PROJECT DATA SHEET

A = Add, C = Change, D = Delete: A | Amendment Number: | CODE: 3

2. COUNTRY/ENTITY: Worldwide

3. PROJECT NUMBER: 936-5994 PD-ABF-604

4. BUREAU/OFFICE: R&D/Health [69]

5. PROJECT TITLE (maximum 40 characters): Environmental Health ISN 82615

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 12 DD 31 YY 03

7. ESTIMATED DATE OF OBLIGATION (Under B below enter 1, 2, 3 or 4): A. Initial FY 93 B. Quarter 4 C. Final FY 02

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY 93 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	3,500		3,500	125,000		125,000
R&D/H	(3,500)	( )	(3,500)	70,000	( )	70,000
(incl OYB Trans)	( )	( )	( )	(20,000)	( )	(20,000
Other U.S. 1. Buy-ins/add-ons				55,000		55,000
Other U.S. 2.						
Host Country						
Other Donor(s)						
TOTALS	3,500			125,000		125,000

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1 Grant	2 Loan	D. OBLIGATIONS TO DATE 1 Grant	2 Loan	E. AMOUNT APPROVED THIS ACTION 1 Grant	2 Loan	F. LIFE OF PROJECT 1 Grant	2 Loan
(1) HE	510	540				42,000		42,000	
(2) DFA	510	540				5,000		5,000	
(3) ESF	510	540				3,000		3,000	
(4) ARDN	510	540				1,000		1,000	
(5) CS	510	540				13,000		13,000	
(6) PSEE	510	540				2,000		2,000	
(7) NIX	510	540				4,000		4,000	
TOTALS						70,000		70,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 850 | 230 | 510 | 610 | 710 | 840

11. SECONDARY PURPOSE CODE:

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BR	ENV	TECH	PVOV	PVON		
B. Amount							

13. PROJECT PURPOSE (maximum 480 characters)

To strengthen the capacity of developing country and government organizations to develop, implement, and monitor effective strategies, programs and projects in the areas of environmental health throughout the world by facilitating the exchange and application of technology and information

14. SCHEDULED EVALUATIONS: Interim MM 01 YY 98 | Final MM 12 YY 02

15. SOURCE/ORIGIN OF GOODS AND SERVICES: [X] 000 [ ] 941 [ ] Local [ ] Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment)

17. APPROVED BY: Signature: Robert Wrin
Title: Robert Wrin, Acting Director, R&D/H
Date Signed: MM 01 DD 16 YY 93

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

AID 1330-4 (8-79)

PROJECT AUTHORIZATION

Name of Country: Worldwide

Project Title: Environmental Health

Project Number: 936-5994

1. Pursuant to Sections 103, 104, 106 and 531 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Environmental Health Project involving centrally-funded planned obligations not to exceed $70,000,000 in grant funds from the Health (HE), Environmental Health (EH), Child Survival (CS), Private Sector, Environment and Energy (PSEE), Development Fund for Africa (DFA), Economic Support Fund (ESF), and Agriculture, Rural Development and Nutrition (ARDN), Environmental (ENV), and Assistance for the New Independent States of the Former Soviet Republic (NIS) accounts, of which $20,000,000 will be from OYB transfers, over a ten year period from the date of authorization. This allocation is subject to the availability of funds in accordance with the A I D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. Additional funding in the amount of $55,000,000 may be provided under the Project by Regional Bureaus and Missions through buy-ins.

The initial obligation year for the Project is FY 1993; the final obligation year is FY 2002 The project assistance completion date is 12/31/03.

2. The purpose of the project 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 focus of this project will be in the provision of technical assistance in engineering and technology, institutional and human resource development, policy, public health, community participation, information services, epidemiology, finance, and health information system development The project will address cross-cutting issues requiring inputs from the following subsectors: water supply and sanitation, wastewater, solid waste, air pollution, tropical diseases, food hygiene, hazardous

materials, occupational health and injury.

3. The agreement(s) which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. Regulations and Delegations of Authority shall be subject to the following terms and covenants and major conditions, together with such other terms and conditions as A.I D. may deem appropriate.

a. Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in the "cooperating country" or the United States, except as A.I.D. may otherwise agree in writing. (Each country in which research, training, or technical or other assistance takes place under the project shall be considered a "cooperating country.") Except for ocean shipping, the suppliers of commodities or services shall have the cooperating country or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing.

