates training government workers to improve service delivery and community collaboration (e.g., CIMEP work in Tunisia and Ecuador).

4. Technical training for government workers includes computerized water management models (Slovakia and India), airborne particulate analysis and ambient air pollution (Egypt), GIS (Zambia and Eritrea malaria programs), anti-malarial monitoring and surveillance (Zambia), and risk assessment and coping cost methodology (India).

5. EHP provided communications assistance to governmental and/or nongovernmental units in health and environment in Guatemala, Haiti, and Ecuador. In Romania, Poland, and Slovakia, EHP worked with universities to develop environmental health curricula.

6. EHP trained NGO staff members to manage new activities/enterprises related to environmental health services in poor communities (e.g., Haiti and Jamaica) and helped a nongovernmental association of municipal officials to develop policy recommendations and improve their advocacy efforts (e.g., Slovakia).

7. EHP has strengthened new and existing community-based organizations. In CIMEP countries and in Haiti, some community volunteers received technical

[12] This section is concerned with institutional capacity building in environmental and health institutions. Institutional capacity building focusing on peri-urban activities is found in the following subsection. Institution building related to CIMEP and community participation is discussed in Section A.3.

training in topics related to data collection, water fountain management, and cholera prevention.

8. EHP conducted sector and institutional assessments and evaluations in Guatemala, Egypt, the Senegal River Basin Management Organization, Nepal, and Bolivia (CARE). It also provided short-term emergency assistance in West Bank and Gaza. (Monitoring and evaluation activities are reviewed below in Subsection C.)

9. On the whole, comments from the field are very positive regarding the institutional technical assistance. The core EHP staff member for institutional issues and institutional consultants was given very high marks for being knowledgeable, diplomatic, flexible, practical, and quite experienced. Demand for EHP's core institutional specialist is high.

10. Institutional interventions have ranged from highly participatory process-oriented tasks to more formal institutional analyses of financial and administrative systems. EHP negotiated institutional change in national, regional, and local settings. However, the strategies used to deal with sensitive politics and to cultivate the political will needed for institutional change are not always documented. Also, EHP has not always given consistent attention to or provided documentation of service equity issues (e.g., geography, socioeconomic class, gender, etc.), although some of these issues are addressed in EHP's institutional capacity building activities in peri-urban areas (see Subsection A.8.).

A.7.b. Conclusions

1. EHP's assistance in institutional capacity building appears to be improving skills, processes, internal systems, and financial viability for governmental agencies and NGOs. Progress in cost recovery appears to be limited in some countries because of issues out of EHP's control — organizational leadership, government rules and regulations, lack of political will, etc.

2. EHP's technical training has been of high quality and has been well-received. In some instances, further assistance was needed to ensure sustainability and replicability (e.g., ongoing modifications to the Slovakian water management computer model).

3. The impact over time of the process-oriented training, communication, and education activities has not been systematically measured — for example, will government workers continue to collaborate with communities, and will organizations change as these trained individuals rise in the ranks?

4. EHP has been praised for its short-term assistance in sectoral and institutional reviews and evaluations, in addition to its emergency assistance. While these efforts have met the clients' needs, they are somewhat scattershot, and their lessons remain buried within trip and activity reports.

5. When participatory approaches were used to help build institutional capacity during technical assistance (e.g., staff workshops during evaluations, training of trainers), these efforts were very much appreciated by EHP's clients and appear to have increased stakeholder ownership of the resulting recommendations.

6. While the quality of EHP's institutional assistance, by both core staff and consultants, has been excellent, the demand for the services of the core institutional staff member exceeds his available time.

7. EHP's audience will not fully learn how to replicate its institutional capacity building efforts without learning how it successfully negotiated local, regional, and national political issues and cultivated the political will needed for institutional change. Service equity issues are a part of this discussion.

A.7.c. Recommendations

1. EHP should continue to use the talents of its highly qualified core staff member and consultants. It would be quite beneficial to EHP and USAID to have another core staff member of his caliber with a similar mix of interpersonal skills and work experience.

2. EHP's success at institutional capacity building needs to be replicated by others, who would benefit from a synthesis of EHP's efforts across countries that drew conclusions about the types of assistance that are more helpful in different institutions and political environments. This work could include discussion of issues related to political will, leadership, participation, and service equity.

3. If a technical working group were established (as suggested previously in the section on community participation), EHP should convene a workshop or session to discuss alternative models for community-level environmental health institutions to avoid being completely dependent on volunteer efforts. Greater thought should be given to providing employment and financial and other incentives to community members who serve on committees and organizations.

4. EHP is in a position to make a significant contribution to USAID's work on indicators for organizational change and development in the environment and health sectors. While cost recovery and other financial indicators are important tools for monitoring institutional change and reform, they do not capture the range

of organizational changes (e.g., systems development and implementation, behavior changes) that result from technical assistance.

A.8. Institutional Capacity Building (Strengthening Public Sector Institutions and NGOs Serving the Urban Poor)[13]

A.8.a. Findings

1. EHP has achieved or anticipates results in six countries.

2. EHP focused (or will focus) on water supply, sanitation, or drainage activities in Jamaica, Haiti, Tunisia, and Benin. Solid waste activities were the principal focus in Morocco and Peru and a secondary focus in Haiti.

3. EHP activities in Haiti, Jamaica, and Peru were primarily focused on building NGOs' capacity to provide and manage environmental health services. The RUDO staff in Jamaica managed the EHP activity and assisted USAID/Haiti. The staff was quite pleased with the activity's accomplishments in very difficult environments.

4. In Tunisia, Morocco, and Benin, EHP's efforts appear to be divided among municipal, NGO, and community clients.

5. Funding for EHP's work with institutions that provide environmental health services to the urban poor has mostly come from RUDOs and G/ENV/UP, through both EHP's core and requirements contracts. The latter office has a memorandum of understanding with G/PHN/HN to work together on four types of activities: potable water, sanitation, solid waste, and policy. Besides field support, G/ENV/UP also co-funds EHP's production of a newsletter, *Voices from the City.* (See also Subsection F.)

6. EHP has leveraged or plans to leverage funding and other resources from other donors, municipalities, NGOs, and communities. In addition, EHP cooperated with GreenCOM, another USAID–funded global project, in Morocco and Haiti, using Sustainable Cities funding from G/ENV/UP. Funding from the Environmental Initiative of the Americas was also tapped.

7. In addition to direct field assistance to USAID–funded efforts, EHP has assisted other organizations by providing technical assistance in strategic planning (i.e., to CARE in LAC and Africa), developing a computer model for making

[13] This subsection mentions activities in Tunisia and Benin where a major focus was or will be the application of the CIMEP methodology (see Subsection A.3.).

urban water and sanitation technology choices (WAWTTAR), creating guidelines related to household credit mechanisms for environmental health infrastructure, and disseminating critical issues through publications, information networking, and a USAID seminar.

8. Since work in this area is intended to benefit the "urban poor," the evaluators reviewed results data disaggregated by income level and the gender of the household head (since these are often poorer households). However, these data are generally not available for EHP work in peri-urban areas.

9. In high unemployment, peri-urban areas, EHP has promoted approaches that rely on long-term community volunteers; most of the activities are not yet generating enough revenue to hire unemployed locals. Training in employable skills has also been limited in EHP activities with community organizations. Accordingly, unemployed locals have been disappointed by the lack of employment and training opportunities.

10. EHP has used a number of measures to gauge the success of its NGO activities. Quantitative measures have focused on the financial viability of assisted NGOs (e.g., their ability to provide services or water on an unsubsidized, fee-for-service basis as in Jamaica and Haiti) and the cost savings from the participation of community volunteers (e.g., Tunisia). Some measures track process changes (e.g., the frequency and quality of interactions between municipalities and citizens or NGOs, attitudes and behaviors of municipal staff and citizens) and outputs (e.g., the development of Fes's community-based action plan for solid waste in Morocco).

A.8.b. Conclusions

1. EHP efforts to document some municipal cost savings and behavior changes resulting from its peri-urban activities are useful but limited in geographic scope and timeframe.

2. Unless they can provide more jobs or more training for unemployed locals, EHP's volunteers are likely to lose interest in the community-based management structures.

3. Discussions with EHP staff members indicate that their work in this results area is intended to provide service equity by geographic area — the poor/peri-urban neighborhoods. Their goal is to track service provision to these areas rather than to target the poorest households within these neighborhoods.

4. Given the nature of buy-ins, EHP has not always been in a position to select its in-country clients (e.g., NGOs and/or municipalities). While the end goal of many of these activities is similar (i.e., improving the capacity of institutions to

provide environmental health services in poor urban areas), EHP has not yet conducted a systematic comparison of the relative merits of a multi-partner CIMEP approach versus approaches focused more exclusively on NGOs or municipalities.

5. It is interesting to note that these activities receive only limited central health funding and no funding from missions' health accounts. If missions' health money is being spent on the urban poor, it appears that environmental health services are a low priority for this funding.

6. EHP has been appropriately assertive and successful in seeking resources from other partners.

7. EHP continues the important role played by WASH in getting the word out about how to work and prioritize efforts in poor peri-urban neighborhoods, using seminars, publications, information networking, and preparation of guidelines.

A.8.c. Recommendations

1. G/PHN/HN and EHP may want to consider renaming this results area, to "Strengthening Public Sector Institutions and NGOs Working in Peri-Urban Areas," in order to draw attention to the geographic emphasis.

2. EHP's forthcoming synthesis report on peri-urban activities will be a valuable contribution. It will be helpful to others in the field to understand the critical issues related to each type of environmental health service (e.g., water supply, sanitation/drainage, solid waste) and EHP's experience in working with different mixes of clients (e.g., governments alone, NGOs alone, governments and NGOs together). When possible, the practical implications of working under different cultural, economic, and political conditions should be highlighted.

3. If core budget constraints continue, EHP may need to depend more on information dissemination and less on technical assistance to meet the needs of other organizations.

B. OTHER ENVIRONMENTAL HEALTH INTERVENTIONS

B.1. The Relationship between G/PHN/HN Results Area Activities and Other Activities in the EHP Portfolio

B.1.a. Background

Annex E is an EHP report that briefly describes the project's activities outside the results areas analyzed in Section IV.A.1.–A.8. These activities relate to tropical diseases, ARI prevention, lead, disaster assistance, and cross-center results. In addition, EHP has developed environmental health curricula, promotional materials, scopes of work, and results packages.

ARI prevention is discussed in Subsection B.2. Items noted in Annex E concerning Egypt and Slovakia are reviewed in the annexed country reports. Beyond that, it was not possible for the team to examine these varied activities in detail. The discussion below is designed to shed light on the relationship between G/PHN/HN results area activities and other activities in terms of funding and the use of staff resources.

B.1.b. Findings

1. Figure 5 shows EHP funding (as of August 15, 1997) by activity, broken down by core and requirements funding. The core contract total of $19.27 million includes $3.72 million in transfers to EHP (e.g., field support, OYB transfers). These funds come from missions and other bureaus and support both G/PHN/HN–related and other activities. The transferred funds are distributed among various line items and are not separately identified in the figure.

2. Funds directly attributed to G/PHN/HN activities total $9.71 million. Half of these funds stem from core monies and half come from requirements sources.

3. Funds designated for other activities total $7.8 million. Core funds account for $2.25 million, and the remaining $5.55 million comes from requirements contract funding. Much of the requirements contract funding paid for industrial and infrastructure assistance in Central and Eastern Europe. These activities were conducted during the beginning of EHP's work.

4. It is not possible to predict exactly how much demand there will be during a given year for different kinds of EHP services. Recent trends show a preponderance of demand related to G/PHN/HN results areas. However, a large

requirement for other activities could arise if USAID determined there was an urgent need for EHP services to a given country program.

5. As shown in part II of the figure, $2 million is budgeted for G/PHN/HN–related technical activities and $200,000 for other activities. Promotion and scoping work is expected to account for less than half of the latter amount.

6. EHP's core technical staff resources are heavily weighted toward work within the G/PHN/HN results areas. Six of the eight technical directors devote all of their time to these areas. The operations and engineering directors divide their time between G/PHN/HN results–related work and other activities.

FIGURE 5. EHP FUNDING, FY1993 – FY1997

	Core Contract	Requirements Contract	Total
I. Authorized			
Technical Activities Contributing to G/PHN/HN Results Areas	$4,856,000	$4,857,000	9,713,000
Other Technical Activities	2,248,000	5,554,000*	7,802,000
Administrative, Management, and Start-Up	5,427,000	0	5,427,000
ICU, Newsletters, Workshops	1,280,000	0	1,280,000
General Support for Missions and Bureaus	3,040,000	0	3,040,000
Collaboration, Liaison, and TAG	220,000	0	220,000
Subtotal	$17,071,000	$10,411,000	$27,482,000
II. To Be Authorized (as of August 31, 1997)			
Technical Activities Contributing to G/PHN/HN Results Areas	$2,000,000*	$0	$2,000,000
Other Technical Areas	$200,000	0	200,000
Subtotal	$2,200,000	0	$2,200,000
TOTAL	$19,271,000	$10,411,000	$29,682,000

* Estonia	$1,795,000	** $1,610,000 of this has been earmarked for Activities but has not been authorized:	
Central and Eastern Europe	1,568,000		
Romania/Bulgaria	1,381,000		
Romania	384,000	AIMI	$806,000
Gaza	100,000	Missions—	
Egypt	262,000	Field Support	200,000
West Bank	60,000	Other	604,000

B.1.c. Conclusions

1. Less than half of EHP's core activity funding has been for activities outside those related to G/PHN/HN objectives. The large requirements funding for other technical activities shown in part I of Figure 5 occurred before the project's emphasis shifted toward G/PHN/HN objectives, a shift that will likely become more pronounced, as shown in part II of the figure. However, EHP staff members recognize that they may be called upon to meet large, unforeseen requirements for services outside the G/PHN/HN framework.

2. The deployment of senior staff to work on these two categories of activities appears reasonable given the relative workloads and demand patterns.

B.1.d. Recommendations

1. EHP should continue to offer services outside the G/PHN/HN results framework in accordance with the project's mandate and the Global Bureau's mission for field support.

2. However, in view of the limits on core financial and staff resources, the multiple tasks identified to attain G/PHN/HN's results area objectives, and the limited time remaining under the current contracts, EHP should continue to give priority to the G/PHN/HN agenda.

3. Should a conflict arise over how to deploy core funds or technicians' time, every effort should be made to find an alternative source — if necessary, outside of EHP — for work outside the G/PHN/HN results framework.

B.2. Acute Respiratory Infections (ARI)

B.2.a. Findings

1. ARI is one of the three major disease categories targeted by USAID's child survival program. However, further research and planning are required before a field activity can be mounted.

2. In homes in developing countries, cooking fires are often a major source of exposure to smoke and particulate matter and are believed to affect acute lower respiratory tract infections (ALRI) among children. However, no hard data exist on whether reducing smoke exposure reduces disease.

3. Most cooking stoves are designed for fuel efficiency rather than improved health. WHO is planning to study the health impact of an improved stove.

4. As noted in EHP's Applied Study No. 3, *Prevention: Environmental Health Interventions to Sustain Child Survival,* field testing is needed to assess the feasibility and cultural appropriateness of behavior change to reduce ambient and indoor air pollution. Examples of steps that households and communities might take are to reduce the burning of solid waste, move cooking fires outdoors, and keep children away from smoky cooking stoves.

5. A technical advisory group (TAG) on air pollution, convened by EHP in 1996, identified indoor air quality and particulates as priority problems for EHP.

6. Following USAID's review of the TAG's recommendations over the ensuing six months, it was agreed that $100,000 of EHP's FY1997 funding would be used to identify initial activities and provide guidance to USAID on environmental measures to reduce the incidence of ARI. The project received its FY1997 allotment in August 1997. EHP has assigned responsibility for ARI to its technical director for public health.

7. EHP and G/PHN/HN/EH are beginning to identify research needs and possible linkages with NGOs concerned with the issue of smoke exposure. In addition, the TAG that EHP convened in July 1997 on indicators included coverage of ARI. The proposed strategy now includes two initiatives:

- an ARI network to serve as a link between the health and energy sectors and a forum for dialogue on ARI and indoor air pollution issues
- exploration of opportunities for a behavior change field activity, preferably in collaboration with an existing improved stove program.

B.2.b. Conclusions

1. EHP's inclusion of ARI and ALRI within the mandate of the indicator TAG will result in raising the visibility of these issues and increasing the potential that they are included in child survival objectives and programs.

2. Pursuit of collaborative activities as part of an applied research effort is a reasonable approach to developing an ARI strategy.

3. Approaches to behavior change and education that EHP has refined in other areas would appear to offer excellent opportunities for action on ARI.

B.2.c. Recommendations

1. EHP should proceed to develop its ARI strategy during the balance of the current contract and should provide a framework for USAID's longer-term strategy to introduce ARI prevention into missions' agendas.

2. G/PHN and G/ENV should ensure that technical services and training performed under the Energy and Environment IQCs are coordinated with EHP activities.

C. MONITORING AND EVALUATION

C.1. Findings

1. EHP conducts three categories of activities related to monitoring and evaluation (M&E):

- EHP developed indicators and monitoring plans for its own activities. The project regularly monitors and occasionally evaluates its activities. In addition to initial planning efforts to address the strategic objectives of USAID/G/PHN, EHP also made a regular effort to include M&E activities in its field work (e.g., Tunisia, Jamaica). A significant number of country activities implemented by EHP appear to include an M&E component.
- At the request of missions and RUDOs, EHP conducted evaluations of the work of other projects and contractors in several countries (e.g., activities in Egypt to evaluate institutional support contracts for Cairo GOSD and Cairo Water).
- EHP developed indicators and monitoring plans for several missions' sectoral and program activities (e.g., buy-ins for water/wastewater institutional indicators and environment sector indicators and monitoring in Egypt).

2. EHP uses a range of M&E approaches depending on the type and level of stakeholder participation and the data collection methods.

3. In Egypt, some stakeholders and clients felt that the EHP indicator and monitoring documents were confusing. The indicators were interpreted in different ways and did not include adequate narrative explanation.

4. Also in Egypt, some stakeholders and clients noted that there was a cultural dimension to the selection of indicators (e.g., the loss of "face" for host-country

ministries when targets reveal that they are not operating optimally). In addition, some informants felt that EHP consultants were too directive and that they did not adequately explain why their final report did not address all the issues raised in the stakeholder workshop (e.g., use of index indicators).

5. EHP's work on indicators is found in a number of EHP field reports (e.g., on Haiti and Ecuador) and other documents (e.g., the CIMEP manual). The July 1997 TAG meeting focused on indicator issues for environmental health.

C.2. Conclusions

1. EHP's core and field work consistently features monitoring and evaluation. In general, EHP supervisors, clients, and participants have been very satisfied with the quality of EHP's M&E work.

2. In particular, M&E activities that include participatory approaches, such as stakeholder workshops or training for community members and government officials in collecting data using various methods, have been highly successful and have resulted in increased "ownership" of the M&E results.

3. Many clients and stakeholders recognize that indicator work is iterative and particularly difficult early on due to competing perspectives, needs, and interests. As a result, consultants hired to work on indicators may have a difficult time gaining consensus on which indicators to adopt. In addition, there may be some confusion, at least initially, over the meaning of particular indicators or data collection forms.

4. There may be the potential for conflict of interest when EHP evaluates its own technical assistance.

C.3. Recommendations

1. Whenever possible and appropriate, M&E should be part of EHP activities.

2. The project as a whole, or at least its core staff members, should avoid evaluating their own technical assistance unless the evaluation is a participatory evaluation and appropriate caveats are discussed.

3. All of EHP's indicator and monitoring work should include a narrative discussion that clarifies definitions and explanations for indicators and data forms.

4. In its current work on indicators and monitoring, EHP should explore potential cross-cultural issues related to indicators and monitoring and should provide this information to its consultants.

5. Whenever possible, participatory M&E methods should be incorporated into EHP's work in order to transfer skills to host-country participants and to increase ownership of monitoring data and evaluation recommendations.

6. EHP is positioned to take a leadership role in environmental health monitoring and evaluation. The forthcoming report on indicators for environmental health resulting from the TAG should also synthesize indicator work now found in EHP's country reports and manuals.

D. LINKAGES AND PARTNERSHIPS

D.1. Findings

1. EHP's links have been strongest with other international organizations, including UNICEF, WHO, PAHO, UNDP, AMREF, Sanitation Working Group of the Collaborative Council,[14] World Bank, Inter-American Development Bank, and JICA. Its next-strongest links are those with international NGOs (e.g., CARE, Plan International), followed by two U.S. federal agencies (CDC, EPA), and U.S. NGOs (e.g., NCIH, World Resources Institute). EHP also has links with several U.S. universities through its subcontractors, Tulane University and Johns Hopkins University, and through other arrangements. EHP's links to the private business community, in the United States and overseas, appear to be very limited — including only those to soap manufacturers in Honduras, El Salvador, Nicaragua, and Guatemala; industrialists in Latin America in the Caribbean for a planned ISO 14000[15] workshop; and bednet makers in Zambia. EHP does not have partnerships with state and local governments in the United States.

2. These relationships have improved the field of environmental health, as well as USAID activities in this area, through the development of guidelines (e.g., with WHO and UNICEF), programming decisions (e.g., with CARE), policy

[14] The next subsection discusses a current problem with the Sanitation Working Group. Subsection E also discusses resource limitations imposed on EHP's international networking.

[15] ISO 14000 is a set of international standards used to promote market-driven environmental regulations.

dialogue (e.g., through the Collaborative Council), development of tools (e.g., WAWTTAR with Humboldt State University), and other activities.

3. In the field, EHP has facilitated cross-ministry cooperation, including between Egypt's Environmental Affairs Agency and Ministry of Health for the LEAP activity and between Benin's Ministries of Interior and Health. EHP has tried to maintain relationships with USAID–funded partners and routinely facilitates USAID links with other organizations (e.g., Zambia, the CIMEP work in Benin).

4. EHP has worked in Washington and in the field with other USAID Global Bureau projects and activities (e.g., BASICS, AIMI, GreenCOM, and PPC's Participation Forum). It also has field partnerships with other USAID contractors in several countries (e.g., ICMA and RTI in Slovakia, EPIQ in Egypt).

D.2. Conclusions

1. On balance, evaluation evidence indicates that EHP has done an excellent and consistent job of establishing and maintaining partnerships with other organizations engaged in environmental health activities which help EHP advance a shared environmental health policy agenda.

2. EHP's broad links with other types of organizations represent a valuable resource for USAID, helping to leverage resources for environmental health programming. The results of these partnerships have been impressive. However, more attention needs to be paid to relationships with the private sector.

3. EHP has played and should continue to play an important role in bringing together environmental and health interests within host countries.

4. According to informants, EHP's collaboration with PVOs and NGOs is state-of-the-art for the health sector at USAID, and the results of these efforts merit being disseminated to a wider audience.

5. In the competitive USAID environment, it appears that competition has sometimes influenced the relationship between EHP and other USAID contractors and cooperators. However, in a number of circumstances, EHP has overcome this structural issue and cultivated positive collaboration through relationships with individuals from other projects.

D.3. Recommendations

1. EHP should be allowed and encouraged to maintain external partnerships and linkages. Evaluation feedback indicates that links could be strengthened with the multilateral development banks. Sector assessments in the field may be one means to improve these linkages. The upcoming work in Benin/West Africa is notable for its extensive involvement with other donors and implementing organizations and should serve as a model for other EHP activities.

2. EHP should work with the Health Policy Division Director in G/PHN to disseminate EHP's collaboration with PVOs/NGOs to a wider health audience.

3. EHP needs to collaborate to a greater extent with the private sector for environmental health activities. EHP should work with BHR/PVC, PACT, and BASICS to learn more about private-public sector partnerships. (See for example, *Mobilizing the Commercial Sector for Public Health Objectives: A Practical Guide,* by S. Slater and C. Saadé and published jointly by UNICEF and BASICS.)

4. EHP should make every effort in the field to unite the environment and health sectors, either through new NGO relationships or through cross-ministerial cooperation.

5. USAID should explore new modes of cross-project collaboration to minimize competition and maximize the range of input into new project development. Adequate funding is needed to pay for such interaction and for joint activities.

E. OUTREACH TO INTERNATIONAL PARTNER ORGANIZATIONS

E.1. Findings

1. International donors, NGOs, and other agencies active in environmental health have mixed views of EHP.[16] On the one hand, they are very complimentary of EHP's technical competence, innovative capacity, and professionalism.

[16] Representatives of the following organizations were interviewed: the Aga Khan Foundation (AKF), Cooperative for Assistance and Relief Everywhere (CARE), U.S. Centers for Disease Control and Prevention (CDC), London School of Health and Tropical Medicine (LSHTM), Pan American Health Organization (PAHO), United Nations Children's Fund (UNICEF), World Health Organization (WHO), and World Bank (IBRD).

2. Interviewees used terms such as "center of excellence," "gold standard," and "model for us." Several had changed their own operating procedures to adopt methods and products used by EHP. All spoke of quality enhancement where EHP has been involved.

3. There is a high level of respect for EHP's innovativeness. Interviewees mentioned EHP's efforts to bring social scientists to work on issues formerly handled by engineers and doctors, to broaden the field of diarrheal disease control by adding a water and sanitation-based hygiene program to oral rehydration therapy, and to use community-based methods that reduce reliance on formal government structures. EHP (and WASH) manuals and checklists are considered excellent methodological tools.

4. On the other hand, international informants felt that EHP showed some strains or reticence in working with other aid entities which they attributed to USAID's limits on EHP's outreach. Several organizations had no contact with EHP before former USAID staff people began to work with these entities.

5. Below is a summary of interviewees' specific comments about EHP:

- Conceptualization: exceptionally sound
- Implementation and monitoring and evaluation: strong
- Information dissemination: excellent publications on a vast number of subjects which are well-targeted and well-received but do not reach far enough
- Influence: significant in a number of areas
- Partnerships: very strong within USAID, quite strong when associated with a group on an activity, but weaker toward the periphery
    - Problem may be in the definition of acceptable partners, as EHP cannot work in non–USAID countries, no longer participates in the Water Supply and Sanitation Collaborative Council (which was an inaccurate perception),[17] and is often dependent on contacts established through former USAID officials
    - EHP should network more, e.g., by giving collaborating PVOs an opportunity to review and discuss EHP's annual workplan

[17] EHP staff members report that they have not left the council, and that they will attend the biennial full council meeting in Manila this fall and will continue to participate in the council's Working Group on the Urban and Peri-urban Poor. However, EHP has suspended its participation in the Sanitation Working Group because its meetings are not well-organized, which makes it difficult to establish effective contact with other agencies there. As a member of the council, EHP is in a position to return to active participation when the dialogue is more productive.

- Areas for future collaboration: strong demand and need; USAID and EHP need to decide how much effort and resources to expend in widening the circle of contacts and influencing the methodological approach of others beyond the USAID immediate circle.

6. Below are some perceptions of EHP's achievements and influence among interviewees from organizations concerned with environmental health:

- EHP instituted standardized resistance testing of malaria drugs in Zambia, where there was a high level of resistance to chloroquine, which led to a major change in drug policy in Zambia, Malawi, and Kenya, and within WHO. (CDC comment) (Actually, AIMI was the USAID entity responsible for the impact in Malawi and Kenya and at WHO.)
- EHP engaged in a joint international effort to analyze how to deal with the reemergence of cholera in Latin America, which involved CARE, IADB, IBRD, PAHO, UNICEF, and USAID. The countries involved had had difficulty identifying priorities and opportunities. EHP applied methodology that took account of all concerns and relevant definitional techniques and feasibility procedures. The approach was accepted and gave impetus to new investments in water and sanitation. (PAHO comment)
- EHP undertook a valuable study that demonstrates the cost-effectiveness of hygiene promotion in preventing diarrhea where water supply and sanitation infrastructure exists or is being constructed. (UNICEF and WHO comment) (Judging from the interviews, the study appears to have influenced UNICEF's operations more than WHO's.)
- UNICEF recognizes the value of EHP's CIMEP approach to priority-setting and to indicators in urban water and health. (LSHTM comment)
- CARE is using and providing feedback on indicators of impact that EHP helped them define. EHP's approach to improving hygiene behavior by helping people analyze their own problems has also greatly influenced CARE. (CARE comment) (This person also expressed a desire for more collaboration on an institutional basis and less dependence on personal contacts.)

E.2. Conclusions

1. EHP can claim credit for significant achievements in extending innovative environmental health concepts and practices to international donors and NGOs.

2. EHP's ability to reach out to international partners is limited by resource constraints and a need to respond first and foremost to internal USAID needs. This prevents EHP from realizing its full potential to promote environmental health internationally in support of PHN's global leadership objective of "Improved policies and increased global, national and local resources for appropriate child health interventions."

3. The task is made all the more challenging by the fact that some of EHP's international partners or potential partners — especially those who maintain traditional bureaucratic boundaries between environment and health — may not appreciate the unique approach EHP offers in bridging the two sectors. International partners also may not fully understand the project's role as basically a bilateral USAID entity.

4. An investment of additional resources and effort in networking and information dissemination could improve EHP's ability to exert influence internationally.

E.3. Recommendations

1. G/PHN should review the extent to which EHP can and should reach out to the international donor and environmental health community given USAID's internal needs, global objectives, and resource availabilities.

2. If greater outreach is deemed to be advisable, and the necessary funds can be earmarked for EHP from existing or additional allocations, EHP and G/PHN/HN/EH should develop a modestly priced effort to expand the project's linkages with environmental health professionals and institutional partners along the following lines:

- Increase dissemination of EHP news and publications to a selected audience, with emphasis on provision of studies, manuals, "toolkits," checklists, etc. (see also next subsection)
- Increase institutional networking with NGOs and other partners who would be receptive to EHP's insights and whose experience and views, in turn, might benefit USAID's environmental health program
- Look for opportunities to restore useful contact with the Collaborative Council's Sanitation Working Group.
- In concert with USAID field missions, actively seek out other donor partners for coordinated action and investment in environmental health.

F. DISSEMINATION OF INFORMATION

F.1. Findings

F.1.a. Scope of Activities

1. EHP's Information and Communication Unit (ICU) serves EHP staff, USAID health and environment personnel, developing country clients, other U.S. government agencies, international organizations, NGOs, universities, and scientists and specialists around the world. The ICU:

- Maintains an environmental health library and a referral service to other collections through computerized databases — information requests more than doubled to about 335 per month between 1995 and 1997; about one-third of users are EHP and USAID staff members[18]
- Has prepared annotated bibliographies on malaria, diarrheal diseases, and ARI; additional bibliographies on lead pollution and emerging diseases are planned
- Has four targeted publication mailing lists for USAID and non–USAID specialists:
  - a VIP list for USAID (331 names)
  - a VIP list for non–USAID people (213 names)
  - a list for new publications (or NEWEHP, with 145 names that comprise mostly subcontractors or USAID offices designated in the EHP contract
  - a small list for selective mailings to USAID personnel (24 names)
- Operates a Web site — in May 1997, 650 organizations from 41 countries visited the site and downloaded 4,277 copies of EHP documents; the majority of requests were generated by a new offering of materials on malaria; ICU is seeking ways to simplify downloading for recipients who lack complex software, especially overseas
- Publishes capsule reports (1 to date), applied studies (6), and activity reports (39) — capsule reports and applied studies are synthesis

[18] Between January and April 1997, 1,340 information requests were received from: EHP staff, 246; USAID, 167; developing countries, 360; international organizations, 278; PVOs/NGOs, 124; U.S. government agencies, 76; universities, 64; and consultants/others 25.

documents; activity reports record EHP activities (see Annex D for a full listing)

- Publishes *Environmental Health and People* (EH&P), a newsletter issued three times a year with information on recent, current, and planned EHP activities and publications — anyone may request the newsletter, and about 650 people currently receive it
- Publishes a bulletin called *Prevention Notes*
- Publishes *Voices from the City* — a newsletter issued with joint support from G/ENV and G/PHN
- Distributes EHP news bulletins and abstracts of scientific papers by e-mail
- Prepares graphic presentation materials.

2. EHP is currently preparing text and data on urban environmental health problems and solutions as well as on the health impacts of dams on the Senegal River for inclusion in the next biennial *World Resources Report*, published by the World Resources Institute. This report receives wide distribution, including to libraries around the world.

3. EHP has published only six applied studies over the past three years, compared with 25 such studies released by WASH between 1991 and 1994. The principal reason is the high cost of such studies and the lack of core funds. The lack of funds also led to reductions in the size of the ICU support staff and limitations on the mailing list, which is half the size of the WASH list. Priority is given to USAID recipients, which results in limits on mailings to those outside USAID. Both outside consultants and core staff members help prepare synthesis reports.

F.1.b. Reactions of Users

1. Users of EHP documents and ICU services rate them very highly for their quality, thoroughness, and free, easy access. One technician called the librarian a "treasure." For the most part, recommendations included in EHP activity reports are valued and read closely by field missions. Many organizations routinely use EHP reports in solving technical and institutional problems. One mission officer praised the excellent quality of EHP flipcharts.

2. While most readers interviewed found EHP's reports well-written, one specialist considered some of them lengthy and difficult to read. A number of people told the team that they were interested in news from EHP but were unaware of the newsletter. Another reader pointed out that, despite their high quality, few of EHP's papers are published in refereed journals such as *Tropical Medicine,* which may be a missed opportunity to widen EHP's influence.

F.2. Conclusions

1. ICU's outreach could be significantly widened if more ample resources were available.

2. ICU is struggling against budget constraints to maintain the volume and variety of its services. The high quality of its product has not been sacrificed. Use of its Web site has grown impressively, which compensates for some of the limitations on hard-copy distribution. There may be some room to substitute electronic for print distribution for some people on the mailing list so that the list could be enlarged at little or no additional cost.

3. There is a perceived lack of publicity about recent and planned EHP publications and activities. Distribution of a list of all available EHP (as well as WASH and VBC) reports, accompanied by a topical index, would benefit users. The "market" could readily absorb more applied studies if funds were available to undertake them. Readership could be broadened, and knowledge about effective environmental health practices could be extended if special attention were paid to the readability and graphic presentation of EHP studies and if more capsule reports were published that included guidelines on proven methodologies.

4. The project's global reputation should be enhanced by EHP's contribution to the forthcoming issues of the widely distributed *World Resources Report.*

5. EHP could further extend its influence by publishing more widely in professional journals.

F.3. Recommendations

1. To the maximum extent possible given the project's financial and staff resources, EHP should expand ICU's mailing lists and Internet services; increase the publication of attractively prepared detailed studies and capsule reports on proven methodologies; seek ways to expand distribution of its newsletters; and make available an indexed list of project reports.

2. EHP should explore additional opportunities to publish its applied research and upcoming syntheses in a variety of formats in professional journals. EHP's reports or occasional papers may be appropriate for inclusion in enhanced literature reviews.

G. EHP AS BRIDGE BETWEEN THE HEALTH AND ENVIRONMENT SECTORS

G.1. Findings

1. There appears to be a strong awareness among RUDOs, missions, and the Center for Environment (G/ENV) of the importance of health in environmental activities. This is reflected in substantial EHP input into ENV–sponsored projects. On the other hand, the evaluation team was not advised of specific EHP inputs into the formulation of USAID's overall environmental agenda.

2. RUDOs and environment offices in missions and USAID/W bureaus have provided a total of $6.28 million to EHP for assistance to ten countries[19] and for a LAC workshop.

3. G/ENV personnel regularly participate in EHP staff meetings. The center supports information dissemination by co-funding *Voices from the City* and the *Lessons Learned in Water, Sanitation, and Health.*

4. Both G/ENV and the mission in Egypt have expressed interest in a tighter linkage between health and environment. G/ENV suggested that the linkage be formalized through a shared strategic objective or intermediate result.

5. With G/PHN/HN as the center responsible for EHP, it is not surprising that health funds account for a much larger proportion of EHP's budget than environment funds — $17.02 million as of June 30, 1997 (the bulk of it for the core contract). Nevertheless, the role of environment as a determinant of health is not yet fully reflected in USAID's health agenda and in the programming of USAID health offices in Washington and overseas.

[19] Bulgaria, Egypt, Estonia, Haiti, India, Jamaica, Nicaragua, Peru, Romania, and West Bank/Gaza.

FIGURE 6. ROLE OF HEALTH AND ENVIRONMENT FUNDS IN EHP BUDGET AS OF JUNE 30, 1997 ($ MILLIONS)

Sector	Core Funds		Requirements Contract Funds		Total Amount
	Amount	% of Total	Amount	% of Total	
Health	$14.39	87.7	$2.63	25.3	$17.02
Environment	1.95	11.9	4.33	41.6	6.28
Other	0.07	0.4	3.45	33.1	3.52
Total	$16.41	100.0	$10.41	100.0	$26.82

G.2. Conclusions

1. EHP has played a significant role within USAID as a bridge between the environment and health sectors.

2. The project's health contributions are well-recognized by the environment offices. To a lesser degree, health offices in Washington and overseas recognize the importance of environment as a determinant of health.

3. Much work remains to be done before EHP's role is fully incorporated into USAID's health agenda and programming. (See the discussion and recommendation in Section V.B.)

G.3. Recommendation

1. To maintain and nurture the unique role of EHP in promoting primary prevention for health, the project should remain within G/PHN. At the same time, given the interests of both G/PHN and G/ENV in the project, the two centers should consider involving EHP in a shared intermediate result supporting their respective strategic objectives. This would strengthen EHP's ability to support the two centers in terms of both policy development and implementation.

V. Contractor and USAID Management

This section covers the various aspects of contractor and USAID management of the Environmental Health Project. Subsection A discusses seven aspects of contractor management, which are contained in one set of findings, followed by conclusions and recommendations. Subsection B on USAID management is divided into two sets of findings, conclusions, and recommendations.

A. Contractor Management

A.1. Findings

A.1.a. Technical Assistance Delivery

1. Nearly all the host-country and USAID clients interviewed personally or via questionnaire give the EHP consortium's delivery system high marks. (The consortium consists of CDM and its subcontractors.) The consultants selected are judged to have appropriate technical qualifications and relevant overseas experience; many have a long record of experience in the countries of assignment. They arrive in a timely fashion with clearly defined scopes of work and are conscientious in meeting their deadlines. The project does a good job of backstopping technicians and contractual/financial arrangements (see also Subsection A.1.g. below). Only one mission, in response to the questionnaire, ranked some aspects of the delivery system as fair rather than good to excellent.

2. Particularly appreciated is the consortium's pre-planning process. Each consultant team is brought to EHP headquarters for intensive briefings and joint implementation planning before being dispatched to the client post. One CDM

subcontract technician has adopted the same technique for his firm's own consulting work. The pay-off in improving the efficiency and effectiveness of implementation is considered worth the cost of this process.

A.1.b. Relationships with Clients and Counterparts

1. EHP consultants typically demonstrate keen awareness of host-country situations, perspectives, and cultural sensitivities. For example:

- In Egypt, an EHP team deftly helped to restore a cooperative relationship that had broken down between two ministries involved in a USAID–financed project.
- In Jamaica, EHP consultants applied their technical and institutional skills to rework a faulty design by another contractor and to rapidly develop a model sanitation program for the urban poor that took full account of local practices and politics.
- Slovakian counterparts expressed great satisfaction with the style and quality of EHP's assistance. For example, the mayor of Trencin used 90 percent of an EHP specialist's recommendations in drafting a water management contract, and health officials in Banska Bystrica lauded EHP's technical and public relations advice in promoting radon control.