Ocean shipping financed by A.I.D under the Project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

b Based on the justification described on page 3 of the Action Memorandum from the Director for Health, Bureau for Research and Development, regarding Authorization of the Environmental Health Project (936-5994), I hereby determine that the proposed PASA(s) with the Centers for Disease Control of the Department of Health and Human Services and/or the Environmental Protection Agency qualifies under Section 621(a) of the FAA because it is (1) for technical assistance, (2) the Centers for Disease Control and/or the Environmental Protection Agency is particularly suited to carry out the scope of work, (3) this action is not competitive with private enterprise, and (4) it will not interfere with the normal work nor will it interfere with the domestic operations of the CDC and/or EPA

APPROVED: _____

DISAPPROVED: _____

DATE: 3/24/93

Clearances:

R&D/H/CD:DCarroll	draft	Date:	11/5/92
R&D/H/CD:JKlement	draft	Date:	11/5/92
R&D/H:GPettigrew	draft	Date:	12/9/92
A-R&D/H:RClay	draft	Date:	1/25/93
R&D/PO:JBierke		Date:	3/18/93
GC/R&D:GWinter	draft	Date:	12/18/92

A-DAA/R&D:DGillespie _____ Date: 3/24/93

d

USAID

U S AGENCY FOR
INTERNATIONAL
DEVELOPMENT

MAR 16 1993

ACTION MEMORANDUM FOR THE ACTING ASSISTANT ADMINISTRATOR
BUREAU FOR RESEARCH AND DEVELOPMENT

FROM: A-R&D/H, Robert Wrin

SUBJECT: Authorization of the Environmental Health Project (936-5994)

PROBLEM: Your authorization is requested to initiate a new centrally-funded ten year project entitled "Environmental Health" (936-5994) in the amount of $70,000,000 from the Health (HE), Child Survival (CS), Private Sector, Environment and Energy (PSEE), Development Fund for Africa (DFA), Economic Support Fund (ESF), and Agriculture, Rural Development and Nutrition (ARDN), Assistance for the New Independent States of the Former Soviet Republic (NIS) and Environmental (ENV) accounts. Of this amount $20,000,000 will be from OYB transfers.

DISCUSSION: The Environmental Health Project continues the initiatives and successes accomplished under the Water and Sanitation for Health (WASH) and the Vector Biology and Control (VBC) Projects This will enable the Agency to continue to address rural and urban water supply and sanitation, wastewater, solid waste, as well as vector borne tropical disease concerns in developing countries In addition, the Project will be expanded to include other related environmental health needs such as air pollution, food hygiene, hazardous materials, occupational health, and injury. To summarize, the Environmental Health Project will build upon the extensive expertise gained in WASH and VBC, and will place greater emphasis on peri-urban environmental health issues.

The Water and Sanitation for Health and the Vector Biology and Control Projects will be completed within the next 6-12 months Combining these two programs with the new environmental health subsectors identified above will consolidate the management requirements as well as enable cost savings to be realized. This approach will maintain, at a lower cost, the high quality of water supply and sanitation, and tropical disease control services requested by missions while phasing-in new environmental health subsectors as demand is generated by the missions and regional bureaus. This will also enhance the linkages and coordination among the subsectors

The focus of the new project will be in the provision of technical assistance in engineering and technology, institutional and human resource development, policy, public health, community participation, information services, epidemiology, and finance. The ten year duration of the project will allow for longer term planning and applied research in these new areas. It is intended that the Environmental Health Project will continue to be central to the Agency's environmental health initiatives over the next decade

Project Data

$3.5 million of central funds is planned to be obligated during the start of the Project in fiscal year 1993. The final year of obligation is FY 02, and the Project Assistance Completion Date is December 31, 2003.

In addition to the amount authorized above, an estimated $55,000,000 may be contributed to this project by Missions and Regional Bureaus.

Project Issues

As recommended in the April 14, 1992 PID review, the Tropical Disease Research (TDR) Project will not be incorporated into this project.

Special Interest in the Project

Environmental health, which is increasingly recognized as a priority health issue in the developing world, potentially has an enormous negative impact upon recent improvements in maternal and child health and increases the burden upon an already severely stretched health delivery system and human resource base.