In one exception to the rule, the evaluators were told that progress on a pollution abatement effort in Zlatna, Romania, was hindered for several months until the EHP team improved its coordination with USAID and its understanding of the local political situation. This occurred during an early stage of EHP's involvement in Romania. (Other occasional problems are cited in Section IV.C., findings 3 and 4.)

2. The evaluation team heard much praise from USAID field missions for the quality of EHP's advice, presentations, and reports, for the project's flexibility, and for its rapid response to changing requirements.

3. Other contractors respect the consortium's professional competence and advice. Two separate contractors in Egypt said they had closely followed the technical and organizational recommendations in EHP evaluations of their projects.

4. EHP has formed collaborative relationships with other Global Bureau centers and with other bureaus. For example:

- The Office of Environment and Urban Programs (G/ENV/UP) holds monthly meetings with EHP. The two entities have cooperated on risk

assessment in Ecuador and India, on community management of environmental pollution in Tunisia, and on urban sanitation projects in Haiti and Jamaica. Staff members at G/ENV/UP believe that the technical elements of EHP that are not solely health-related (e.g., water and sanitation) could fit into the UP portfolio. (See also Section IV.G. regarding collaboration.)

- The Bureau for Latin America and the Caribbean (LAC) found EHP very responsive to a variety of training, community mobilization, and water and sanitation needs in coping with a cholera epidemic in Latin America.
- The Bureau for Humanitarian Response (BHR) occasionally uses EHP to review water and sanitation proposals by NGOs as well as environmental health indicators, although it relies on a separate contract for on-site water and sanitation work of the type formerly performed by WASH.
- In recognition of EHP's (and WASH's) experience in community participation processes, the Bureau for Policy and Program Coordination (PPC) has relied on EHP's support in conceptualizing and organizing its Participation Forums and in identifying speakers.

A.1.c. Contractor Staffing

1. EHP's core staff includes the project director; 10 technical, operations, and program directors with specialized responsibilities; and the librarian (see Figure 2). There were originally two additional executive slots, which were dropped because of a reduction of about half in annual core funding and as a response to service demand patterns. The technical directors for epidemiology, finance/private sector, and health information systems each left for personal reasons and were not replaced.

2. EHP and G/PHN/HN/EH agreed to convert the epidemiology slot to that of senior technical director. Epidemiological issues are now handled principally by the directors for public health and risk assessment/management and by the senior technical director; other staff members also have expertise in this area. The demand for expertise in health information systems and finance/private sector issues has been limited and can be met with consortium personnel, outside consultants, and/or technical advisory teams.

3. The position of senior technical director was created in 1996 to coordinate the technical divisions of EHP and to foster greater focus on results. EHP has benefited from the incumbent's long experience managing such activities and her skill in several EHP technical areas. EHP teammates and clients speak highly of her contributions.

4. Reductions in core funding also led to cuts in the time certain EHP managers devote to the project. The director devotes about 65 percent of his time to the project, and the operations director/institutional development director and the engineering/technology director spend about 85–90 percent of their time on EHP work. Other directors occasionally take on outside assignments when their workloads permit.

A.1.d. Roles of Subcontractors and Local Consultants

1. The evaluation team interviewed representatives of six of CDM's twelve subcontractors. They appreciate CDM's administrative efficiency, especially the fact that it pays on time. They also welcome the clarity of their assignments and the opportunity to participate in implementation planning pursuant to approved scopes of work (SOWs). Personal relations between CDM and subcontractor personnel are very good.

2. In the area of initial activity planning, CDM draws a distinction between core and resource subcontractors. Core subcontractors who have personnel assigned to EHP headquarters participate in developing SOWs along with USAID field missions and the Office of Health and Nutrition. Resource subcontractors, on the other hand, are called upon only to supply consultants to help implement SOWs. To avoid incurring additional costs, senior staff members of resource subcontractors are not asked to help plan or backstop EHP consultancies carried out by their employees or by short-term consultants.

3. One resource subcontractor would like to receive more communication about the status of EHP activities. CDM began sending quarterly reports to its subcontractors in early 1997. Another resource subcontractor, while recognizing changes in the demand for services and funding limits, expressed disappointment that more work had not come his way and that his firm had not been chosen to provide an activity manager to EHP as originally expected.

4. The consortium selects highly qualified local consultants to help implement its activities, as the evaluation team observed in Slovakia. EHP also uses local consultants in third countries: for example, one Tunisian involved with CIMEP in his country is now helping EHP with a comparable activity in Benin.

A.1.e. Activity Management and Reporting

1. EHP operates through an activity implementation plan (AIP) system. Activities are organized as relatively small units ranging between $50,000 and $80,000. Each activity has a single SOW with a clear product that one consultant

or group can accomplish and that one activity manager and an assistant can track and supervise. Groups of activities are overseen by a single manager or special team. This system allows for quick response to missions' requests and buy-ins and facilitates quality control over the selection of teams to staff activities.

2. Activity managers are delegated primary responsibility for their activities, and staff members are encouraged to participate in decision-making.

3. Under EHP's management information system (MIS), staff time is charged by activity. Each activity is tracked by a variety of management indicators and by the source of funds. Expenditures are identified by country, region, and technical area. A projected system to track the use of funds will identify the anticipated use of core funds to ensure that priority activities receive funding.

4. In addition to serving the project's management needs, the data generated by this system enable EHP to produce detailed ad hoc and special reports as required by USAID management. However, EHP staff advise that one report in particular — the annual Child Survival Report on expenditures by country — is very time-consuming to produce.

5. EHP's regular reports are designed to serve the AIP system. These include:

- Annual work plans — these include narratives and tables covering current status, plans, and funding requirements for each area of EHP activity
- Interim results reports — these are issued between annual work plans and are largely narrative, providing a rather comprehensive update of the status of each area of EHP activity and the reports available
- Quarterly reports — these summarize the status of activities and results, and funding data, with relevant attachments
- Monthly contract status reports — these are brief, computer-generated reports on the status of core and requirements funding
- Reports for the file — these include unpublished trip reports, field notes, and working papers
- Activity reports — these are records of completed consultancies, workshop reports, evaluations/assessments and comprise most of the EHP reports that are publicly available.

6. The quarterly reports include a section on EHP's use of subcontractors, which cites cumulative invoicing data and identifies the types of service provided by each subcontractor as well as which core personnel each furnishes. Data on subcontractor consulting assignments are not shown.

7. The written reports are complemented by regular weekly meetings and ad hoc meetings between EHP and G/PHN/HN/EH staff. All current issues are discussed at these meetings, but no official, permanent record is kept of how major issues have been resolved. (The EHP contract calls for the quarterly report to discuss major problems in implementing the contract and actions taken to resolve them.)

A.1.f. Achievement of Targets for Deliverables

1. EHP's "Interim Results Report" of June 1997 details the results achieved and anticipated for each of the eight areas in G/PHN/HN's results framework for the project. Sections III and IV.A.1–8 of this report confirm that substantial progress has been made in achieving the outcomes designated for each of the eight results areas. Personnel from both EHP and G/PHN/HN are able to track deliverables for a large number of individual activities via the system described above.

A.1.g. Cost Management

1. The USAID contracting officer (CO) for EHP states that there is nothing unusual in the cost structure of the CDM core and requirements contracts. He negotiated about ten delivery orders under the latter before this responsibility was shifted to field COs. In each case, he found CDM's proposals complete, technically sound, and generally accurate in costing. Where CDM came in high, a reasonable level was negotiated. Only one or two inquiries about CDM have come in to the Washington contracting office from field COs, which is one measure of field satisfaction with the contractor.

2. The two contracts were written at a time when USAID exceeded the requirements of the Federal Acquisition Regulations (FAR), e.g., by asking contractors to seek approval for normal consultant salaries and daily rates rather than just for exceptional rates. CDM complies with these requirements, seeking timely approvals of salary rates and subcontracts. The contractor also consults the CO before approving any questionable expense and promptly informs him when something goes wrong, such as theft of equipment at a post.

3. Tight annual funding levels for the core contract have forced EHP to make difficult choices in order to maintain essential activities. The choices have been to adjust the consortium's staffing patterns and work schedules (as noted above); to

limit proactive field activities, publications, and marketing;[20] to sacrifice a degree of outreach to non–USAID partners (see Sections IV.E–F); and to keep a tight rein on administrative expenditures.

4. The above measures have been criticized by some. One subcontractor interviewed complained that CDM requires too much precision in administrative/financial reporting and tries to save money by limiting the length of field trips and the time available for report writing. Other subcontractors lamented the fact that EHP is hindered from publishing more synthesis and technical guideline papers.

A.2. Conclusions

1. The EHP consortium is widely recognized for providing highly qualified and dedicated technicians who carry out their tasks efficiently, effectively, and in a collaborative and sensitive manner.

2. CDM has strong relationships with its core subcontractors. Consultants furnished by resource subcontractors are treated as full partners in carrying out EHP assignments, but the firms' senior staff members are not invited to share their views on the EHP agenda or on specific activities. This may be a good policy in general as a way to hold down costs, but it may lead to missed opportunities to meet particular needs with the subcontractors' available expertise. (Section IV.A.6. points out one area where subcontractor involvement would be useful.)

3. Some subcontractors feel left out of the loop on the general status of EHP activities. Others are disappointed because more work has not come their way.

4. EHP effectively manages a complex operation by defining single-purpose activities, delegating specified responsibilities to well-qualified personnel, encouraging participatory decision-making, and maintaining multiple tracking mechanisms. The combination of EHP reports and frequent meetings with G/PHN/HN/EH personnel provides a rich source of information that both sides can use for planning, implementation, and tracking. The reports also serve as an excellent record for review. What is currently lacking is a permanent record of the implementation problems that arise and how they are addressed. Such historical information would be helpful to USAID and to EHP management, particularly in the event of personnel changes.

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[20] With little or no money available for travel to promote EHP's agenda, technicians piggyback their marketing efforts onto trips taken in connection with ongoing activities.

5. EHP manages its funds in a very conscientious manner. Given the special workload inherent in the final contract year (e.g., the need to write synthesis reports) and the continuing high field demand for core staff services, a review of the cuts in work schedules in particular would appear to be in order.

A.3. Recommendations

1. The consortium and G/PHN/HN/EH should continue to keep EHP core staffing and work schedules under review to ensure that they coincide with available funds, final-year contract requirements, and service demands.

2. EHP should continue to look for every opportunity to secure additional core funds and buy-in resources that will allow the project more flexibility to achieve its potential for service and outreach.

3. CDM should seek to bring resource subcontractors more into the EHP "family" by increasing communication about EHP activities and by making greater use of the expertise of subcontractors' senior staff where it would clearly benefit the development of strategy and the planning and backstopping of activities. (See also Section IV.A.6.)

4. The quarterly report should provide summary information on the most recent use of each subcontractor for consulting assignments. This information would facilitate periodic review of the extent to which each subcontractor is needed or is being used to the project's full advantage.

5. In accordance with the EHP contract and to strengthen institutional memory, the quarterly report should include a record of significant issues that have arisen during the reporting period and the steps taken to resolve them. The absence of such issues also should be cited.

6. G/PHN/HN and EHP should review the annual Child Survival Report to see if the data compilation requirements could be simplified.

B. USAID MANAGEMENT

B.1. Project Oversight

B.1.a. Findings

1. In addition to the Environmental Health Project, the G/PHN/HN/EH division chief oversees the Africa Integrated Malaria Initiative (AIMI), the Emerging and Re-emerging Infectious Diseases (ERIDs) program, and special funds established by Congress for war victims and displaced children and orphans. Two environmental health specialists manage EHP, one serving as project manager, the other as senior technical advisor (STA).

2. Only since the arrival of the current G/PHN/HN/EH division chief in June 1997 have all three positions been filled simultaneously on a full-time basis. Prior division chiefs also held other positions. The current project manager, who assumed his position in November 1996, replaced an incumbent who served both as project manager (under the title of contracting officer's technical representative — COTR) and as division chief. The current STA came on board in November 1993.

3. The first COTR, who served until January 1995, insisted that EHP not undertake promotional visits to the field until it had studied environmental health issues in each region and was certain that EHP capabilities matched USAID objectives. The year 1994 was one of great program flux, and the COTR did not wish to have EHP appear to be "selling" its services until the missions — which were undergoing staff and funding cuts at the time — had their strategic plans in place. As a bridge, G/PHN/HN personnel discussed EHP with a number of missions during visits to the field. Project personnel, however, felt they lost precious time as a result of this restriction, which they felt deprived them of the opportunity to influence field missions' strategy development to include environmental health. They maintain that this has contributed to the difficulty of "mainstreaming" environmental health (see Subsection B.2. below). The second COTR, who served from January 1995 to November 1996 and who also had responsibility for development of G/PHN/HN strategic objectives, more actively promoted the project in the field and gave the EHP staff more scope for proactive work and control of day-to-day management.

4. The current project manager, a Johns Hopkins University fellow on assignment at USAID, is regarded as very accessible. He is perceived to open doors for the project in Washington and the field, and he has an excellent conceptual grasp of environmental health. A specialist in air pollution, hazardous

substances, and risk assessment, he plays an active technical role in planning and supervising EHP activities in these areas and has provided an intellectual challenge to EHP on technical issues. The STA is a Colorado State University professor of civil engineering who has long USAID experience and once served as COTR for WASH. He oversees EHP's water and sanitation activities.

5. The project manager and STA work closely on a daily basis with the EHP staff. They review proposed activities and reports before submitting them to the division chief for approval, and they track implementation and financing with the help of the AIP system described above. The time required from initial scoping of an activity to approval by G/PHN/PH/EH is usually less than a month. Both EHP and USAID managers see AIP as an efficient system even though it is paper-intensive. They seek ways to refine the process and ensure that it meets current USAID needs, e.g., in the formulation of indicators.

6. The project manager pays particular attention to reports in his area of specialization, and this has sometimes resulted in a delay in their approval.

B.2. Conclusions

1. After a rocky start on the EHP intervention strategy and a lengthy period of understaffing, G/PHN/HN/EH is now fully staffed with highly experienced specialists who are able to provide close management and strategic support to the project.

2. Relations between the Environmental Health Division and EHP are cordial and productive, with activities being carefully planned and tracked by both sides. The detailed AIP process contributes to an objective approach to management that serves the best interests of both parties.

3. Management decisions are generally expeditious in the context of the AIP system. Minor changes in management style should suffice to expedite processing of EHP approvals where there have been delays.

B.2.a. Recommendation

1. G/PHN/HN/EH should continue using the current AIP management system, while always looking for additional ways to expedite processing and simplify tracking.

B.3. EHP's Position Relative to Other G/PHN/HN Programs

B.3.a. Findings

1. Other G/PHN/HN divisions recognize the high quality and value of EHP services. For example, EHP works with other groups financed by the Global Bureau, such as Mothercare. However, some G/PHN/HN personnel say that more technical coordination between EHP and projects in breastfeeding, nutrition, and maternal health would be beneficial. The problem is that offices are short-staffed and are heavily engaged in vertical activity and reporting. This style of working makes it more difficult to do horizontal, cross-technical planning.

2. EHP has collaborated in several countries with BASICS, which falls under G/PHN/HN's Child Survival Division. The two projects have worked together on malaria control in Zambia and on a handwashing initiative in Central America, as well as on other field activities. However, while collaboration on individual activities is increasing, efforts to engage BASICS in joint strategic planning with EHP at the headquarters level have not borne fruit. As a result, environmental health measures are not consistently included in child survival programs.

3. In the field, EHP technicians have found that USAID health officers often appear to be unfamiliar with environmental health activities or their role in a comprehensive health program and that they lack experience dealing with or relating to other sectors.

4. A key factor that has contributed to keeping EHP out of the mainstream of USAID's health program and community is that the PHN Center's strategic framework — which EHP had no role in developing — makes no mention of environmental health. The framework does not exclude the concept, but its wording focuses on increased use of child and women's health and nutrition interventions. This is the context in which EHP's results framework was developed (see Figure 1).

5. Another factor that has limited EHP's involvement in child survival programming is the belief of many health specialists that environmental health measures are not cost-effective.

6. The G/PHN/HN leadership and those in the Environmental Health Division recognize that environmental health has not yet been mainstreamed into the PHN Center's child survival agenda. They have not yet developed a comprehensive strategy to bring this about but are supporting EHP's efforts to highlight experiences and data that demonstrate the cost-effectiveness of such activities. Among these efforts are the development of new indicators and a recent study on the cost-effectiveness of sanitation and hygiene promotion in preventing diarrheal disease, which has gained international attention. However, field studies to obtain

hard evidence in all of EHP's activity areas would be costly and would consume sizable portions of EHP's slim budget.

B.3.b. Conclusions

1. Other Global Bureau divisions and projects are happy to work with EHP on specific activities where their interests coincide. However, the lack of reference to environmental health in the PHN Center's strategic framework, as well as health sectoral traditions, general unfamiliarity with environmental health, and a belief that environmental health measures are not cost-effective have combined to keep EHP from being a full partner.

2. What is lacking is a clear USAID and G/PHN policy that environmental health is an integral part of child survival programming, and a set of concrete steps to facilitate such programming in both Washington and the field.

B.3.c. Recommendations[21]

1. In an effort to mainstream environmental health, it is recommended that G/PHN/HN establish a joint planning process, perhaps beginning with a retreat, that involves specialists and managers from G/PHN/HN, EHP, BASICS, other projects, and selected outside consultants. This group would attempt to create a comprehensive, model results framework showing how to integrate a variety of environmental health measures into child survival results packages. The model could draw in part on experience from existing programs such as the wide-ranging EHP work in Zambia and CIMEP activities in Tunisia and Benin. The framework would be supplemented by modules prepared by EHP that detail technologies, implementation steps, costs of different environmental health interventions, and the latest data on cost-effectiveness. The draft model would be distributed for comment before being issued as guidance. (See Section VI.A.1. concerning the need for related EHP action.)

2. G/PHN/HN/EH and EHP should continue to develop as much data on cost-effectiveness as resources permit.

3. To maintain cross-technical coordination on environmental health–related issues and to keep the model updated, G/PHN/HN should consider holding periodic meetings of specialists who work from different perspectives in a given

[21] Discussion of and recommendations for an additional management issue concerning AIMI is found in Section IV.A.2.

area, e.g., diarrheal disease. Such meetings might be held once a year at a time when the results would have the most impact on USAID programming.

VI. Future Directions

This section highlights issues for the immediate future and for the project's second five years. It contains items not yet discussed as well as selected recommendations from earlier sections.

A. The Remainder of the Current Contract

A.1. Management Issues

1. The EHP contract should be extended for six months to March 25, 1999, for the following reasons:

- A protest of the award delayed initiation of activities for six months.
- An extension will give the current experienced staff more time to contribute to important G/PHN/HN objectives.
- An extension will enable the team to launch short-term activities that would otherwise have to be postponed for lack of time to complete them by September 25, 1998.
- An extension can be funded within the current core ceiling of $28.2 million.

2. G/PHN/HN should proceed as outlined in Section V.B.2. to attempt to mainstream the project within the PHN Center's health program and community. This would primarily involve:

- Establishment by G/PHN/HN of a joint planning process leading to a comprehensive, model results framework and detailed modules that would demonstrate how to integrate environmental health activities into child survival programs
- Efforts by EHP to convince those in G/PHN/HN and on Capitol Hill of the importance and utility of environmental health. EHP should consider using the Manoff Group's expertise to identify issues for different audiences within G/PHN/HN and to advise on framing messages to demonstrate that EHP is seen to be crucial to success of the Child Survival SO. Evaluation informants suggested five potential topics in this regard:
  - Framing messages so that EHP's work with and for children is highlighted
  - Making the case for community-based environmental health delivery systems related to malaria, other ERIDs, potable water, and sanitation
  - Continuing to highlight the mother-water and women-water linkages
  - Spotlighting EHP's work in the policy arena to decentralize and finance public water authorities
  - Making the case for the cost-effectiveness of environmental health approaches.

3. Contacts with environmental health professionals outside of USAID are vital to the development of environmental health policy and the expansion of environmental health programming internationally. The ICU has much greater capacity to disseminate its publications than its resources allow it to use. Funds are also scarce for increased person-to-person contacts by EHP. In support of the Global Bureau's leadership function, G/PHN/HN should allocate a modest amount of additional funds (through increased authorization or reprogramming) to allow greater dissemination of EHP publications and intensified networking with potential NGO and donor partners.

4. Most of EHP's funds and senior staff resources are focused on activities related to the PHN Center's results areas. This is appropriate, given the demand for work related to these areas and the short time remaining under the current contracts. Should a conflict arise over whether to deploy core funds or a technician's time for PHN–related activities or for other work, every effort should be made to find an alternative source for the latter — if necessary, outside of EHP.

5. G/PHN/HN/EH and EHP should review the status of subcontractors who are experiencing low demand for their services. In some instances, demand might be increased through improved marketing (e.g., social marketing); in others,

demand may be low because the services are not needed (e.g., occupational health) or are being furnished by other projects.

6. The project needs a mechanism stronger than the Technical Advisory Group to integrate the expertise of some of the subcontractors and to facilitate dialogue with other USAID projects and outside experts. Behavior change/social marketing, community participation, and monitoring and evaluation are three important topics that could be addressed by regular meetings of technical working groups and/or advisory groups.

A.2. Activities within the G/PHN/HN Results Framework

1. Synthesis/Lessons Learned — During the time remaining under the current contract, EHP needs to focus on synthesizing the lessons learned from its experience in a wide variety of activities carried out in multiple countries and settings. The contractor advised the evaluation team that EHP is planning to do this, in accordance with the terms of the core contract. The syntheses will be important both for the design of the balance of the project and for planning and implementing future activities of USAID and other institutions.

2. Diarrheal Disease — One of the synthesis topics should be diarrheal disease, and EHP should consolidate its experience and lessons learned in a publication that would provide guidance for integrating primary prevention of diarrheal diseases with child survival programs. Such a publication would be useful not only to G/PHN/HN and field missions, but also to NGOs and international development organizations.

3. Sanitation Policy — Efforts to incorporate primary prevention into national sector policies and to broaden their application should continue, especially in countries where the community-based approach has been initiated. With USAID's support, EHP could facilitate national sector policy planning through workshops and extended technical assistance. Continued international networking is also essential.

4. Malaria — EHP should continue its work on malaria control in Zambia and should seek opportunities to replicate its approach in other African countries, in collaboration with BASICS or other child survival entities where possible. The project also should continue to respond to requests from missions in Latin America and Asia. At the same time, EHP should continue to promote its approach by developing links with WHO, PAHO, and UNICEF. Finally, the project should develop guidance materials for USAID missions and others to apply and integrate its approaches and lessons learned into child survival initiatives.

5. Risk Assessment — EHP should continue with community-based risk assessment and mapping and should prepare guidelines and manuals. A workshop on its approach or a broader workshop for NGOs on primary prevention could be effective. NGO interest will likely be keen, provided USAID policy strongly supports EHP's approach.

6. Community Participation — EHP needs to open the dialogue on CIMEP and community participation to a wider audience. Its work in this area also needs to incorporate relevant literature and the experiences of other organizations and USAID projects. EHP's broader work in community participation would benefit from the CIMEP experiences. Greater attention needs to be given to scaling up CIMEP, working out approaches that are not dependent on volunteers and which include employment, income, and other incentives for participating community members and for the involvement of youths and/or children. EHP's expertise at the community level is a strong asset, but its work in this area (CIMEP and non–CIMEP) needs to be synthesized.

7. Behavior Change — EHP needs to better integrate expertise from behavioral scientists and social marketing specialists (i.e., subcontractors such as the Manoff Group and Johns Hopkins University and other experts). Its work needs to be more clearly linked to behavior change models, and greater conceptual clarity is needed on the issue of individual versus community behaviors.

8. Institutional Capacity Building (Supporting Environmental Health); Institutional Capacity Building (Serving the Urban Poor) — More environmental health work needs to be conducted with ministries of health and health NGOs. EHP's upcoming synthesis report on peri-urban activities will be a valuable contribution.

9. Linkages and Partnerships — EHP should continue to utilize existing linkages and partnerships and should try to find additional opportunities to link in-country environmental and health organizations. Public-private sector partnerships should be explored with organizations that have expertise on this topic, such as BHR/PVC, PACT, and BASICS. EHP should continue to assist its field partners in developing proposal writing skills and finding sources of follow-on funding.

10. Monitoring and Evaluation — EHP's upcoming report on environmental health indicators should be used as a vehicle to stimulate dialogue among USAID projects, other environmental health donors, and implementing agencies. Indicator development for behavior change by individuals in households, communities, and institutions needs to be considered. In addition to its existing outcome indicators (e.g., cost-efficiency and recovery), EHP should consider index indicators to measure progressive changes within institutions over time as they take steps to adopt structural or procedural changes.

11. Emerging and Re-Emerging Infectious Diseases (ERIDs) — With its experience in control of malaria and other vector-borne diseases and as successor to the Vector Biology Control (VBC) project, EHP is well-situated to provide assistance in combating ERIDs. In addition to responding to requests for short-term interventions, EHP could provide longer-term technical assistance and could develop local and regional institutional capacity to carry out surveillance and training. One possibility is in South Asia, which is seriously affected by diseases such as dengue, visceral leishmaniasis, Japanese encephalitis, and malaria. The Vector-Borne Disease Center (VBDC) in Hetauda, Nepal, is strategically located to provide regional support to disease control efforts through surveillance, research, and training. In consultation with USAID/Nepal, G/PHN/HN should consider building on EHP's current small-scale technical assistance to VBDC beginning in FY1998. EHP could help expand VBDC's capabilities through assessment of its program and facility needs, assistance in program planning, training of center staff, collaboration on studies, development and testing of control strategies, and assistance in regional training.

B. THE NEXT FIVE YEARS

B.1. Reshaping the G/PHN/HN Results Framework for EHP

1. The current results framework has eight areas of activity:

- Two focused directly on disease prevention: diarrhea and malaria
- Five focused on cross-cutting processes in support of the first two areas: risk assessment, community involvement, behavior change, institutional capacity building, and urban poor
- One on sanitation policy.

2. EHP also has been assigned the task of laying the groundwork for an ARI initiative — a potential ninth results area.

3. Risk assessment plays an integral part in diarrhea and malaria prevention activities as well as in the areas of community involvement, behavior change, and urban poor. It made sense to have a separate package for risk assessment under the first EHP contract in order to develop the methodology for use in environmental health. This has now occurred to the point where risk assessment can serve as a standard tool for use in the five other named areas of activity. Refinement of the tool can continue to be an objective within those areas. Eliminating risk assessment as a separate area would reduce the number of overlapping objectives and simplify reporting on results.

4. One of the results areas is entitled, "Institutional Capacity Building (Strengthening Public Sector Institutions and NGOs Serving the Urban Poor)." It is recommended that the last four words be replaced with "Working in Peri-Urban Areas," to reflect the fact that EHP seeks to provide service equity by geographic area — the poor/peri-urban neighborhoods — rather than by targeting the poorest households within those neighborhoods. This fact indicates a need to draw greater attention to service equity issues (by geography, socioeconomic class, gender, etc.) in EHP's work with publicly funded institutions that provide environmental health services.

5. The sanitation policy package could be broadened to provide policy support to all the environmental health results packages. This would facilitate both the startup of environmental health activities and the scaling up of pilot activities that have succeeded. The tools for this results area would include international networking with other donors and NGOs, expanded and targeted information dissemination, and workshops and technical assistance within countries to promote policy formulation and planning.

6. The malaria results area could be expanded to incorporate other emerging and re-emerging diseases. (See Section A.1.12. above.)

7. Summing up these proposals, the reshaped results framework would appear as follows:

- Diarrhea Prevention
- Emerging and Re-emerging Disease Prevention
- Community Involvement
- Behavior Change
- Institutional Capacity Building (Strengthening Institutions Supporting Environmental Health)
- Institutional Capacity Building (Strengthening Institutions and NGOs Working in Peri-Urban Areas)
- Environmental Health Policy Support

8. These results areas would be designed with explicit, detailed emphasis on the promotion of child survival and maternal health, in support of G/PHN/HN's strategic objectives.

B.2. Prioritization

The project underwent considerable tightening in its early years when annual core funding was severely cut, four new subsectors of activity were dropped,[22] and EHP's mandate was revised to concentrate a major part of its effort on child survival and maternal health. At the same time, the project has maintained its capacity to respond to a variety of other service demands from field missions and other USAID bureaus and Global Bureau centers. Two approaches are offered to facilitate maintenance of this pattern during a time of restricted core funding:

- In case of a conflict over whether to use limited core funding or technical resources for G/PHN/HN results area work or another activity, the former should take priority under normal circumstances. The exception would be a situation where the agency asked EHP to meet an urgent non–PHN priority and there was no good alternative source.
- Much research remains to be done before an ARI initiative can be conceptualized and implemented in the field. EHP's current initial efforts on ARI could be carried forward in the next phase of EHP under a separate contract, leaving EHP free to concentrate on field activities within the above results areas, using existing environmental health technologies and approaches. Once a feasible ARI plan was established, a results package for field activities could be implemented through EHP or another mechanism.

B.3. Other Management Issues

1. Staffing — To meet the increasing and potential demands for services in the areas of institutional strengthening, community participation, and behavior change, EHP and G/PHN/HN may want to strategize about how to expand available expertise through an appropriate combination of core staff and consultant assignments.

2. Advisory Groups — The next contract should formalize advisory groups that include expertise from core contractors, subcontractors, G/PHN, and outsiders to provide dialogue and technical leadership on particular environmental health topics.

3. Relationship with G/ENV — Given the popularity of EHP with G/ENV/UP and the RUDOs and given USAID's interest in cross-center initiatives, G/PHN and G/ENV might consider experimenting with a shared intermediate result

[22] The subsectors were food hygiene, hazardous materials, occupational health, and injury.

supporting their respective strategic objectives. This innovative idea would be more likely to work if funding, results, and accountability were shared between the two centers.

5. Policy Links within USAID — EHP should have much stronger links with policy activities in both the G/PHN/Health Policy Division and G/ENV. EHP's experience in this area can make a significant contribution to both health and environment policy for USAID.

6. Democracy and Governance — Environmental health has proved to be an effective vehicle for developing local initiative and capacity for governance (e.g., Slovakia, Jamaica). This should be given recognition by strengthening the links between G/PHN/HN/EH and EHP on the one hand, and G/DG and regional bureau DG offices on the other.

7. Cost-Effectiveness — The next contract should provide sufficient funds to deal with cost-effectiveness issues should they become an obstacle to implementing promising environmental health measures.

Annexes

Annex A: Questions Posed to the Evaluation Team: EHP Evaluation Team Scope of Work

The evaluation team is tasked with answering several broadly-posed questions, as well as specific questions concerning both technical content and management issues. The answers to the specific questions are expected to clearly contribute to the discussion of the general questions, and the team's work plan should reflect this.

GENERAL QUESTIONS

The following two general questions should be addressed as major themes throughout the evaluation:

1. Is there a significant body of project accomplishments, in terms of a contribution in conceptualizing, advocating, and operationalizing development activities in environmental health? Are these being disseminated widely enough? Are shortcomings or failures of project activities being analyzed, corrected, and shared with others as lessons learned?
2. Has EHP influenced the way USAID pursues environmental health activities? Has EHP assisted USAID or international organizations to focus more strategically and effectively on setting priorities among environmental health problems and taking action? If so, how and at what operational levels? Are the goal, purpose, and objectives of the project and contract consistent with current levels of resources or do these need to modified? Given the increased constraints on USAID funding, what is the appropriate role for the current EHP contract within G/PHN/HN and other USAID programming? What does this imply for USAID's niche with respect to future programming in environmental health?

SPECIFIC QUESTIONS

Specific questions are organized to identify three interrelated areas of evaluation: technical content and approaches; field activities; and administration and management.

Technical Content and Approaches

Advocacy/Policy/Information Dissemination

1. Are EHP's results being adequately disseminated to USAID and USAID–supported projects and others active in international environmental health?

   What are the advantages/disadvantages of each mechanism used by EHP to report results and disseminate information? How could this reporting be improved? Is there a role for a lessons learned document from EHP, such as the one produced at the conclusion of the WASH project?

2. Has EHP been effective in establishing partnerships, either with NGOs, other international organizations, or other U.S. governmental agencies (federal, state, or local), which would be helpful in facilitating EHP's contributions to the environmental health policy agenda and in leveraging USAID activities?

   Are there other relationships which have not been pursued, or not pursued actively enough, which should be?

3. Are there specific examples of policies that were changed as a results of EHP-associated technical assistance in priority setting?

4. Have other organizations influenced EHP?

   How and how effectively are new concepts and technologies introduced to the project's activities? What are the relative roles of EHP and USAID staff in facilitating this process?

Environmental Health Interventions

5. How well has EHP conceptualized environmental health interventions as components of an overall health package, especially as related to key child survival diseases (diarrheal disease, malaria, and ARI)?

   Has the field-level implementation of this concept been effective?

6. In urban or industrial settings, how well has EHP conceptualized environmental health interventions as components of overall local environmental services delivery?

   Has the field-level implementation of this concept been effective? What have been the relative advantages and disadvantages of the various approaches pursued in different settings? Can EHP partnerships with PHN and non-PHN USAID units (e.g., Urban Programs) be strengthened to strategically support the linking of health and environmental services?

7. To what extent has EHP integrated its model for community participation (CIMEP — Community Involvement in the Management of Environmental Pollution) with other EHP efforts?

   Could this integration be improved? If so, how?

Evaluation/Monitoring

8. Has EHP included effective evaluation as a component of its activity design?

   Are lessons learned from such evaluations effectively captured and communicated? Are there instances in which lessons learned from a given activity have had a substantive impact on the design of subsequent related activities?

9. Has EHP developed monitoring tools, particularly as these relate to reporting results which respond to USAID objectives, both for G/PHN/HN and for field Missions?

   To what extent has EHP succeeded in developing an approach to monitoring field activities that links inputs (resources and level of effort) to outputs (activities completed), outcomes (changes in intermediate processes such as sustained behavior change which can be related to change in health status), and where possible, impact (actual change in

health status)? Are adequate baselines established where appropriate, and do provisions exist for obtaining data required to monitor progress (either through ongoing or planned data collection activities of USAID, countries themselves, or other organizations, or through data collection activities supported by the project itself)? Is there consensus on the use of these indicators by the field and if not, why not?

Field Activities

General

1. Is field assistance and support effective, appropriate, and sustainable?

   Are there ways in which the effectiveness and impact of this assistance can be increased, either by the contractor or by USAID? Has EHP succeeded in applying its technical expertise and approaches in field programming? Has the project succeeded in using opportunities presented in the field to learn and to advance its technical agenda? How might interactions between field activities and technical capabilities be further strengthened?

Coordination/Collaboration

2. Has EHP engaged in collaboration and cooperation with other USAID projects in the planning and implementation of its field activities?

   How successful has such successful collaboration been? Are there particularly positive examples of interaction and cooperation that should be built on, or others that have revealed approaches that are unsuccessful or too costly?

3. In its field activities, has EHP interacted effectively with other international organizations (such as UNICEF and WHO, as well as PVOs and other nongovernmental organizations) engaged in programming related to environmental health?

   Should relationships with such organizations be more extensively or systematically included in future EHP programming? To what extent is the ability to pursue such relationships in the field affected by the local USAID Mission's level of engagement with these other international organizations?

USAID Mission Satisfaction

4. Have EHP field activities met the objectives of the USAID unit requesting those services, whether G/PHN or a USAID Mission/Bureau? (Cite specific examples)

   What are approaches that have been most and least successful in building and sustaining working partnerships with USAID field Missions? What aspects of the project's assistance and operations are viewed as most effectively contributing to Mission programming, and are there aspects of EHP operations that are viewed by Missions as problematic?

5. Evaluate EHP's assistance in terms of the following criteria:

   a. timely availability of consultant teams
   b. selection process for consultant teams (adequate in terms of technical qualifications, language skills, and relevant overseas experience)
   c. adequate planning
   d. use and strengthening of in-country capacity
   e. having clearly defined scopes of work
   f. adequate administrative and managerial support
   g. mechanisms for accountability and communication

Administration and Management

USAID relationships

1. Is the contribution of EHP to G/PHN/HN SOs clear to the SO teams responsible for their implementation?

   Within USAID, EHP has had to adapt to change in focus brought about by the establishment of G/PHN/HN Strategic Objectives since the project started. If the EHP contribution is not clear, what should be done by EHP (both USAID management and the contractor) to improve and articulate its contribution to G/PHN/HN SOs?

2. What aspects of the relationships between the EHP contractor management and the USAID Office of Health and Nutrition could be improved?

Issues to consider include USAID project management changes, common USAID and EHP contractor vision (or lack thereof), communications (with Missions and other USAID units), approval processes, inter alia.

3. How effective has the USAID/G/PHN/HN project management team been in serving as broker, facilitator, and negotiator in interactions between the Project and USAID, both field Missions and in AID/Washington?

   Is the USAID team sufficient in size, qualifications, and organization to effectively play this role, as well as its technical/management oversight role? In what ways could this function be improved?

Staffing

4. Is the EHP project adequately staffed to meet its contractual and field-demand-driven obligations?

   In particular, what has been the impact on the project of losing the services of the Technical Director for Health and Management Information, Technical Director for Finance, and the Technical Director for Epidemiology? Have adequate steps been taken to provide the needed services in these disciplines? What has been the impact of the addition of a Senior Technical Director to the project? How has this new position assisted in the integration of activities across EHP disciplines, increased the attention given to environmental health aspects to each task, and been accepted by the other staff members?

5. How effectively has the EHP contractor made use of the full capabilities of the consortium, including those subcontractors engaged for specific technical or geographic skills?

   Are there specific activities in which the presence or absence of a specific subcontractor has had a significant impact on the success or difficulty of the activity?

Reporting and deliverables

6. Are the management monitoring tools in the contract sufficient to measure and communicate progress?

   Are there redundancies that could be omitted/streamlined? (Tools include annual work plans, quarterly reports, monthly contract status reports, activity reports, trip reports, applied studies)

7. Are the targets for deliverables being met?

   Compare implementation to date against the specified terms for each of the contract's delineated areas of activity and requirements.

Costs

8. Are costs of the project's services reasonable?

   Determining cost factors in a given case may be the project's design, the nature of the contract, efficiency of implementation by the contractor, and/or the nature of the services themselves?

Annex B: Principal Contacts

USAID/Washington

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[25] Visited by the evaluation team.

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Annex C: Mission/RUDO Questionnaire

G/PHN and the Health Technical Services Evaluation Team would like to request your assistance with the interim evaluation of the G/PHN-funded Environmental Health Project (EHP). We are trying to understand how well this project has served your mission/RUDO's needs in the field. If there are other individuals in the Mission/RUDO who would also like to comment on EHP's performance in the field, please forward this questionnaire to them.

The following e-mail questionnaire is brief and will take approximately 10-15 minutes to complete. Please e-mail ("lsanei@usaid.gov") or fax (703-807-1801) your responses to Ms. Linda Sanei, Health Technical Services Project, by July 25.

I. Background Information

Name (Optional):

Office/Division/Team Affiliation:

Mission/RUDO:

What was your personal involvement with EHP activities in your mission/RUDO?