Exacerbating these environmental health concerns is the rapid urbanization occurring in virtually all developing countries in the past 40 years. Based on current UN population projections, by the year 2006, most of the world's population will be in urban areas. In the growing peri-urban areas, people live with no piped water, no sewer system, no safe cooking facilities, no lighting or access to roads; the negative effects of environmental conditions on health are particularly acute because of crowded living conditions and the lack of basic service delivery and infrastructure.

Strengthening or creating institutions and developing human resources are necessary in many developing countries to ensure the successful implementation of environmental health programs. Talented scientists and other professionals are needed in a broad range of technical fields in environmental health.

The goal of this project is to improve the health status of developing country populations exposed to environmental health

risks. This project is designed to enable developing countries to effectively assess, manage and prevent health problems resulting from environmental conditions in the discussed subsectors.

Waivers, Special Clearances, Provisions, and Determination

a. Waivers: none

b. Special Clearances: An Initial Environmental Examination has been prepared for the Project and is attached to the Project Implementation Document.

c. Provisos: There is no need for any special provisions because the research supported by this project is non-biological, does not involve the use of human subjects, and will not infringe on intellectual property rights.

d. Determinations and Certifications. A 621(a) determination to access the expertise of the Centers for Disease Control of the Department of Health and Human Services and the Environmental Protection Agency is appropriate CDC and the EPA qualify under Section 621(a) with specific reference to the following provisions:

1. **The services sought from CDC and EPA are technical assistance.** This includes the provision of direct technical assistance to USAID missions and offices, both overseas and in Washington, DC;

2. **The technical assistance sought is uniquely available from CDC and EPA.** Through the public health and environmental services of CDC and EPA A I.D. can obtain access to superior capabilities to both private and public sources. These services are both unique and readily available, demonstrating the absolute advantage of CDC and EPA in their respective areas

3. **Furnishing of these services will not interfere with the normal work nor will it interfere with the domestic operations of the CDC and/or EPA.** Both CDC and EPA separately conduct domestic programs, and it is clear that these PASAs will in no way interfere with the ongoing activities of either organization

SECTOR COUNCIL REVIEW· The Health Sector Council reviewed the project paper for this project on October 15, 1992. Suggestions made by members of the Sector Council have been incorporated in the final draft.

CONGRESSIONAL JUSTIFICATION: A Congressional Notification will be sent to Congress upon project authorization.

PROCUREMENT PLAN AND BUDGET: The project is expected to be implemented using several procurement instruments. The three principal instruments will be. a) a competitively bid contract (for a five year period) for technical assistance and field mission support; b) PASAs with the Centers for Disease Control and the Environmental Protection Agency for the activities relating to tropical vector borne diseases (specifically, malaria) and selected environmental health assistance; and c) non-competitive grants or cooperative agreements to international organizations and/or other organizations/agencies which have unique expertise in water supply and sanitation, environmental health and/or tropical disease related areas, which will contribute to the achievement of project objectives.

RECOMMENDATION: That you sign the attached project authorization.

Attachments:
1. Project Authorization
2. Project Data Sheet
3. Project Paper

Clearances:

R&D/H/CD:Dcarroll draft date 11/5/92
R&D/H:GPettigrew draft date 12/9/92
R&D/H:JKlement draft date 12/9/92
A-R&D/H:RClay draft date 1/25/93
R&D/PO:JBierke [signature] date 3/18/93
FA/OP:MGushue draft date 12/30/92
GC/R&D:GWinter draft date 12/18/92
A-DAA/R&D:DGillespie [signature] date 3/24/93

Drafter:R&D/H/CD/:JHA7/20/92;rev NMP:10/26/92;rev JMK,11/02/92;rev DC,11/4/92,rev JMK,11/17/92,rev NMP, 12/1/92,rev,DC,3/11/93:U:cddpub\docs\eh.mem

ENVIRONMENTAL HEALTH
936-5994
PROJECT PAPER

OFFICE OF HEALTH
BUREAU FOR RESEARCH AND DEVELOPMENT
AGENCY FOR INTERNATIONAL DEVELOPMENT

MARCH 11, 1993

ENVIRONMENTAL HEALTH PROJECT PAPER
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ABBREVIATIONS

AAAS	American Association for the Advancement of Science
AFR	Africa
A I D.	Agency for International Development
ARDN	Agriculture, Rural Development, and Nutrition
ARI	Acute Respiratory Infection
BASICS	Basic Support for Institutionalizing Child Survival
CDM	Camp Dresser and McKee and Associates
CEHA	Centre for Environmental Health Activities
COTR	Contracting Officer Technical Representative
DDM	Data for Decision Making Project
DFA	Development Fund for Africa
EF	Environmental Forum
ENV	Environmental Funds
EP3	Environmental Pollution Prevention Program
EPA	Environmental Protection Agency
EPAT	Environmental and Natural Resources Policy and Training Project
ESF	Economic Support Funds
ESP	Asia Bureau's Environmental Support Project
EUR	Eastern Europe
EWG	Environmental Working Group
FY	Fiscal Year
GDP	Gross Domestic Product
GIS	Geographic Information System
GNP	Gross National Product
GREENCOM	Environmental Education and Communication Project
HEALTHCOM	Communication and Marketing for Child Survival Project
HHS	Health and Human Services
HIS	Human Information Systems
IEE	Initial Environmental Examination
IPA	Intergovernmental Personnel Act
ISPAN	Irrigation Support Project for Asia and the Near East
LAC	Latin America and the Caribbean
LDC	Less Developed Country
LOP	Length of Project
MIS	Management Information System
NGO	Non-Governmental Organization
NIOSH	National Institute for Occupational Safety and Health
O&M	Operations and Maintenance
OYB	Operational Year Budget
PACD	Project Assistance Completion Date
PAF	Project Authorization and Request for Allotment of Funds
PAHO	Pan American Health Organization
PASA	Participating Agency Service Agreement
PCB	polychlorinated biphenyls
PEEM	Panel Experts Environmental Management (WHO)

PHS	Public Health Service
PIO/T	Program Implementation Order/Technical Services
PRE	Bureau for Private Enterprise
PRIDE	Project in Development and the Environment
PRITECH	Technology for Primary Health Care
PVO	Private Voluntary Organization
REACH	Technology for Primary Health Care I Project - Resources for Child Health
REDSO	Regional Economic Development Services Office
RFP	Request for Proposal
RHUDO	Regional Housing and Urban Development Office
SOW	Scope of Work
TA	Technical Assistance
TAACs	Technical Advisors in AIDS and Child Survival Project
TAG	Technical Advisory Group
TO	Technical Officer
UN	United Nations
US-AEP	United States - Asia Environmental Partnership
USG	United States Government
VBC	Vector Biology and Control Project
WASH	Water Supply and Sanitation for Health Project
WHO	World Health Organization

I. Summary

The purpose of Office of Health's (R&D/H) proposed Environmental Health Project (No. 936-5994) 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 Environmental Health (EH) Project supports the objectives of the R&D Office of Health Strategy directly, through technical assistance, and indirectly, by optimizing its interaction with other Office of Health projects It is proposed that this new project have a project ceiling of $125 million with $50 million provided by R&D Health core funds and $75 million from other Office, Bureau, and Mission OYB transfers and buy-ins A project duration of ten years is proposed, with the principal contract to be competitively awarded for an initial five-year period, and then rebid for the remaining five years

The Environmental Health Project continues the initiatives and successes accomplished under the Water and Sanitation for Health (WASH; No 936-5973) and Vector Biology and Control (VBC, No. 936-5948) Projects. Thus, the EH Project will continue to address rural and urban water supply and sanitation, wastewater, solid waste, as well as tropical disease concerns in developing countries, but will also include other environmental health needs, including those related to air pollution, food hygiene, hazardous materials, occupational health, and injury. The Environmental Health Project will build upon the experience gained in WASH and VBC, but will also place greater emphasis on peri-urban environmental health issues.

Environmental health programs have barely kept pace with growing rural populations, and have fallen far short of the needs of the more rapidly growing peri-urban populations. Since these poor urban and rural populations form the basis for both industrial and agricultural productivity, provision of basic environmental health services is a first step towards improved health and economic development at the community level.

The focus of this new Project will be in the provision of technical assistance in engineering and technology, institutional and human resource development, policy, public health, community participation, information services, epidemiology, finance, and health information system development. In addition, the project will address cross-cutting issues requiring inputs from several of these nine technical areas.

SOURCE SELECTION INFORMATION -- SEE FAR 3 104

The ten-year duration of the Project will allow for needed long-term planning and applied research in this vital sector. Therefore, the Environmental Health Project will continue to be central to the Office of Health's initiative over the next decade.