Time Period (s): From_____To_____
From_____To_____

Your role:

II. SUBSTANTIVE CONTRIBUTIONS OF THE ENVIRONMENTAL HEALTH PROJECT

A. *Quality and Quantity of Project Services*

1. What kinds of services were provided by EHP to your Mission/RUDO? (Mark items that apply)

   ☐ Technical advising
   ☐ Training
   ☐ Workshop(s)
   ☐ Applied Research
   ☐ Other (specify)

2. Please rank the following services provided by EHP:
   (5=Excellent; 4=Good; 3=Fair; 2=Poor; 1=Unable to assess at this time)
   ___ Overall Usefulness
   ___ Quality of EHP Staff
   ___ Quality of Local Counterpart Staff
   ___ Effectiveness of EHP collaboration/coordination with host country institutions
   ___ Effectiveness of EHP relationships with host country policy/decision makers
   ___ Institution Building
   ___ Quality of Workshops, Conferences or Seminars
   ___ Quality of Training
   ___ Usefulness of Reports
   ___ Dissemination of Technical Information and Field Results
   ___ Monitoring and Evaluation
   ___ Other (please specify):

B. PROJECT IMPACT AND RELEVANCE

1. Who benefited most from the EHP activities in your country?
   (Mark items that apply)
   ☐ USAID
   ☐ Host Country
   ☐ Other Donors (specify):
   ☐ Other (specify):

2. Has EHP helped address priority concerns of your mission/RUDO?

   Yes _____ No_____ Unable to Assess at this Time_____

3. Describe the most important outputs generated by EHP to date (e.g. new information, recommendations, guidelines, actions, etc.) Be as specific as possible.

4. How have the project's outputs been used by USAID (Mark items that apply):

   ☐ To inform policy dialogue with host country government
   ☐ To collaborate with other donors
   ☐ To develop USAID program strategy/results framework
   ☐ To report on program/project results
   ☐ To design new projects/programs
   ☐ To respond to mandate/requests from Congress
   ☐ Other (specify):

5. How have the projects' outputs been used by host country institutions, including NGOs (check items that apply):

   ☐ To reform or formulate new sanitation or other environmental health policy or laws
   ☐ To strengthen host country institutions
   ☐ To improve service provision
   ☐ To enhance community participation
   ☐ To improve dialogue between host governments and the public
   ☐ To attract other donor funding for environmental health
   ☐ Other (specify):

6. In terms of your Mission's/RUDO's strategic objectives, what have been EHP's most significant accomplishments/results/impacts, to date? Please be specific. Examples may include providing approaches/technologies, policy and program changes/prioritization; behavior changes by providers & consumers; strengthened institutions (e.g. serving the urban poor, dedicated to environmental health), or other results.

7. As a cross-sectoral project, EHP hopes to impact USAID and host country programming by promoting prevention in the health sector and health issues in the environmental sector. What impact has the work of EHP had on environmental and health programming for:

   Your mission/RUDO:

   Host country:

8. In which areas of assistance could EHP's work be made more useful, relevant or sustainable (for USAID, host country government, host country NGO or community needs)

9. What steps, if any, could be taken to improve the effectiveness of EHP's dissemination efforts?

10. What steps could be taken to improve the effectiveness of EHP's monitoring and evaluation efforts?

11. Does your mission/RUDO use other cooperators/contractors for environmental health-related activities? If yes, what do you see as EHP's comparative advantages and disadvantages?

III. PROJECT ADMINISTRATION/MANAGEMENT/OPERATIONS

A. Ranking of Project Administration & Management

1. Please rank the following aspects of the management of the project by EHP and AID/W:

   (5=Excellent; 4=Good; 3=Fair; 2=Poor; 1=Unable to assess at this time)

	EHP Contractors	USAID/W
Timeliness of Responses/Services		
Logistical Arrangements for Country Visits		
Having Clearly Defined SOWs for Delivery Orders and Consultants		
Contractual/Financial Arrangements		
Mechanisms for Accountability & Communication		
Flexibility/Adaptability (mission needs; reengineering, etc.)		
Overall Planning/Management/ Backstopping		
Additional Comments/Explanations:		

B. Areas for Improvement

1. What have been the most significant problems encountered in carrying out the project (e.g., Management, Implementation and/or Technical)? Please be as specific as possible.

2. How should EHP prevent these problems in the future?

IV. FUTURE PROJECT ACTIVITIES

A. Future Needs/Interests

1. In the next two to five years, are there other critical environmental health issues that EHP should be addressing, that it has not addressed to date?

2. In the next two to five years, which services do you foresee your mission/RUDO requiring from EHP and would you be willing to pay for these services entirely out of mission/RUDO funds if core funds were not available?

3. What, if any, changes or improvements, would you like to see in the nature of the services provided by the project (please specify)?

4. Please add any additional comments on what you would recommend for EHP's focus or project structure in the future.

Annex D: Publications from the Environmental Health Project (as of September 1997)

ACTIVITY REPORTS

Activity Report 1. *Survey of U.S. Private Voluntary Organizations Working in Environmental Health*, Hirschey, Ann. WASH Task 490, EHP, Arlington, July 1994.

Activity Report 2. *Evaluation of the Suchitepequez Ivermectin Distribution Program in Guatemala*, Burnham, Gilbert and Oliver, Charles W. Act. 021-CC, EHP, Arlington, Va., December 1994.

Activity Report 3. *A Review of National Cholera Plans in Guatemala, Honduras, and Ecuador*, Chudy, John Paul. Act. 020-CC, EHP, Arlington, Va., December 1994.

Activity Report 4. *Evaluation of Water Interventions in Bolivia*, Powell, Clydette, Larrea, Oscar, and Vargas, Veronica. Act. 030-RC, EHP, Arlington, December 1994.

Activity Report 4. *Evaluacion de Intervenciones de Agua en Bolivia*, Powell, Clydette, Larrea, Oscar, and Vargas, Veronica. Act. 030-RC, EHP, Arlington, Va., December 1994.

Activity Report 5. *A Review of Sanitation Program Evaluations in Developing Countries*, LaFond, Anne. Act. 016-CC, EHP, Arlington, Va., February 1995.

Activity Report 6. *Review of an NGO Based Peri-Urban Environmental Health Project in Peru*, McCommon, Carolyn and Altobelli, Laura. Act. 131-CC, EHP, Arlington, Va., February 1995.

Activity Report 7. *Technical Assistance in Curriculum Development for the University of Medicine and Pharmacy, Cluj, Romania*, Rest, Kathleen. Act. 156-RC, EHP, Arlington, Va., March 1995.

Activity Report 8. *Community Risk Assessment in Tunisia: Socioeconomic, Hygienic, and Environmental Analysis of Three Outlying Quarters: R'tibat*

(Kasserine), Oued Blibane, and Ksibet-Chott (Sousse), Boukraa, Ridha and Bechraoui, Nadia. Act. 158-RC, EHP, Arlington, Va., June 1995.

Activity Report 8. *Diagnostic Socio-Environnemental: Analyse Socio-Economique, Hygienique et Environnementale de trois quartiers peripheriques R'tibat (Kasserine), Oued Blibane et Ksibet-Chott (Sousse)*, Boukraa, Ridha and Bechraoui, Nadia. Act. 158-RC, EHP, Arlington, Va., June 1995.

Activity Report 9. *Towards a Functional Vector-borne Disease Research and Training Center in the Endemic Terai, Nepal; Technical Assistance 1994-1995*, Wijeyaratne, Panduka, Oliver, Charles W., Upreti, Tara S., and Wirtz, Robert A. Act. 130-RC and CC, July 1995.

Activity Report 10. *Findings and Institutional Options for Future Management of Water Supply and Wastewater in the Governorates of Fayoum, Beni Suef, and Menya*, Edwards, Daniel B., Laredo, David, Selim, Tarek, Bakr, Mahmoud, El-Tayeb, Mostafa, Genena, Neamat, and Zaki, Salah. Act. 173-RC, EHP, Arlington, Va., August 1995.

Activity Report 11. *Action Plan: Institutional Development for Water and Wastewater Utilities in the Governorates of Fayoum, Beni Suef, and Menya; Provincial Cities Development Project, Egypt*, Edwards, Daniel B., Laredo, David, Selim, Tarek, Bakr, Mahmoud, El-Tayeb, Mostafa, Genena, Neamat, and Zaki, Salah. Act. 173-RC, EHP, Arlington, Va., September 1995.

Activity Report 12. *Summary Report: Institutional Development for Water and Wastewater Utilities in the Governorates of Fayoum, Beni Suef, and Menya; Provincial Cities Development Project, Egypt* , Edwards, Daniel B., Laredo, David, Selim, Tarek, Bakr, Mahmoud, El-Tayeb, Mostafa, Genena, Neamat, and Zaki, Salah. Act. 173-RC, EHP, Arlington, Va., September 1995.

Activity Report 13. *Summary of Activities in Zlatna, Romania, 1994-1995 (Lead Exposure in Young Children; Air Quality Monitoring and Control; Occupational Health and Safety)*, Billig, Patricia. Act. 108-RC, EHP, Arlington, Va., January 1996.

Activity Report 14. *Evaluation of the Institutional Support Contract for Cairo General Organization for Sanitary Drainage*, Zobrist, Fred, Carney, James, and Shaw, Kennedy. Act. 196-RC, EHP, Arlington, Va., September 1995.

Activity Report 15. *Chloroquine Efficacy Study in Zambia, 9 May to 9 July 1995*, Ettling, Mary, Bloland, Peter B., and Ruebush, Trenton K. Act. 177-CC, EHP, Arlington, Va., November 1995.

Activity Report 16. *PVO Workshop on Environmental Health, June 29, 1995*, Bradford, Bonnie. Act. 160-CC, EHP, Arlington, Va., November 1995.

Activity Report 17. *An Evaluation of Technical Options for Improvement of the Wastewater Treatment System at the RAS Kiviter Oil Shale Chemical Plant, Kohtla-Jarve, Estonia*, Castaldi, Frank J. Act. 228-RC, EHP, Arlington, Va., March 1996.

Activity Report 18. *Improvement of the Dephenolization Plant at the RAS Kiviter Oil Shale Chemical Plant, Kohtla-Jarve, Estonia*, Packy, Dan. Act. 229-RC, EHP, Arlington, Va., March 1996.

Activity Report 19. *Cholera Prevention in Ecuador: Community-Based Approaches for Behavior Change*, Whiteford, Linda M., Laspina, Carmen, and Torres, Mercedes. Act. 126-RC, EHP, Arlington, Va., January 1996.

Activity Report 20. *Summary of Phase I: Restructuring and Environmental Improvement. Assistance to RAS Kiviter, Kohtla-Järve, Estonia, 1994-1995*, Jackson, Don, Andrechak, Ed, Harris, Graham, Mansfield, Frank, Murrie, Joseph, Orr, Nancy, Parrish, Robert, Rowley, Art, Salt, Ed, Sinor, Jerry, Swenson, Doug, and Wilkinson, Leslie. Act. 151-RC, EHP, Arlington, Va., March 1996.

Activity Report 21. *A Plan for CDS to Establish a Water and Sanitation District in Cité Soleil, Haiti*, Rosensweig, Fred, McGahey, Chris, Noth, Richard, Shafritz, Lonna, and Gottert, Peter. Act. 221-CC, EHP, Arlington, Va., May 1996; revised, with addendum September 1997.

Activity Report 22. *An Assessment and Source Apportionment of Airborne Particulate Matter in Cairo, Egypt*, Rodes, Charles E., Nasralla, Mahmoud M., and Lawless, Philip A. Act. 133-RC, DO #7, EHP, Arlington, Va., August 1996.

Activity Report 23. *Evaluation of the Institutional Development Component of the Cairo Water II Project: The General Organization for Greater Cairo Water Supply*, Zobrist, Fred and Edwards, Dan. Act. 243-RC, DO #19, EHP, Arlington, Va., June 1996.

Activity Report 24. *Addressing Environmental Health Issues in the Peri-Urban Context: Lessons Learned from CIMEP Tunisia*, Yacoob, May and Kelly, Margo. Act. 244-RC, DO #3, EHP, Arlington, Va., September 1996.

Activity Report 24. *Placer les Questions de Santé environnementale dans le Contexte periurbain: leçons tirées du Projet GESCOME tunisien*, Yacoob, May and Kelly, Margo. Act. 244-RC, D.O. #3, EHP, Arlington, Va., September 1996.

Activity Report 25. *Monitoring the Effect of Behavior Change Activities on Cholera: A Review in Chimborazo and Cotopaxi, Ecuador*, Whiteford, Linda M., Laspina, Carmen, and Torres, Mercedes. Act. 245-RC, D.O. # 1, EHP, Arlington, Va., October 1996.

Activity Report 26. *Coping with Intermittent Water Supply: Problems and Prospects. Dehra Dun, Uttar Pradesh, India* , Choe, KyeongAe, Varley, Robert C. G., and Bijlani, H. U. Act. 193-CC, EHP, Arlington, Va., October 1996.

Activity Report 27. *Development of Indicators for the Water and Wastewater Sector in Egypt*, Laredo, David, Selim, Tarek, and Carney, James. Act. 239-RC, D.O. #20, EHP, Arlington, Va., December 1996.

Activity Report 28. *Environmental Assessment for the Gaza Industrial Estate Project*, Davis, Bob, Abumojhli, Iyad, Castaldi, Frank, Hamady, Sana, and Hodgkin, Jonathan. Act. 250-RC, D.O. #22, EHP, Arlington, Va., December 1996.

Activity Report 29. *Summary of Phase II: Restructuring and Environmental Improvement Assistance to RAS Kiviter, Kohtla-Järve, Estonia, 1994-1995*, Jackson, Don, Andrechak, Ed, Brodie, James, Castaldi, Frank, Harris, Graham, Mansfield, Frank, Orr, Nancy, Packy, Daniel, Parrish, Robert, Rowley, Art, and Salt, Edward Wilkinson Leslie. Act. 230-RC, D.O. #15, EHP, Arlington, Va., December 1996.

Activity Report 30. *Using Rapid Assessment as a Health-Planning Tool in Zambia*, Wijeyaratne, Panduka, Balderrama, Fanor G., and Baer, Franklin C. Act. 328-CC, EHP, Arlington, Va., FORTHCOMING.

Activity Report 31. *Institutional Assessment for Lead Exposure Abatement and Reduction in Cairo*, O'Toole, Laurence J., Phoenix, Janet A., and Gamaleldin, M. Walid. Act. 255-CC, EHP, Arlington, Va., December 1996.

Activity Report 32. *Lead Exposure Abatement Plan for Egypt: Results of Environmental Sampling for Lead*, Chappell, Richard, Ezzeldin, Hossam S., Billig, Patricia, Ault, Steven K., and Brantly, Eugene. Act. 256-CC, EHP, Arlington, Va., August 1997.

Activity Report 33. *Reducing the Environmental and Health Impacts of Mercury and Cyanide in Gold-Mining in Nicaragua*, Rosario, Joana and Ault, Steven K. Act. 245-CC, EHP, Arlington, Va., March 1997.

Activity Report 34. *Designing a Sanitation Program for the Urban Poor: Case Study from Montego Bay, Jamaica*, Perez, Eduardo A. and Reddaway, Betsy. Act. 123-CC, EHP, Arlington, Va., May 1997.

Activity Report 35. *Evaluation of the Jamaica Urban Environmental Program for On-Site Sanitation*, Daane, Janelle, Lamb, Mary, and Perez, Eduardo A. Act. 349-CC, EHP, Arlington, Va., July 1997.

Activity Report 36. *Summary of EHP Activities under the "Promotion of Private Health Markets Project": Slovakia, Poland, and Romania*, Ault, Steven K., Pepper, Lewis, Pollard, Richard, and Rest, Kathleen M. Act. 149-RC, EHP, Arlington, Va., August 1997.

Activity Report 37. *Lead Exposure Abatement Plan for Egypt*, O'Toole, Laurence J., Brantly, Eugene, and Billig, Patricia. Act. 355-CC, EHP, Arlington, Va., October 1997.

Activity Report 38. *Air Pollution and Child Health: Priorities for Action. Report of a Meeting of an EHP Technical Adviroty Group on Air Pollution, July 17-18, 1996, Arlington, Virginia*, Bendahmane, Diane B. Act. 263-CC, EHP, Arlington, Va., June 1997.

Activity Report 39. *Identification of Financial Resources and Credit Mechanisms for the Urban Sanitation Program1 in Jamaica*, Ocasio, Raymond. Act. 357-CC, EHP, Arlington, Va., August 1997.

APPLIED STUDIES

Applied Study 1. *Talking Drums: A Communication Handbook for Field Managers of River Blindness Prevention Programs*, Oliver, Charles W. Act. 004-CC, EHP, Arlington, Va., April 1994.

Applied Study 2. *Financial Services and Environmental Health: Household Credit for Water and Sanitation*, Varley, Robert C. G. Act. 125-CC, EHP, Arlington, January 1995.

Applied Study 3. *Prevention: Environmental Health Interventions to Sustain Child Survival*, Murphy, Helen, Stanton, Bonnie, Galbraith, Jennifer, Wijeyaratne, Panduka, and Arata, Andrew. Act. 127-CC, EHP, Arlington, Va., Revised February 1997.

Applied Study 3. *Prevención: Intervenciones de Salud Ambiental para sostenimiento de Supervivencia Infantil*, Murphy, Helen, Stanton, Bonnie, Galbraith, Jennifer, Wijeyaratne, Panduka, and and Arata, Andrew. Act. 127-CC, EHP, Arlington, Va., Revised February 1997.

Applied Study 4. *Child Survival and Environmental Health Interventions: A Cost-Effectiveness Analysis*, Varley, Robert C. G. Act. 176-CC, EHP, Arlington, Va., November 1996.

Applied Study 5. *Better Sanitation Programming: A UNICEF Handbook*, UNICEF. Act. 187-CC, EHP and UNICEF, Arlington, Va., April 1997.

Applied Study 6. *Beyond Participation: Locally Based Demand for Environmental Health in Peri-Urban Areas*, Varley, Robert C. G., Yacoob, May, and and Smith, Scott. Act. 146-CC, EHP, Arlington, Va., December 1996.

Annex E: Additional Results Achieved through EHP Technical Assistance (Not Related to G/PHN/HN Results Areas)[29]

TROPICAL DISEASES

- Review is underway of results of ten years' support by USAID for schistosomiasis vaccine development and implementation of evaluation phase for candidate antigens.

- An Initial Environmental Evaluation for Malaria was conducted in preparation for the Zambia Child Health Project.

- Local systems of drug distribution for onchocerciasis control in West Africa were evaluated.

- Administrative support was provided to USAID's Malaria Vaccine Development Program.

ARI

- An EHP ARI prevention initiative is being developed: a technical advisory group was convened and improved stove programs were identified; identification of interventions is underway.

- Development of Environmental Health Curricula and Promotional Materials

[29] Source: EHP Interim Results Report, June 1997.

- The hygiene curriculum for medical students at the University of Medicine in Cluj, Romania, was revised and an environmental health module for continuing education for practicing physicians was developed.

- Two environmental health curricula were developed for the School of Public Health at the Jagellionian University in Krakow, Poland: a 22-hour module as part of an existing health promotion certificate and a full 200-hour post-graduate certificate course.

- A wide range of health promotion materials was developed and disseminated in Martin, Slovakia.

- A series of seminars on environmental health were held for USAID staff members and other development workers to increase their understanding of environmental health and the role of prevention.

- NCIH published a collection of articles on environmental health with EHP collaboration.

LEAD

- Technical assistance is being provided to the Egyptian Environmental Affairs Agency for developing a Lead Exposure Abatement Plan (LEAP) for Egypt. (Field work under this activity has identified elevated levels of lead in several food items, ceramics, a traditional cosmetic, and paint; examined the routes by which people are exposed; and identified the roles various institutions will need to play in a lead exposure abatement program.)

- A set of options were developed for monitoring blood lead levels during the phase-out of lead in gasoline in Latin America and the Caribbean.

- An inter-institutional working group in Romania is carrying out action plans to reduce exposure to lead from industrial contamination of a lead smelter.