II. Program Rationale

A. Project Background

1 Office of Health 1992 Strategy

The Environmental Health Project supports the R&D Office of Health objectives, taken from the 1992 Summary Strategy·

> "The primary objective of A I D 's health programs is to contribute to human productivity through
>
> 1) increasing life expectancy, primarily through reductions in the infant mortality rate and the HIV prevalence rate
>
> 2) reducing morbidity, which consumes family and health sector resources and reduces productivity at all ages
>
> Achieving these objectives will increase the quality of life and promote broad-based economic growth in A I D -assisted countries
>
> A second objective of A I D 's health program is to contribute to a more equitable and sustainable distribution of resources and services, both nationally and globally, through assistance directed at improving the efficiency and effectiveness of public and private LDC health systems Achieving this objective will contribute to better health and greater political stability and pluralism in A I D -assisted countries
>
> A third objective of A I D 's health program is to contribute to improving environmental quality through assessing and managing environmental health risks. Achieving this objective will require reductions in "brown" pollution and therefore result in increases in environmental quality in A I D -assisted countries."

This project directly addresses these objectives through its technical assistance in the environmental health sectors. It also is designed to maximize Office of Health's resources through efficient and appropriate collaboration with other projects.

2. Definition of Environmental Health

Environmental health is defined as encompassing those diseases and health problems that result from environmental conditions or are exacerbated by environmental degradation These problems range from the direct health impacts of human interactions with the environment, to indirect health impacts of environmental degradation. The public attention given to environmental issues world-wide in recent years has served to spotlight the adverse

effects of environmental change on human health in developing countries. In rural areas, environmental problems with a long, well-documented negative health impact continue to persist despite efforts for alleviation. Meanwhile, new concerns are being voiced regarding overlooked rural health problems, such as indoor air pollution. As the developing world becomes increasingly urbanized and industrialized, urban environmental health conditions which call for attention are emerging.

3. Effect of Rapid Urbanization on Environmental Health

Based on current United Nations population projections, in 14 years, most of the world's population will be in developing countries and the majority will be in urban centers. By 2025, more than half of the populations of Africa and Asia will be in urban areas and nearly 85% of Latin America's population will be urbanized. Urbanization, which is fueled by both absolute population growth and migration, clearly offers advantages to some, but for the poor who are often the majority of the urban population, rapid, unplanned urban growth usually results in unhealthy environmental conditions. Rapid growth of settlements housing the poor (referred to as the peri-urban sector in this project) usually accompanies rapid, unplanned urbanization Indeed, it is not uncommon for such settlements, with many of the households headed by women, to grow at twice the rate of the more formal parts of the city In Tegucigalpa, Honduras, 80% of the population lives in peri-urban areas; in Addis Ababa, Ethiopia the figure is the same. In these peri-urban areas, people live with no piped water, no sewer system, no solid waste disposal, and no safe cooking facilities. Women and children are heavily relied on to carry water to the home The lack of basic services leads to a living environment which is not only crowded but also polluted. Not surprisingly, research shows that health conditions within these peri-urban communities are often much worse than those of the better-served, higher income urban communities. For example, in Nairobi, Kenya, forty percent of the children living in a peri-urban community (Kiberia) were found to be infested with parasitic worms as compared to none of the children in the formal urban community.

4. Economic and Development Impacts of Environmental Health

The significance of environmentally-related diseases as inhibitors of economic growth and development has yet to be explicitly measured. However, it is clear that the economic burden incurred as a result of environmental health conditions can be enormous and poses a threat to continued economic growth. For example, the cost of epidemics can be high, absorbing a large percentage of national revenues. In Peru, the first two months of the cholera epidemic in 1991 cost at least $250 million in treatment costs and losses to the fishing and food industries.

This represents 20% of Peru's planned investment in basic sanitation for 10 years.

Onchocerciasis (river blindness) is a striking example of how disease can compromise the human potential for economic development WHO estimates that 10 percent or more of some heavily infected communities may be "economically blind." In some African villages the prevalence of blindness reaches 35 percent. Blindness of this magnitude reduces the productivity of agricultural communities below their survival level. A community loses an average of 22 productive person-years (9 years of disablement and 13 years lost due to premature death) for every blind person One study of onchocerciasis-related blindness in Burkina Faso, conducted before an onchocerciasis control program began, estimated that the country lost 60,000 productive person-years annually.