DEVELOPMENT OF SCOPES OF WORK AND RESULTS PACKAGES

- In partnership with USAID/El Salvador, a scope of work for a comprehensive assessment of the urban environmental health problems was developed including recommended interventions for the greater area of San Salvador. (The scope of work is currently being implemented by a Salvadoran NGO.)

- In partnership with USAID/Egypt, a results package for a new wastewater project in Alexandria was designed.

- In partnership with USAID/Dominican Republic, a water and sanitation strategy was designed to be incorporated with the mission's health strategic objective.

- In partnership with USAID/Egypt, a technical, financial, institutional, and social analysis was completed leading to a results package for water and wastewater activities in three provincial cities and Alexandria.

DISASTER ASSISTANCE

- An emergency assessment identified the environment-related risk areas contributing to an outbreak of cholera in Gaza and recommended steps to prevent future outbreaks.

- Drought conditions in seven southern African countries were assessed and recommendations were put forward for remedial actions.

CROSS-CENTER RESULTS

- Implementation of CIMEP in Tunisia has had non-health results:
  - Creation of small enterprises by communities
  - Improvements in governance and transparency
  - Access of communities to municipal government

- Development is underway of a workshop providing LAC industrialists with an awareness of ISO 14000, a set of international standards used to promote market-driven environmental regulations, and guidance on getting certified to strengthen their potential to participate in international trade.

- Negative environmental impacts of the RAS Kiviter oil-shale chemical plant in Estonia were mitigated through improvements in production, recycling of fuses, better collection and treatment of waste products, improvement in management, and reduction in workers' exposure to pollutants.

- A community-based air pollution reduction project was initiated in Krakow, Poland.

- The Environment Department in Bansks Bystrica, Slovakia, received assistance in legislation to address three priority environmental health issues.

- The overall financial viability of the RAS Kiviter plant in Estonia was improved by increasing revenue through sales contracts with foreign companies and decreasing production costs.

- A city environment office in Trnava, Slovakia, was established and a committee to formulate an environmental strategy was formed.

- Collaboration is underway with the World Resources Institute in preparing a report to be published in 1998 on the health consequences of environmental changes associated with intensification of agriculture, urbanization, industrialization, and growth in energy consumption.

- Wastewater treatment plants in three cities in Romania and two in Bulgaria were provided with more modern equipment so that they could operate at maximum efficiency, as part of a USAID–supported effort to decrease environment pollution of waterways in the Arges River and the Yantra River basins, respectively, which are part of the Danube River systems.

- Equipment necessary for applying receptor modeling techniques to identify sources of particulates in ambient air was provided to the National Research Centre in Cairo, Egypt.

- Information about customer demand for water supply was provided to the city of Dehra Dun, Uttar Pradesh, India; it was confirmed that the city would be a good candidate for private investment in the provision of water supply because people are willing to pay for reliable water.

- USAID/West Bank and Gaza was advised on a proposed water supply project for the Hebron/Bethlehem area.

- An Environmental Assessment of the Gaza Industrial Estates Project was prepared.

- Logistics and editorial support was provided for PPC's Participation Forums as a contribution to the Administrator's all-Agency initiative to increase participatory processes within USAID and in USAID–supported projects.

Annex F: Results Achieved and Anticipated through EHP Technical Assistance and Proactive Activities (Inception to June 1, 1997)

RESULTS ACHIEVED AND ANTICIPATED THROUGH EHP TECHNICAL ASSISTANCE AND PROACTIVE ACTIVITIES (Inception to June 1, 1997)[30]

RESULTS AREAS									
Activity # / Description	*1. Diarrhea Prevention*	*2. Malaria Prevention*	*3. Community Involvement*	*4. Risk Assessment*	*5. Sanitation*	*6. Behavior Change*	*7. Urban Poor*	*8. Institutions*	*Other*
AFRICA									
Benin, CIMEP									
Eritrea, Malaria Assessment									
Eritrea, Dengue Assessment									
Senegal, Follow-Up to Senegal River Basin Health Study									
Zambia, Chloroquine Testing									
Zambia, Kitwe Urban Health Project - Start Up									
Zambia, Prevention of Malaria and Diarrhea									
Zambia, Lusaka GIS									
ANE									
Egypt, Schistosomiasis Vaccine Development									
Egypt, Lead Abatement									
Egypt, Airborne Particulates									

[30] Source: EHP Interim Results Report, June 1997.

RESULTS AREAS									
Activity # / Description	*1. Diarrhea Prevention*	*2. Malaria Prevention*	*3. Community Involvement*	*4. Risk Assessment*	*5. Sanitation*	*6. Behavior Change*	*7. Urban Poor*	*8. Institutions*	*Other*
Egypt, Provincial Cities Assessment Study									
Egypt, Evaluation of GOSD ISC									
Egypt, Development of Institutional Development Indicators									
Egypt, Evaluation of the Cairo Water II Project Institutional Component									
Egypt, Alexandria Wastewater II Results Package Design									
Egypt, Utilities Management Results Package									
Gaza, Wastewater Project									
Gaza, Cholera Outbreak Emergency Assessment									
Gaza, Industrial Estates Environmental Assessment									
India, West Bengal Region Risk Assessment									
India, Coping Costs Methodology									
Morocco, Solid Waste in Fes									
Nepal, Malaria Research and Training									
Sri Lanka, Environmental Health Workshop									
Tunisia, CIMEP									

RESULTS AREAS									
Activity # / Description	*1. Diarrhea Prevention*	*2. Malaria Prevention*	*3. Community Involvement*	*4. Risk Assessment*	*5. Sanitation*	*6. Behavior Change*	*7. Urban Poor*	*8. Institutions*	***Other***
West Bank, Eastern Aquifer Basin Data Collection									
ENI									
Bulgaria, Procurement of Equipment for Wastewater Treatment									
CAR, Pesticides Information									
Estonia, Assistance to RAS Kiviter, Restructuring and Environmental Improvement									
ENI, Curriculum Development: Romania, Slovak Republic, and Poland									
Romania, Zlatna Copper Smelter Pollution Reduction									
Romania, Procurement of Equipment for Wastewater Treatment									
Slovakia, Restructuring of Water and Wastewater Sector									
LAC									
Bolivia, Prevention Component for Child Survival									
Bolivia, Vector-Borne Disease Control									
Central America, Soap Promotion									

RESULTS AREAS									
Activity # / Description	*1. Diarrhea Prevention*	*2. Malaria Prevention*	*3. Community Involvement*	*4. Risk Assessment*	*5. Sanitation*	*6. Behavior Change*	*7. Urban Poor*	*8. Institutions*	*Other*
Dominican Republic, Developing a Water and Sanitation Strategy									
Ecuador, Behavior-Based Cholera Prevention									
El Salvador, Start-Up for Urban Environmental Health									
Guatemala, Water and Sanitation Sector Assessment Reform Recommendations									
Haiti, Urban Pollution Project									
Jamaica, Peri-Urban Sanitation									
Nicaragua, Reducing the Health Impacts of Mercury Pollution									
Peru, Solid Waste Management for Peri-Urban Poor									
Peru, Malaria Control in the Amazon Basin									
LAC, Options for Monitoring Blood Lead Levels									
LAC, Dengue Control									
Non-Country Related									
Conceptual Framework for Prevention									
CIMEP Guide									
Diarrheal Disease Prevention Guide									

RESULTS AREAS									
Activity # / Description	*1. Diarrhea Prevention*	*2. Malaria Prevention*	*3. Community Involvement*	*4. Risk Assessment*	*5. Sanitation*	*6. Behavior Change*	*7. Urban Poor*	*8. Institutions*	***Other***
Risk Assessment Methods Development									
UNICEF, Collaboration, Sanitation Evaluation, Guidelines									
Planning for an EHP ARI Prevention Initiative									
Support to AIMI									
Malaria Vaccine Development									
Ivermectin Program Review									
CARE, Strategic Directions for LAC and Africa									
WAWTTAR									
Solid Waste Management Sector Assessment Guidelines									
Collaborative Council Sanitation Working Group									
The Peri-Urban Network									
Urbanization and EH Lunchtime Seminar and Capsule Report									
Environmental Health Seminars									
Southern Africa, OFDA Drought Assessment									
ISO 140000 in LAC									
The Role of Credit in Urban WS&S									

RESULTS AREAS									
Activity # / Description	*1. Diarrhea Prevention*	*2. Malaria Prevention*	*3. Community Involvement*	*4. Risk Assessment*	*5. Sanitation*	*6. Behavior Change*	*7. Urban Poor*	*8. Institutions*	***Other***
Publication of NCIH Proceedings									
PPC Participation Forums									
Collaboration with the World Resources Institute									

Annex G: Country Reports

EGYPT

1. Purpose and Nature of Evaluation Team Visit

The EHP evaluation team visited Egypt from July 18 to July 25, 1997, which included four workdays. The purpose of the brief visit, like the ones to Slovakia and Haiti, was to gain an on-site understanding of how EHP relates to a USAID country program and to see examples of the diversity of EHP's activities worldwide. The information obtained during the three country visits was used in conjunction with evaluation data obtained through communications with missions not visited, through interviews with USAID/Washington and EHP staff as well as other donors, and through document reviews.

The team consisted of Walter Sherwin, team leader; Alfred W. Hoadley, Ph.D, environmental health specialist; and Nancy K. Diamond, Ph.D, institutional specialist. The team is very grateful to John Borrazzo, the G/PHN/HN/EH project manager for EHP, who was visiting Egypt and arranged all the meetings, and to all the interviewees, who were most gracious in offering their time and their intimate knowledge of the USAID program and EHP's role in it.

Attached is a list of the persons whom the team met in Egypt. Detailed interviews were held with USAID, Egyptian government, and contractor personnel. No project sites were visited.

2. Focus of EHP Activities

In Egypt, EHP has provided support to USAID's Urban Administration and Development (UAD) Office in water and wastewater, the Environment Office, and the Health Office. With the exception of the Lead Exposure Abatement Plan (LEAP) and the air particulates study, most of these activities have emphasized providing support to the mission rather than on working with Egyptian counterparts.

EHP has carried out a number of activities for UAD in water and wastewater.

EHP has conducted evaluations of the institutional support contracts for the Cairo General Organization for Sanitary Drainage (GOSD) and the Cairo General Organization for Water Supply (Cairo Water). EHP also assessed institutional options for three provincial cities, recommended the preferred option, and suggested a course of action for its implementation. Another activity was project analyses for Provincial Cities and Alexandria, which USAID used to develop a results package for Middle Egypt. EHP also assisted the mission in developing indicators to monitor its institutional development projects in water and wastewater.

EHP has carried out three major activities for the Environmental Office. The first and largest was the development of a Lead Exposure Abatement Plan for Cairo. In conjunction with the Egyptian Environmental Affairs Agency (EEAA) and the Ministry of Health and Population (MOHP), EHP identified the sources of exposure, analyzed the institutional setting, and developed interventions to reduce exposure. The second activity has been the development of a monitoring and evaluation plan for Egypt's environmental policy program. The third activity was an airborne particulates study for Cairo.

EHP is currently carrying out one activity for the Health Office consisting of support to the Shistosomiasis Vaccine Development Program.

A summary listing of EHP activities in Egypt concludes this country report. The review that follows examines selected aspects of EHP's interventions.

3. Assessment of EHP Services and Results

3.a. Environmental Health — Technical Issues

Findings

1. EHP helped MOHP to plan an assessment of blood levels of lead, and helped the National Research Centre (NRC) to carry out an air particulates apportionment study that included the provision of equipment in Cairo. This contributed to planning for USAID's support to MOHP and the development of a lead smelter action plan.

2. EHP worked with EEAA and MOHP to prepare a lead exposure abatement plan and environmental report. This plan is expected to be implemented in conjunction with the Sub-committee on Sustainable Development and the Environment under the Gore-Mubarak agreement. EHP set up and coordinated a working group including EEAA, MOHP, USAID, and CDC to keep CDC and MOHP informed of progress on the abatement plan and to provide input into the blood lead survey being carried out by MOHP with CDC assistance. Because studies of blood lead levels in children were delayed, the lead exposure studies

included estimates of blood lead concentrations in small children as well as information on sources.

3. EHP is helping to develop a monitoring and evaluation plan for the environment sector in Egypt. The system will include environmental indicators that affect health and that measure health impact itself.

4. The mission sees EHP as an important resource to draw upon as needs arise but not in the context of longer-term involvement in any continuing activity.

Conclusions

1. The two studies carried out provided the data required to initiate policy dialogue and plan control programs for two priority threats to health in the Cairo area.

2. The contributions of the EHP staff were highly competent technically and effective in terms of developing EEAA staff and organizational capabilities and forming collaborative linkages between the health and environmental sectors.

3. Similarly, there is scope for continued assistance to EEAA in planning interventions for air pollution control; in planning, design and implementation of control programs; in training; and in promoting dialogue between the health and environmental sectors on priorities and strategies for dealing with common problems.

4. EHP's work on a monitoring and evaluation plan for the environmental sector offers further opportunity for promoting dialogue. EHP can continue to influence this process through training, workshops, technical assistance, and follow-up collaborative activities.

Recommendations

1. USAID/Egypt and EHP should examine how the project might contribute on a longer-term basis to the mission's strategic objectives, perhaps in conjunction with the Egypt Environmental Policy Project.

2. EHP should seek opportunities through its activities to define further the linkages between environment and health, so as to encourage increased collaboration both within the host government and within USAID.

3.b. Community Involvement in Managing Environmental Pollution or Community Participation Approaches

Findings

1. EHP was requested by USAID/Egypt to write a social and consumer analysis annex for the "Institutional and Technical Findings and Interventions for Water Supply and Wastewater in the Governorates of Alexandria, Beni Suef, El Fayoum, and El Menya." Due to funding, time, and bureaucratic constraints, the

consultants focused on conducting social research with a limited sample of male and female utility clients and service providers in several locations in two provincial governorates. The data collected provided an essential perspective to the overall report. Information was not available to the evaluators regarding progress on the recommendations raised in this annex.

2. The customer service partnership approaches recommended by EHP in the Provincial Cities Annex appear to be quite different from the management-oriented customer service improvements being implemented by other contractors through the USAID–funded institutional support contracts to GOSD and Cairo Water II project. This information was available from the EHP evaluations of these two projects.

3. EHP's services in community participation — via CIMEP or other approaches — have not been requested by USAID/Egypt. EHP tried to generate USAID/Egypt mission interest in CIMEP via discussions, drafting a concept paper, and providing support for nine Egyptian decision makers to attend a regional CIMEP workshop in Tunisia. Support for a CIMEP–style approach to establishing a consumer department under Egypt's Secondary Cities Project did not materialize. In discussions with the evaluation team, current mission staff communicated their doubts about the success of community-municipality-NGO partnerships in the Egyptian political context.

Conclusions

1. While the EHP annex brings a fresh and gender-sensitive perspective to customer service approaches in Egypt, some of the recommendations regarding municipality-NGO-community partnerships do not appear to be easily workable (e.g., the PVO/NGO network).

2. However, participatory and partnership approaches have been successfully implemented in environment, health, and other sectors in Egypt by NGOs and other donors.

Recommendations

1. EHP staff may want to consider revisiting its discussions with the USAID/Egypt mission regarding CIMEP possibilities. In these discussions, the CIMEP approach may need to be reframed in terms of how and where participatory approaches by others have worked specifically in Egypt. EHP staff will need to convince mission staff that CIMEP would build upon these successes to the benefit of USAID's environmental and infrastructure programs.

2. Discussions should also be held with the current institutional support contractors to identify how partnership approaches to customer service will need to be adapted in Egypt and similar settings.

3.c. Changes in Behavior/Practices

Findings

1. To date, behavior change by community members has not been a component of EHP's programs in Egypt.

2. As part of short-term technical advice and evaluation, EHP has recommended behavior change within institutions (see section below on Institutional Capacity Building). EHP has only conducted short-term technical assistance in Egypt. However, the institutional development indicators prepared by EHP for the water and wastewater sector do not include behavior change indicators (knowledge, attitude, and behaviors) for individuals within these institutions. Although it appears that these changes are occurring, there may not be sufficient institutional capacity or motivation to track these changes.

3. Behavior change and social marketing assistance by EHP could be a potential follow-on activity to the Lead Abatement Plan for Egypt.

Conclusion

1. To date, the short-term and topical nature of USAID/Egypt's buy-ins to EHP have not lent themselves to behavior change approaches.

Recommendation

1. EHP may want to consider further discussions with its subcontractors that have behavior change and social marketing expertise to identify future opportunities in Egypt for these approaches. The Lead Abatement Plan for Egypt may have follow-on activity potential in social marketing.

3.d. Institutional Capacity Building (Strengthening Public Sector Institutions & NGOs serving the Urban Poor)

Activities in this area have not been supported by USAID/Egypt.

3.e. Institutional Capacity Building (Strengthening Institutions Supporting Environmental Health)

Findings

1. To date, EHP's assistance to USAID/Egypt in this area has been of a short-term nature.

2. EHP evaluated two institutional support contracts (Cairo GOSD; Cairo Water). The contractors involved in these evaluations were generally quite satisfied with the quality of the evaluators and the results of their work. The evaluation for GOSD included a participatory workshop which included GOSD contractor and institutional staff. This experience was very positive for those

involved and appeared to increase staff "ownership" of the evaluation recommendations.

3. Institutional and customer service options were analyzed for three provincial cities, followed by the design of a results package for one city, Alexandria. The USAID client was pleased with the resulting reports and the quality of the consultants. It was not possible for the evaluators to interview municipal utility staff in these other locations. The Provincial Cities project is still being designed and has not yet been awarded.

4. EHP developed indicators with USAID, contractors, and Egyptian ministry stakeholders for institutional development of water and wastewater utilities and is in the process of developing indicators for USAID's environmental sector. While acknowledging that indicator development is, by necessity, an iterative process, a few stakeholders expressed dissatisfaction with the pace of the process, the manner of the workshop facilitator, and the failure to include minority opinions in the final set of recommended indicators for institutional development. The environmental sector indicators are currently in process, and these consultants were noted for using a more culturally sensitive, consultative process with Egyptian counterparts.

Conclusions

1. On balance, USAID/Egypt has been very satisfied with the short-term assistance in institutional issues provided by EHP. The quality of consultants and their reports has been very high. However, the short-term nature of EHP's assistance to the Egypt mission has not allowed EHP to demonstrate its full potential to provide institutional capacity building.

2. Indicator and monitoring work can raise sensitive issues of institutional performance in Egypt.

Recommendations

1. With the buy-in for environmental sector indicators, EHP has the opportunity to explore more collaborative and sensitive approaches to development of indicators and monitoring systems. EHP should address these dimensions in its team planning meetings in the future.

2. USAID/Egypt would benefit from the long-term institutional capacity building expertise of EHP. EHP would be a valuable partner in the upcoming EPIQ buy-in.

4. Linkages and Partnerships

Findings

1. The primary linkages for EHP in Egypt have been with other USAID projects such as the institutional support contractors, Brown and Veatch, International., and CH2M-Hill. Under the current work on environmental sector indicators, EHP is cooperating with the EPAT and EPIQ projects.

2. Under the Lead Exposure Abatement Plan (LEAP) activity, EHP has helped to forge a new collaborative relationship between the Egyptian Environmental Affairs Agency and the Ministry of Health and Population.

Conclusion

1. Given the scope of its Egypt activities, EHP has made the necessary linkages and partnerships.

Recommendation

1. EHP should do its best to maximize field interaction with EPIQ staff in the near future.

5. Monitoring and Evaluation

Findings

1. EHP has evaluated two other projects and worked on two sets of indicators for the mission. Both activities are discussed above in Section 3.d., Institutional Capacity Building.

2. EHP's own activities have been too short-term to include monitoring or evaluation.

Conclusion

1. EHP's work in Egypt on indicators and evaluation are a good reminder that these activities should not be formulaic from one cultural setting to another. The wording of some indicators and selection of targets for improvement may unintentionally draw negative attention to a specific ministry or agency or division. Consultants in this area must work in a highly collaborative manner and must be quite sensitive to local cultural issues.