Comprehensive data on the economic impact of these diseases are limited and measurements of the effects of these diseases on basic economic indicators such as GDP growth rates, export earnings, consumption and investment, and government revenues and expenditures are rare. Nevertheless, there is accumulating evidence establishing the link between health and economic growth.

One such study conducted by A I D , "Economic Impact of Malaria in Africa," found costs per case of malaria in sub-Saharan Africa to be $9 68 or approximately 12 days of economic output. These costs are expected to increase to 23 days of economic output by 1995 The direct per case cost of $3 40 is equal to the total annual public sector health expenditure in many of the African countries. In other words, treatment of one case of malaria uses up a person's entire share of government health resources. With an annual per capita cost of $1.72, the malaria burden was estimated to equal a loss of 2 1 days output per person, with a projected increase to 4 1 days of lost economic output per person yearly by 1995. The study makes clear that the costs of controlling and preventing environmental health diseases should be weighed against the tremendous public health and economic benefits. In view of the significant impact that the range of environmentally-caused diseases appears to have on economic growth, the preventive strategy taken by this project makes long-term financial as well as economic sense.

5. Environmental Health Subsectors: Health Consequences

This project uses a framework which divides environmental health concerns into nine subsectors: tropical diseases; water supply and sanitation, solid waste; wastewater; air pollution; food hygiene; hazardous materials; occupational health; and injury. Because of interactions among these subsectors, categorization of environmental health problems into discrete subsectors may not

always be possible or desirable. Nevertheless, the subsector framework assists in identifying general areas of environmental health amenable to control and management Within each subsector, environmental conditions may directly or indirectly impact upon health. The importance of particular subsectors with regard to health varies from one developing country to another For example, in Sub-Saharan Africa contaminated water and poor sanitation help to cause infectious and parasitic diseases that account for over 62% of all deaths - twice the level in Latin America.

Figure 1: Health and the Environment

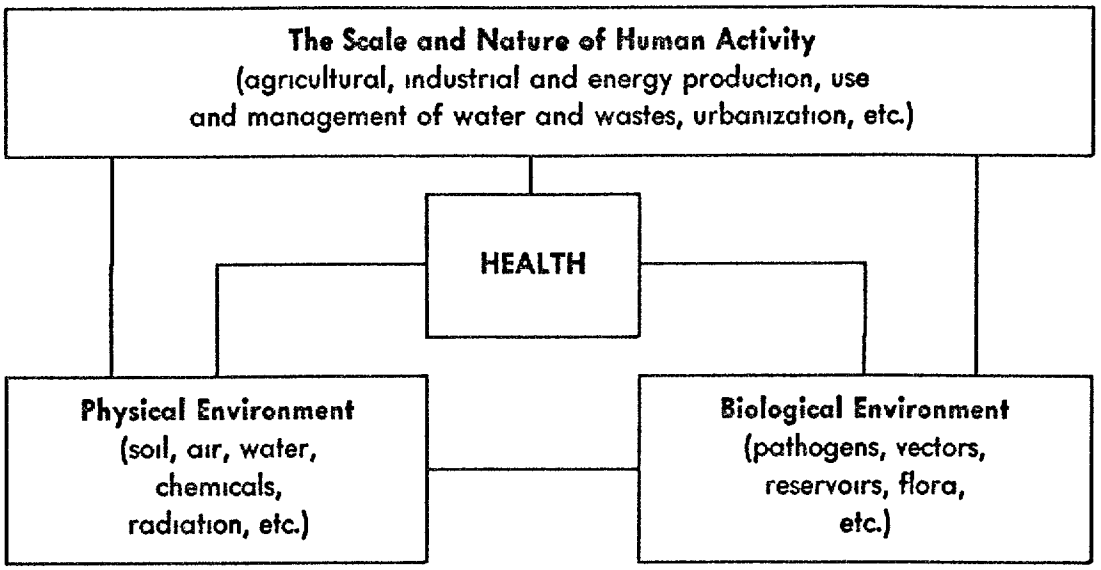


Figure 1 provides an overview of the interactions between human activities and the physical and biological environments. This emphasizes that interventions aimed at single components of an environmental health problem may not be adequate. Rather, all components in Figure 1 must be considered when trying to improve human health. For example, the direct and indirect links between health and activities such as agriculture or industry clearly exist. Such links must be considered when designing a strategy to address a health problem related to environmental conditions

The remainder of this section defines each of the nine subsectors and explains their relationship to environmental health. The first four subsectors discussed are those which are currently addressed by the VBC and WASH Projects: tropical diseases (VBC); and water supply and sanitation, wastewater, and solid waste (WASH). Since more attention has been traditionally afforded these four areas, the environmental health impacts are better

documented than the five new areas covered by the project: hazardous materials, air pollution, occupational health, injuries, and food hygiene.

a. Tropical Diseases

Tropical diseases covered by this project are those where the infectious agent is introduced into the host by another organism, most often an insect or arthropod. Several hundred diseases are transmitted by vectors and may be parasitic, bacterial or viral. Disease transmission depends upon a number of factors related to the parasite, bacteria or virus, the human host; the vector's ecology and the environment. Because environmental factors play such an important role in transmission, tropical diseases can be introduced into an area as a result of significant changes in the environment. Irrigation, road building, forestry and other economic development activities may increase opportunities for transmission by creating new vector habitats. The lack of basic services in urban and peri-urban settings may enhance disease transmission as habitats are created for vectors due to mismanagement of wastewater and solid waste. The relationship between environmental conditions and tropical disease transmission (and control) accounts for the inclusion of these diseases in the environmental health project.

The most common tropical diseases are malaria, schistosomiasis, filariasis, arboviruses (including dengue, yellow fever, and numerous encephalitides), leishmaniasis, and trypanosomiasis These diseases are a major cause of morbidity and mortality in developing countries. Only a few will be detailed here but the examples are illustrative of the enormous tolls on health and the economy exacted by tropical diseases.

Malaria is one of the leading causes of death and illness in the world. There are 267 million infected, 110 million new cases each year and 1 to 2 million deaths annually In infants, young children, pregnant mothers and others with little or no immunity, malaria may be fatal. In Africa, malaria is a leading cause of infant mortality and is responsible for more than 1 million childhood deaths each year, as well as approximately half of all hospital and clinic visits. The direct and indirect costs of one malaria case can exceed the national per capita expenditure on health.

Onchocerciasis, or "river blindness", affects 17.5 million people of whom 340,000 are completely blind In some villages in Burkina Faso and Ghana, the prevalence of blindness reaches 35%. Although onchocerciasis is not a life-threatening disease, it has severe economic repercussions because family providers are often stricken with blindness and other chronic effects of the disease.

Schistosomiasis is a chronic, debilitating disease which infects about 200-300 million people in 79 countries worldwide. The disease is transmitted to humans when they enter water contaminated with infected freshwater snails, which serve as intermediate hosts of the parasite. First infection with schistosomiasis usually occurs during the early school years and is a frequent cause of absenteeism. It is not uncommon for 85% of a school's population to be infected in some highly endemic areas of Africa. In addition to its effect on children, schistosomiasis has a major impact on the agricultural workforce and on national economic productivity. In Egypt, where 20% of the people are infected, economic losses due to lost work are estimated to exceed $500 million a year.

As is true of other tropical diseases, environmental changes related to development have resulted in changes in the epidemiology of schistosomiasis that threaten to expand the infected population Water development schemes, including dam building and irrigation systems, have created new breeding sites for snails. New agricultural systems that emphasize irrigation, double cropping and other intensive cultivation practices have increased farmers' exposure to infection. Although schistosomiasis is primarily a rural disease associated with daily activities related to water use, urban and peri-urban transmission is becoming a serious problem In these areas, snail-infested streams and canals are often the most convenient water sources.

b. Water Supply and Sanitation

Safe water is water that does not contain microorganisms or chemical substances in concentrations that would cause illness or harm the user. An adequate water supply is one that provides potable water in quantities sufficient for drinking and for other household purposes so as to make possible the personal hygiene of household members. Over 1 2 billion people, about one-fourth of the world's population, lack access to a safe and adequate drinking water supply. The water supply for these people is a river, lake, stream, spring or well that is a breeding ground or carrier of disease-causing organisms or the home of disease-carrying insects In the peri-urban setting where hundreds of millions of people lack a piped water supply, there is no alternative but to use contaminated water from surface sources which are often merely open sewers. Alternatively, individuals lacking a piped water supply may purchase water of unknown quality at exorbitant prices from vendors. Such inadequate provision results in environmental damage, economic costs and illness. Inadequate water supplies, especially in Asia, prompt people to boil water, consuming fuel wood and adding to air pollution. In Jakarta, Indonesia, over $50 million is spent each year by households for boiling contaminated water.