Recommendation

1. In Egypt and elsewhere, EHP should explore different, culturally sensitive approaches to the development of indicators and monitoring systems.

6. Management

Findings

1. USAID officers expressed a high degree of satisfaction with EHP technical assistance. The teams are deemed highly competent, responsive, efficient, very familiar with Egypt, culturally sensitive for the most part, and ready to touch base with other donors. However, the team was told that expansion of EHP's program in Egypt was hindered by insufficient contractor staff to market and develop projects with the mission.

2. The mission's environment and health offices praised EHP's senior technical director as very knowledgeable, easy to work with, and able to "make things happen." The health office was pleased with EHP's assistance in schistosomiasis vaccine development. However, the office told the team that the mission's health program does not lend itself to major use of EHP services — it tends to rely on major contracts rather than buy-ins.

3. The project manager for EHP is formally a virtual member of the mission's environment strategic objective team and visits Egypt frequently. The team was told that he has had considerable influence on mission thinking on the sector policy reform program, evaluation of Cairo air studies, development of LEAP, and the mission's program submissions to Washington. Mission personnel also told the team that he was instrumental in persuading the Ministry of Petroleum to order a switch to unleaded gas.

Conclusions

1. EHP is highly appreciated by both the environment and health offices in the mission, but it appears that only the former is likely to make continued major use of the project's services.

2. The project manager's role in the mission's environment program, both directly and as an intermediary for EHP, is significant.

Recommendation

1. G/PHN/HN/EH and EHP should seek further opportunities for the project to collaborate with USAID/Egypt, either in the context of the PHN results areas or in ways that would not deflect needed resources from the project's primary emphasis on results area work.

7. Future Directions

Findings

1. The Egypt mission has preferred to draw upon EHP's excellent capabilities to provide short-term technical assistance that meets the needs of the clients.

2. EHP has begun preliminary collaboration with the EPIQ contractors on indicator development.

Conclusion

1. EHP can potentially make a strong contribution to long- or medium-term USAID activities in Egypt. One vehicle may be collaboration with EPIQ.

Recommendation

1. EHP should continue to pursue long- or medium-term technical assistance opportunities in Egypt. Specific topical suggestions can be found in the recommendation sections above.

8. People Interviewed by the Evaluation Team

George Deikun, Environment Office Director, USAID
Mohamed Elalfy, Project Officer, Urban Administration and Development, USAID
James L. Goggin, Project Officer, Environment Office, USAID
Linda Lou Kelley, Health Development Officer, USAID
Omar, Abo El Maati, Project Officer, Office of Urban Administration & Development, USAID
Salwa F. Wahba, Project Officer, Environment Office, USAID
Moenes Edward Youannis, Project Officer, Urban Administration and Development, USAID
Sayed Abou El Ela, Institutional Support Contract Project Manager, General Organisation Cairo Sanitary Drainage Utility

Peggy Howe, Program Manager — Financial Viability, Black & Veatch International, Contractor for Management, Training & Systems Strengthening (MTSS) Project

Collie Martin, P.E., Vice President and Project Manager, CH2M Hill Institutional Support Contract, Cairo Sewerage II Project

Richard Noth, Manager for Management Development, CH2M HILL/OMI, Cairo Sewerage II Project

9. Summary of EHP Egypt Activities

FIGURE 7. SUMMARY OF EHP EGYPT ACTIVITIES

Date	Activity	EHP #
	Air Pollution	
Oct 1994 – Jun 1996	Airborne Particulates Study	133RC & 133CC
Nov 1995 – Apr 1996	Air Quality Criteria for Particulates	231CC
	Water and Wastewater	
Mar 1995 – Oct 1995	Provincial Cities Assessment Study	173RC
Jul 1995 – Nov 1995	Evaluation of GOSD ISC	196RC & 196CC
Mar 1996 – Oct 1996	Development of Institutional Development Indicators	239RC
May 1996 – Sep 1996	Evaluation of the Cairo Water II Project Institutional Component	243RC
Jul 1996 – Oct 1996	Alexandria Wastewater II Results Package Design	246RC
Feb 1997 – May 1997	Utilities Management Results Package	325RC

FIGURE 7. SUMMARY OF EHP EGYPT ACTIVITIES		
CIMEP		
Nov 1995 – Mar 1996	CIMEP Initiation Activities	228CC
Mar 1996 – Jul 1996	Scoping Activities and the Development of a Workplan	238RC
Lead Abatement Action Plan		
Mar 1996 – May 1996	First Scoping Visit	243CC
Jul 1996 – Jan 1997	LEAP Institutional Analysis	255CC
Jul 1996 – Mar 1997	Environmental Lead Sampling and Exposure Pathways Analysis to Protect Children's Health	256 CC
Jul 1996 – Apr 1997	LEAP Policy Dialogue	257CC
Egyptian Environmental Policy Program (EEPP)		
Apr 1997 – Aug 1997	Start-Up for the Design of a Monitoring and Evaluation Plan for Egypt's Environmental Policy Program	327RC
May 1997 – Oct 1997	Design of a Monitoring and Evaluation Plan for Egypt's Environmental Policy Program	328RC
Others		
Mar 1997 – Aug 1997	Schistosomiasis Vaccine Development Program	348CC

HAITI

1. Purpose and Nature of Evaluation Team Visit

The EHP evaluation team visited Haiti from July 15 to July 18, 1997, allowing two days for interviews and site visits. The purpose of the team's visit, like the ones to Egypt and Slovakia, was to gain an on-site understanding of how EHP relates to a USAID country program and to see examples of the diversity of EHP's activities worldwide. The information obtained during the three country visits was used in conjunction with evaluation data obtained through communications with missions not visited, through interviews with USAID/Washington and EHP staff as well as other donors, and through document reviews.

The team consisted of Walter Sherwin, team leader; Alfred W. Hoadley, Ph.D, environmental health specialist; and Nancy K. Diamond, Ph.D, institutional specialist. The team was warmly received in Haiti by Melissa Knight and Pierre Cam Milfort of the Economic Growth Office at the USAID mission. The director of CADEPA, Henri Supplice, not only answered the team's many questions and arranged meetings with his colleagues, but also kindly provided transportation for most of the visit. This included extensive tours of the project site and surrounding areas. The team is also grateful for the hospitality and information furnished by Reggie Boulos, the president of CDS.

2. Focus of EHP Activities

EHP has carried out one major activity in Haiti. USAID requested EHP to assist the Centre pour le Développement et la Santé (CDS) (Center for Development and Health), the largest Haitian NGO, to develop a plan to establish an autonomous organization to provide water and sanitation services in Cité Soleil, a densely populated peri-urban area with over 200,000 inhabitants in Port-au-Prince. UNDP funded an independent $2.5 million water supply system for Cité Soleil but had not developed a clear plan for managing the system. USAID decided to piggyback on the UNDP effort and to focus on developing the institutional capacity to manage the water system.

EHP assistance consisted of:

- technical assistance to CDS to develop a plan for building a community-based water and sanitation utility (subsequently named Centrale Autonome pour la Distribution d'Eau Potable et d'Assainissement — CADEPA)

- funding for CDS local staff and demonstration projects, which were primarily targeted to environmental sanitation activities.

The project concept was to use the revenues from the sale of water to fund the management of the water supply system and also environmental sanitation services, primarily solid waste collection and disposal. The plan addressed institutional, community, technical, and financial aspects and included a detailed implementation plan as well as indicators to monitor performance. The activity began in October 1995, and the plan was finished in April 1996. In addition, EHP carried out three monitoring trips, of which the last one took place in September 1997. The water supply system was inaugurated in April 1997.

The review that follows examines selected aspects of EHP's intervention.

3. Assessment of EHP Services and Results

3.a. Environmental Health — Technical Issues

Findings

1. EHP's assistance focused on key technologies and management systems for delivery of water, latrine construction, solid waste management, and laundry facilities. A detailed implementation plan with targets was prepared that included responsibilities as well as guidelines for maintenance and a practical system for monitoring water quality. In preparation for the planning process with the community, EHP assisted in a review of appropriate latrine technologies.

2. At the time the evaluation team visited the project area, progress had been made in all areas of implementation:

- Seven of nine planned community latrine units had been nearly completed. It was anticipated that these would be completed in August and that all units would be opened for use by the community at that time.
- Fifty-eight of 76 water points were functional. Each water point was serving 200–300 people daily. At each water point, two of the four taps were being operated for 12 hours per day. The water points were not being heavily used.
- There appeared to be concern in the community over cleanliness of the environment. Pilot solid waste cleanup teams, paid out of income from the sale of water, were functional in six areas. Teams operated in the vicinity of water distribution points to remove solid wastes from streets, surface drains, and adjacent vacant areas. The team was informed that the municipality was removing solid wastes that had been collected by the teams and placed in transfer sites for disposal.

- One of two laundry facilities had been completed. It was suggested by the project staff and USAID that the second facility need not be constructed and that the savings could be used for other purposes.
- Power had not been connected at the storage reservoir yet, and the chlorinators were not functioning.
- There were plans to upgrade one previously constructed communal latrine, but it was not possible for the evaluation team to visit this facility or to obtain information on the status of the activity.

3. The project has faced a variety of political and civil disturbances as well as a roadway project and related works which necessitated changes, negotiations, and added to delays in implementation of portions of the project.

4. Information for preparation of final "as-built" drawings had been provided to EHP, but the plans were not yet completed.

Conclusions

1. EHP provided excellent technical assistance and established good relations with the community, contributing significantly to the results accomplished.

2. The technical interventions employed were appropriate to the geologic, spatial, and social constraints existing in this densely populated peri-urban area.

3. Anticipated results embodied in indicator targets for monitoring of results were very ambitious, given the nature of the development environment in Cité Soleil. It would have been better to provide targets that recognized the constraints and uncertainties inherent in such an area and gave a real measure of accomplishment. In fact, results were impressive, although planned targets were not met.

Recommendation

1. The project in Cité Soleil provides a model for future projects in poor urban and peri-urban areas which should encourage further efforts in Haiti and elsewhere.

3.b. Community Participation

Findings

1. EHP designed CADEPA to be a partnership between a new branch of CDS, an NGO with a long history in Cité Soleil, and a new community-based organization structured in committee tiers. Forty fountain committees and seven zonal committees have been established.

2. EHP planned for community participation via a staff of community animators and communicators working with an elected neighborhood committee

of volunteers. The latter would oversee the water kiosk technicians and hire a small crew of sanitation workers. Leaders from these committees would serve on a management board for CADEPA.

3. In an area with extremely high rates of unemployment, community members have a great interest in obtaining paid employment with CADEPA. Training was proposed for CADEPA volunteers, but to date, only the fountain managers have received training. A negligible amount of nepotism is occurring in the election of the committee members; a significant amount of nepotism is occurring, as expected by EHP and CADEPA, in the allocation of the paid positions in water kiosk management and sanitation. However, involved residents feel positively about the committee structure and believe it could be used by other donors to do other types of activities.

4. The EHP plan called for three-way interaction among the community, the NGO, and the local branch of the Centrale Autonome Métropolitaine d'Eau Potable (CAMEP, the Urban Water Supply Agency of Port-au-Prince), but this interaction has not yet occurred.

5. Although the original EHP plan identified that private water vendors could potentially undermine CADEPA, these relationships have not yet developed. In a meeting with evaluators, it was clear that the private water vendors have had minimal contact with CADEPA staff and were not pre-informed about having their CAMEP water supply permanently cut off during the previous week.

6. Because of its participatory approach and focus on clean water, the CDS founder believes it will have much greater health impact than the 20+ years of curative-oriented assistance that CDS provided to Cité Soleil through its health clinic.

Conclusions

1. Many elements of the EHP plan and technical assistance have contributed to the impressive success of CADEPA in the extremely difficult Cité Soleil work environment. Part of its success can also be attributed to CDS's long history of community-based work in Cité Soleil, the tradition of self-help organizations in the area, and the excellent technical and social skills of its executive director and staff members working with community members.

2. A weak element of the CADEPA design appears to be its long-term dependence on volunteer services by community members. It is doubtful whether community members will be willing to volunteer their services for long periods of time. Training opportunities will not substitute for employment but will provide incentives to boost the motivation of volunteers. As water receipts increase, nepotism on committees seems likely to increase. It is recognized that the level of employment available is dependent upon revenues from the water utility and/or other activities the utility chooses to undertake.

3. CADEPA needs a stronger relationship with the private water vendors. Their livelihood is dependent on their water sales. These people have the potential to seriously undermine CADEPA's work.

Recommendations

1. In Haiti and elsewhere, greater attention is needed to the issue of how NGO utility projects can generate enough revenue, from the utility tariffs or spin-off enterprises, to increase local job and enterprise opportunities. For example, in Haiti, the director of CDS has suggested that the utility could incorporate and sell shares to Cité Soleil residents. Anti-nepotism rules should be put into place at this stage for the elected committee members.

2. Across its activities, EHP should compare results of assistance with NGO–focused efforts such as CADEPA versus CIMEP–style partnerships with municipalities and public-private sector partnerships.

3. Relations with private water vendors are critical. CADEPA and EHP should develop strategies for establishing ongoing, respectful, and transparent relationships with this interest group.

3.c. Behavior Change

Findings

1. EHP, working together with another USAID Global Bureau project, GreenCOM, provided assistance to CADEPA staff. This assistance included advice on the design and implementation of qualitative behavioral research, development of research-based communication materials, and motivation of community members to participate in CADEPA and improve their environmental health behaviors.

2. Given the resources available, communication efforts have been admirable. GreenCOM–assisted qualitative research informed some of the content and messages of materials. EHP funds supported a full-time community relations person, but now communication activities and staffing are dependent upon the level of revenue generated from the water utility. It appears that EHP's partner, GreenCOM, vastly underestimated the resources needed to communicate with the more than 200,000 residents of Cité Soleil.

3. While there is now behavioral data available regarding people's willingness to purchase water from CADEPA (as evidenced by water sales), data regarding behavior changes related to water storage and use, as well as solid waste disposal, is not yet available. The GreenCOM project helped to develop a monitoring plan to track the impact of health communication materials upon the knowledge, attitudes, and practices of community members.

Conclusion

1. As a result of EHP assistance, CADEPA management appears to have developed good relations with community members who are involved in the local CADEPA committees. However, CADEPA's relations with private water vendors appear to be quite limited and somewhat authoritarian in nature.

Recommendations

1. Communication and community relations are an essential component of this community-driven water utility. At least one permanent position should be established by CADEPA to carry out these activities.

2. Behavior change should be systematically monitored by CADEPA and other EHP activities.

3.d. Institutional Capacity Building (Strengthening Public Sector Institutions & NGOs serving the Urban Poor)

Findings

1. The NGO has succeeded in setting up a water utility, setting up a functioning committee structure drawn from the community, and negotiating with CAMEP.

2. The water utility has successfully coped with many major circumstances, such as the building of the road in conflict with water pipe layout, attempts by CAMEP to change the terms of their agreement with CADEPA, and local politics, among others.

3. The utility is still operating below capacity, and sales are lower than expected, but it is making respectable progress toward cost-recovery. Water losses are at an acceptable level to date.

4. CADEPA has been extremely fortunate, to date, in its choice of director. The position requires a combination of technical and social skills not easily found in most parts of the world.

Conclusion

1. On balance, CADEPA has done an excellent job to date. This success rests on good planning on the part of EHP and the good work of CADEPA's current director.

Recommendation

1. EHP should assist CADEPA in making the transition between directors and in reaching full capacity.

3.e. Institutional Capacity Building (Strengthening Institutions Supporting Environmental Health Services)

Apart from its work with CADEPA, EHP's scope of work in Haiti has not included the strengthening of public sector institutions supporting environment health services.

4. Linkages and Partnerships

Findings

1. In the course of developing the plan for CADEPA, EHP met with other donors and counterparts, such as the Inter-American Development Bank, UNICEF, UNDP, Plan International, and the Cooperative Housing Foundation. CDS was already aware of the activities of GRET (Group for Research and Technology Exchange) and the Mevs Foundation. EHP recommended that these linkages be established and cultivated by CADEPA. Apart from Plan International, it was not evident to the evaluators that this had happened.

2. EHP and CADEPA had discussions with Plan International regarding the support for additional water fountains. At present, out of 76 planned fountains, 58 are now constructed and functioning, 6 more are constructed, and a road project has delayed construction of the remaining 12 fountains. Eighteen fountains were to be funded by Plan International, but a reduced number were built so that water pipe infrastructure could be built to hook up the fountains.

Conclusion

1. EHP provided an entry point for CADEPA to form linkages with other international donors and project counterparts. CADEPA has had to face several major unexpected crises during the past 18 months, and it is somewhat understandable that these relationships have not been pursued to the full extent possible.

Recommendation

1. EHP, as an outside actor operating internationally, can and should continue to play an important role in linking its host-country partners to international donors and NGOs.

5. Monitoring and Evaluation

Findings

1. EHP's proposed indicators for the CADEPA activity clearly reflect their experience in other locations and the priorities of the RUDO, the mission, and the NGO, CDS.

2. In the EHP plan, the consultants note that the lack of data availability in Cité Soleil is a major constraint to developing indicators for the new water district, CADEPA.

3. Of the nine proposed indicators, two relate to district finances, five are tied to water production, quality, consumption, and sales (i.e., percentage of working meters, percentage of unaccounted for water, percentage of samples with acceptable chlorine concentration, gallons consumed daily of high-quality drinking water from the district, and the ratio of district employees to gallons of water sold per day), and one focuses on daily solid waste removal. Only one indicator is people-level and relates to how many people have access to improved waste management service.

4. Targets and indicators generally show changes over time. In actuality, the targets for four of the performance indicators (i.e., meters working, unaccounted-for water, water quality, and district staffing/sales ratio) remain the same over three years (1996–1998).

5. To date, a qualitative baseline has been undertaken by CADEPA anthropologists and/or communications staff with help from GreenCOM. Some additional monitoring data has been collected.

Conclusions

1. EHP's proposed indicators on financial, water, and solid waste appear to be relevant and reasonable for a water utility. However, the set of indicators do not really reflect the community-based nature of the CADEPA water utility. There is an imbalance between technical indicators and people-level and/or qualitative indicators. None of the indicators are set up to disaggregate data by gender or other socioeconomic variables (e.g., which households have access to CADEPA services?). None of the indicators measure progress on institutional issues related to the community committees (e.g., turnover, gender balance, level of satisfaction with participation). None of the indicators measure changes in behavior, attitudes, or knowledge.

2. With the exception of water quality, the target levels for the three other indicators described in Finding 4 above appear to be somewhat unrealistically high for a new utility.

Recommendations

1. To improve customer service and service accessibility, EHP and CADEPA should consider building upon the qualitative baseline data with periodic rapid participatory urban appraisal activities. CADEPA must find some reasonable means to periodically track the customer satisfaction with its services and community participation on committees.

2. EHP and CADEPA may want to have graduated target levels for the district staffing/sales ratio, meters working, and unaccounted-for water.

6. Future Directions

Findings

1. Under its current contract, EHP has scheduled one remaining visit to Haiti to focus on institutional and financial issues.

2. The EHP plan should continue to be followed by CADEPA.

3. At present, the greatest needs in technical assistance from EHP appear to be in monitoring, improving water production, transitions in leadership, and negotiations with CAMEP.

4. At the USAID/Haiti mission, the Democracy/Governance staff are looking for activities that link democracy and environment.

Conclusions

1. CADEPA management is doing a good job and appears to require only minimal additional assistance from EHP.

2. CADEPA activities have a strong democracy component that may attract additional funding.

Recommendations

1. USAID/Haiti may want to consider additional EHP assistance when leadership of CADEPA is transferred later this year.

2. CADEPA should explore the potential for additional USAID funding to support the democracy-building dimensions of their activities (USAID Contact: Michelle Wozniak-Schimp).

7. Management

Findings

1. USAID was highly pleased with the quality of EHP services. The competence, independence, excellent presentations, and prompt response of EHP technicians were noted.

2. The mission has closely monitored month-by-month progress and has taken numerous actions in an effort to overcome unforeseen problems and maintain project target dates. The EHP contract did not provide for continuous on-site monitoring.

Conclusion

1. The mission's close monitoring played a key role in the success of the project.

Recommendations

None

SLOVAKIA

1. Purpose and Nature of Evaluation Team Visit

The EHP evaluation team visited Slovakia from July 7 to July 12 1997. The purpose of the brief visit, like the ones to Egypt and Haiti, was to gain an on-site understanding of how EHP relates to a USAID country program and to see examples of the diversity of EHP's activities worldwide. The information obtained during the three country visits was used in conjunction with evaluation data obtained through communications with missions not visited, through interviews with USAID/Washington and EHP staff as well as other donors, and through document reviews.

The team consisted of Walter Sherwin, team leader; Alfred W. Hoadley, Ph.D, environmental health specialist; and Nancy K. Diamond, Ph.D, institutional specialist. Thanks to careful planning for the visit by EHP in Rosslyn and project and mission personnel in Bratislava, the team had productive visits to three towns where EHP has been active in addition to Bratislava and was able to meet with a large number of Slovakian clients as well as mission and project personnel. Attached is a list of the persons whom the team met in Slovakia.

2. Focus of EHP Activities

EHP has carried out two major activities in Slovakia:

- The first is the decentralization of water and wastewater services from five state-owned regional water and sewer companies to municipalities. In addition to short-term technical assistance, EHP has provided a U.S. long-term advisor, a Slovak advisor, and a Slovak administrative assistant. The objective of EHP's work has been to promote the establishment of municipally based water and sewer companies. Specifically, EHP has carried out seminars to educate municipal officials about the decentralization, assisted three cities (Poprad, Trencin, and Bratislava) in their efforts to take responsibility for water and sewer services, developed a computer-based model to determine the impact of investments in infrastructure on water rates, and strengthened the national municipal association's (ZMOS) ability to provide effective advocacy for decentralization of water and sewer services. As part of USAID's local government program, EHP has worked primarily with municipalities and has therefore also carried out some activities targeted at local environmental health issues. These activities have included a pre-feasibility study of a solid waste landfill in Lubica, the review of a tender document for wastewater

treatment plant in Lucenec, and an assessment of plans to consolidate three municipal services companies in Trencin. EHP's work on decentralization began in the last year of the WASH Project and has continued throughout the life of EHP.

- The second major activity involved the introduction of environmental health promotion approaches in three cities: Martin, Banska Bystrica, and Trnava. The activities in each city were all concerned with improving the ability of the cities to promote environmental health issues. In Martin, EHP worked with the local State Health Institute to develop an environmental health education campaign to reduce exposure to pollution from heavy metals. In Banska Bystrica, EHP worked with the Environment Office in City Hall and the district office of the State Specialized Institute of Health to identify environmental priorities, assist in getting the City Council to pass legislative measures to deal with these priorities, and implement a public information campaign. In Trnava, EHP worked with the municipality to establish an environmental office and develop an environmental strategy.

A summary listing of EHP activities in Slovakia concludes this country report. The review that follows examines selected aspects of EHP's interventions.

3. Assessment of EHP Services and Results

3.a. Environmental Health — Technical Issues

Findings

1. EHP provided assistance to the State Specialized Institute of Health (SSZU) in Banska Bystrica in defining the scope of research on radon. This was considered to be a national priority concern and one of high local interest; it is a well-understood problem in the neighboring Czech Republic. The institute is responsible for defining legislative requirements related to health. Activities carried out with EHP assistance and guidance included:

- Tests for radon carried out in 95 houses, in two of which radon levels were considered high.
- Developing interest of at least one building contractor in learning about radon and its control. The institute also reported changes in the local building code requiring consideration of radon hazards before construction is approved on municipal land.

2. EHP provided technical assistance to the Municipal Environment Department in Banska Bystrica in applying results of monitoring for nitrogen oxides and airborne particulates. EHP advised on organizational structure and

operations, on problem assessment and planning, and on development of presentations to the City Council.

3. As a result of EHP's assistance, city bus routing was modified to alleviate pollution, green areas were designated with tree planting, and local legislation was approved to encourage conversion of coal burning sources of air pollution to gas. This was reported anecdotally to have stimulated conversion of boiler houses which heat multiple apartment buildings and are a major source of emissions. However, the extent of conversion has not been closely monitored, and changes in air quality were not apparent from the air quality data available. Nevertheless, the successes of the program appeared real, and locally the contributions of EHP are seen as a key factor in achieving them.

4. Interest in developing curricula in occupational and environmental health has been expressed by the medical institutions at Matej Bell and Trnava, the School of Public Health at Jesenius University in Martin, and the Department of Economics and Public Service at Matej Bell University.

Conclusions

1. EHP assistance to the State Specialized Institute of Health was very effective from an institutional point of view. The selection of radon as a focus, while probably of limited significance, was of high interest and undoubtedly contributed to the activity's successes. The involvement of a local EHP coordinator provided continuity, support, and stimulus.

2. Future development can be strengthened through EHP contributions to the development of curriculum and educational materials aimed at sensitizing and educating public servants as well as medical students on issues of occupational and environmental health.

Recommendations

1. The mission should seriously consider using EHP for further assistance in curriculum and material design and training in occupational and environmental health for public servants and medical students.

3.b. Community Participation Approaches

Findings

1. EHP/Slovakia activities in community participation orientation were implemented through funding from the ENI Bureau and managed by the health office at USAID/Slovakia. To varying degrees, community participation has been an element of pilot activities in Trnava, Banska Bystrica, and Martin.

2. EHP inputs helped to motivate municipal staff and politicians from Trnava and Banska Bystrica to seek public participation. The public was included in

planning activities in Trnava and in health day events in both towns. In Trnava and Banska Bystrica, there were activities related to the Healthy Cities initiative of WHO. In Martin, the State Health Institute (SZU) consulted parents, teachers, and children about childhood exposure to heavy metals and launched a community-based action and education program to teach preventive measures.

3. Other EHP activities in Slovakia funded through the Local Government office at USAID/Slovakia did not have a strong community participation orientation or mandate.

Conclusions

1. Community participation and municipal-community-NGO partnerships are relatively new notions in the Slovakian context.

2. Progress on creating mechanisms for community planning input were particularly noteworthy in the municipality of Trnava. Local officials commented on the value of EHP assistance in teaching them the value and means to solicit public input during the development of their Healthy Cities proposal. They appear to want to continue this approach in the future. In the other locations, it was not possible to determine if there was strong interest on the part of the public institutions in continuing to work collaboratively with local communities.

Recommendations

1. The sustainability of the new relationships between public institutions and communities would be enhanced by further support from USAID. If future activities are funded, it would be quite helpful to bring in EHP expertise in the CIMEP methodology (community involvement in managing environmental pollution).

3.c. Behavior Change

Findings

1. Under the ENI Health buy-in, behavior change activities were initiated in Banska Bystrica (e.g., radon information activities) and in Martin (community-based action and education program related to heavy metals exposure). Monitoring of changes in knowledge, attitudes, and practices continues in Martin by the SZU. In Banska Bystrica, interest by construction firms and households in information and testing for radon was tracked by the SSZU Radiation Group.

2. It is not clear if the behavioral research (a KAP study) in Martin was conducted by community members or the SZU. However, there were follow-up meetings and discussion groups with parents, children, and teachers to identify remedial actions to reduce heavy metals ingestion by children, create educational materials for schools, and come up with a community-based action plan.

3. Educational materials, prepared for the Martin heavy metals activity, appear to be in part derived from the qualitative research conducted by the SZU. In

Banska Bystrica, the SSZU Radiation group, comprised of physicists and medical doctors, used a more conventional IEC (information, education, and communication) approach. They conducted their own mail and phone survey to determine household and contractor interest in radon testing. Subsequently, they produced informational brochures and newspaper/journal articles based on technical information available from the U.S. Environmental Protection Agency.

4. All of the EHP activities were engaged, to some extent, in behavior change on the part of municipal officials and staff, municipal associations, and national bureaucrats. For some, the EHP activity influenced how they interacted with community members (e.g., Trnava). Municipal staff and politicians in other places were able to use data-based arguments to successfully request budget allocations. VAKS (water and sewer authority) officials and municipal officials in Trencin learned new ways to negotiate acceptable arrangements for water and wastewater services. As a result of their mastery of a new EHP–supported computerized water management model, VAKS officials interacted in new ways with the national Ministry of Soil Management. ZMOS (Association of Towns and Communities in Slovakia) learned how to improve its policy position for the privatization of water and wastewater utilities.

Conclusions

1. The health pilot activities received limited funding from USAID but were able to motivate some behavior change in Martin and Banska Bystrica. Results are not available from Martin, but in Banska Bystrica, increasing numbers of households are seeking radon testing, and contractor interest is also on the rise. New housing developments in Banska Bystrica are now testing for radon on a routine basis.

2. According to those interviewed, Slovakian institutions and divisions within these institutions still continue to work quite independently as a result of the Communist legacy. For example, the SSZU in Banska Bystrica did not work with social or behavioral scientists in other institutions on implementing qualitative research on radon. Rather than contracting with a nearby marketing firm to conduct research or produce educational materials for a radon campaign, physicists at the SSZU chose to do limited household and contractor research on their own, and they created their own highly technical materials and articles for these audiences. However, over time, they modified their own views and behavior and were able to delegate some of this work to those more familiar with mass communication (e.g., allowing a newspaper article to be written by an editor).

3. While behavior change is being systematically monitored in Martin, it appears to be tracked only in an anecdotal manner elsewhere.

Recommendations

1. EHP should consider increasing the use of its subcontractor expertise in behavior change and social marketing.

2. Behavior change should be more systematically monitored across all EHP activities.

3.d. Institutional Capacity Building (Strengthening Public Institutions & NGOs Serving the Urban Poor)

EHP/Slovakia activities were not intended to build capacity for institutions serving the urban poor. Accordingly, there is no documentation regarding this set of results.

3.e. Institutional Capacity Building (Strengthening Institutions Providing Environmental Health Services)

Findings

1. Most of the EHP/Slovakia activities, supported through either ENI Health or Urban Programs funding, are geared to support public institutions involved in providing environmental health services or educations (e.g., universities). Some EHP assistance has been directed at ZMOS and other associations of municipal officials. Less attention has been directed at national level institutions, e.g., Ministry of Soil Management.

2. EHP assistance to institutions has included ongoing technical and policy advising, in-country workshops, training, advice to study tours, curriculum development, and technology development (e.g., computerized water management model).

Conclusions

1. As a result of EHP support, ZMOS and other associations of municipal officials are better able to articulate policy arguments for decentralization of water and wastewater utilities.

2. In Trencin, municipal officials appear to have more confidence negotiating favorable terms for decentralized management agreements with their local VAKS as a result of EHP's involvement. The study tours also provided them with new ideas for how to work with privatized municipal utilities and on other topics such as emergency management.

3. The computerized water management model developed by EHP appears to have been a critical element in helping to transform VAKS economists from bookkeepers to financial planners. These skills will be crucial in the future when utilities are privatized. However, it appears that training has not been sufficient to

allow routine program modifications. EHP is already aware of the need to extend this training to other VAKS in Slovakia and plans to begin this training in the coming year.

4. Several universities appear to be making greater progress in developing environmental health curriculum.

5. Municipal staff and local officials are having greater success at securing local funding for environmental health initiatives and have learned proposal writing skills.

Recommendations

1. EHP is already aware of the need to extend their institution-building efforts to other municipalities. The evaluators strongly support their plans to extend training of the computerized water management model to other VAKS and to use Trencin VAKS officials as trainers. In addition, it would be quite helpful to train Slovakian computer specialists, either from the university or the private sector, to modify the model when circumstances change.

2. Slovakian efforts to develop environmental health curriculum at the university level should be useful to other countries in the region and should be shared at regional fora.

4. Linkages and Partnerships

Findings

1. In Slovakia, EHP's partnerships and linkages have primarily been with other USAID projects and also with U.S. EPA. EHP brokered the volunteer visits by EPA staff to Poprad and Bratislava. EHP's links to other international NGOs and donors do not appear to be significant in Slovakia.

2. EHP's water and wastewater activities are carried out through the Local Self-Government Assistance Center (LSGAC) which is registered as an NGO. EHP shares LSGAC offices in Bratislava with RTI, ICMA, and other contractors.

3. EHP/Slovakia health pilot activities and utility privatization activities have operated completely separately and have had almost no interaction.

Conclusions

1. Although each of the urban office-funded partners listed in Finding 2 above are responsible for related results, their activities have tended to be vertical (contractor–USAID) rather than horizontal (contractor-contractor). Despite sharing office space and some support staff, communication has often been less than ideal.

2. There was not a significant topical overlap between the two sets of EHP activities (health and utility privatization). However, there was a client overlap (municipal officials and staff). In hindsight, there might have been some possibilities for synergy if the activities had worked in some of the same communities (e.g., the impact of privatization on municipal funding levels for environmental health activities).

3. The health activities are of a pilot nature and required minimal USAID investment ($3,000 each). Municipal staff and officials involved in the EHP activity learned how to write proposals and improve their success at securing municipal funding for environmental health activities. It appears that if outside support is required in the future, the municipalities will need to seek out this support on their own.

Recommendations

1. Recommendations for improving cooperator-to-cooperator relationships and USAID–cooperator issues appear in Section 6 below on management.

2. EHP's links to international donors and NGOs are an asset for leveraging funds and should routinely be used to help secure the sustainability of pilot efforts.

5. Monitoring and Evaluation

Findings

1. The results of many of EHP's institutional support activities are discussed in anecdotal, process-oriented terms rather than using quantitative measures. Activities planned in the next year emphasize training. Since these activities fall in the final year of the activity, the monitoring plans focus on inputs and outputs.

2. Monitoring appears to be quite limited for both the health and utility privatization activities. Monitoring appears to have been the most systematic in Martin and includes knowledge, attitude, and behavior change indicators.

3. Monitoring is not consistently gender-disaggregated.

Conclusions

1. Extensive monitoring is not a viable option for EHP/Slovakia activities because both sets of activities are relatively short-term and limited in budget.

2. Because of the delay in utility privatization, progress has been slowed, and by necessity, EHP's work has been much more process-oriented.

Recommendations

1. If possible, EHP should consider how to measure the impact of training on participants over time (e.g., the computerized water management model training).

2. In Martin, monitoring should be disaggregated by gender to identify how strategies need to be adapted in the future.

6. Administration and Management

Findings

1. LSGAC is a loose grouping of USAID contractors working under the mission's local government program. A senior municipal management specialist works on and coordinates EHP utility decentralization activities and RTI activities; he receives half his salary from each organization. Each contractor provides its own staff or uses local contractors for support.

2. The mission has played a very active role in directing the work of LSGAC. This has led to contractor complaints about micro-management.

3. The mission expressed concern to the team about the lack of a workplan from LSGAC. This apparently does not refer to EHP; according to EHP headquarters, field work in Slovakia is proceeding according to an annual workplan prepared in January 1997.

4. EHP's health activities do not fall under LSGAC but rather under the mission health office.

5. EHP's local staff includes two highly competent advisors, an urban planner and a medical doctor.

6. EHP core staff participate regularly in project activities in Slovakia.

Conclusions

1. EHP activities in Slovakia appear to be well-managed by highly competent U.S. and local staff.

2. Coordination among LSGAC contractors is limited, and differences of opinion exist as to the division of responsibilities between the mission and LSGAC.

Recommendation

1. The mission and LSGAC may wish to review their relationship and LSGAC's internal operations to ensure that activities of EHP and the other contractors are coordinated wherever appropriate and that the division of management responsibilities between the two is well-defined.

7. Future Directions

Findings

1. Apart from the environmental health curriculum development, the pilot activities are now completed. A summary of the activities and lessons learned has been drafted.

2. Since privatization efforts are currently in flux, EHP/Slovakia is focusing its efforts in the remaining time of training of VAKs officials on the computerized water management model which was originally developed for Trencin.

Conclusions

1. The summary of the health pilot activities is a useful document. Both process and results would be clarified by the use of matrices that illustrate the differences for the four sites in inputs, outputs and results.

2. Training is a logical focus for EHP during its remaining time in Slovakia.

Recommendation

1. USAID/Slovakia is a close-out mission, and activities will be shut down within the next two years. Despite the relative merits of both sets of EHP activities, future funding does not appear to be an option. If plans change and funding becomes available, then the following activities should be considered for support:

- Implementation of a training program for other municipalities in which the participants in the EHP health pilot activities serve as trainers to their counterparts in other locations in Slovakia.
- Creation of a process for a national dialogue about primary prevention policies and pilot programs, based on the experience in Martin, Trnava, and Banska Bystrica.

- Train Slovakian computer specialists to develop and regularly update computer models for utility management.

8. People Interviewed by the Evaluation Team

Dr. Hana Mociarikova, Project Advisor, Health Office, USAID
George Williams, Chief, Local Government Office, USAID
Ing. Arch. Karol Balas, Urban Planner, EHP Project Advisor, Local Self-Government Assistance Center (LSGAC)
Kenneth R. Mahony, Senior Municipal Management Specialist, EHP/RTI, LSGAC
Martin Rusnak, MD, Ph.D, Local Coordinator, EHP
Dipl. Ing. Stefan Bosnak, Lord Mayor, City of Trnava
Ing. Jaroslav Drako, Specialist in Water Management, Drako & Associates, Bratislava
Dipl. Ing. Beata Janovcova, Chief of the Environmental Department, Banska Bystrica Municipal Office
Dr. Bohumil Chmelik, Director, Institute of Health Management, Trnava
Dipl. Ing. Jan Kardos, Director, Water and Wastewater District, Trencin
Dipl. Ing. Jan Koritko, Technical Director, Water and Wastewater District, Trencin
Ing. Jarmila Prochazkova, Head of Construction Department, Bratislava
Ing. Jozef Taric, General Director of Water Management Section, Ministry of Soil Management
Dr. Alexander Thurzo, Executive Director, Association of Towns and Communities of Slovakia (ZMOS)
Ing. Tomasik, Head of Department for Commercial Services, Bratislava
Dipl. Ing. Jan Vavro, Deputy Director, Water and Wastewater District, Trencin
Dipl. Ing. Jozef Ziska, Lord Mayor, Town of Trencin

9. Summary of EHP Slovakia Activities

FIGURE 8. SUMMARY OF EHP SLOVAKIA ACTIVITIES

Date	Activity	EHP #
Aug 1995 – Jan 1997	Start-Up for Next Phase of EHP TA	122RC
Mar 1995 – Sep 1995	Ongoing Policy Support	145RC

FIGURE 8. SUMMARY OF EHP SLOVAKIA ACTIVITIES		
Jan 1995 – Mar 1996	Preparation of Transformation Proposals	152RC
Jan 1995 – Sep 1995	Strengthening the Capacity of the Association of Towns and Municipalities	153RC
May 1995 – Sep 1996	Environmental and Occupational Health Promotion Activities	179RC
May 1995 – Mar 1996	Review of Tender Documents for Wastewaters Treatment Plant	182RC
Oct 1995 – Dec 1997	Long-Term Advisor	223RC
Jan 1996 – Jan 1997	Financial Analysis in Trencin	231RC
Apr 1996 – Sep 1996	Financial Model for the Trencin Water and Wastewater District	241RC
Aug 1996 – Dec 1997	EHP Home Office Management	247RC
Sep 1996 – Dec 1996	Lubica\Kezmarok Landfill Project	249RC
Oct 1996 – Jun 1997	Bratislava Workshops	322RC
Dec 1996 – Apr 1997	Dissemination of the Enterprise Financial Model	324RC