Sanitation refers to the means of collecting and disposing of human excreta in a hygienic manner. It includes hygiene behavior - a necessary component to any sanitation project. At least 1.7 billion people lack adequate sanitation. In developing countries, sanitation facilities are available primarily in established urban areas and generally lacking in peri-urban areas and rural communities. The rapid growth of cities has eclipsed efforts to provide adequate sanitation. In Nigeria, for instance, where the number of city residents grew by 80% between 1980 and 1990, six in seven houses lack sanitation facilities. Fecal waste is disposed of on nearby land or directly into water. Because the fecal-oral transmission routes become much more important in densely populated areas, the ill effects of poor environmental sanitation are greatest in urban and peri-urban settlements.

Inadequate drinking water supplies and sanitation facilities can have devastating impacts on mortality, morbidity, and the economy. It is estimated that more than 3 million deaths from diarrheal diseases alone could be avoided each year if all people had access to safe drinking water and sanitation services and practiced hygienic behavior. Water-related diseases and illnesses are responsible for the deaths of most of the 5 million children under five who die annually in Africa Poor sanitation and contaminated drinking water are largely responsible for the cholera epidemic currently spreading through several countries in Latin America and Africa. Of the 37 diseases that are the primary causes of death in the developing world (WHO), 21 are water related. Of further importance, water and sanitation are considered the primary interventions for prevention for ten of these 37 diseases· diarrheal diseases, typhoid, schistosomiasis, amebiasis, hookworm, hepatitis A, ascariasis, giardiasis, trichuriasis, and dracunculiasis. The annual death toll from these ten diseases is about 5.5 million and the number of cases per year is over 28 billion. Severe, economic implications result from these illnesses as well. In western Nigeria, for instance, farmers afflicted with dracunculiasis (Guinea worm disease) typically lose 100 work days a year.

Providing people with an adequate water supply and sanitation, when coupled with education on hygiene behavior, reduces morbidity and mortality from many water-related diseases for a number of reasons. Clean water prevents the spread of waterborne diseases, such as common diarrheas cholera. Furthermore, increased quantity of and access to water provide the opportunity to improve hygiene — for example, through washing hands and cooking utensils — and prevent the direct spread of pathogens through contamination of food, water, and other objects that may be put in the mouth Improved water supply and sanitation may lead to decreased contact with unsafe, unimproved water sources and prevent health problems such as schistosomiasis and dracunculiasis. Water-based disease vectors may be controlled by

improving water sources and eliminating breeding sites of insects that carry a variety of diseases, including dengue and malaria. Research has shown that the most effective intervention for selected water-related diseases (including diarrheal diseases) is safe excreta disposal, followed by increased water quantity and improved water quality. Therefore, sanitation facilities and health programs that emphasize hygiene education leading to behavioral change are critical for the maximum benefits of a safe water supply to be realized.

c. Solid Waste

Solid waste is the non-aqueous portion of a waste stream. It includes waste products generated by domestic, commercial, and industrial activities Throughout the developing world it is estimated that 30-50% of municipal solid waste goes uncollected The figures vary among urban centers: 20% in Bangkok, Thailand; 30% in Sao Paulo, Brazil; 78% in Dar es Salaam, Tanzania. The poorer areas of cities generally have inadequate garbage collection or none at all Uncollected refuse dumped in public areas or into waterways contributes to the spread of disease. In neighborhoods with no sanitation facilities, trash heaps become mixed with human excreta. Peri-urban communities typically receive the least service because the roads are so congested or narrow that conventional collection methods are nearly impossible. Inadequate collection combined with mismanagement of disposal present a number of health problems, both direct and indirect For example, by providing a breeding ground for disease-carrying vectors and rodents, improper management of solid wastes creates a health hazard In addition, the dumping of waste in urban drainage channels contributes to health problems because standing water contributes to vector-borne disease transmission. Ineffective solid waste management also increases the risk of injury and poisoning - especially of children - and may create smoldering fires which exacerbate air pollution.

Solid wastes are a particularly significant health risk in large, rapidly growing urban centers in tropical developing countries. People most at risk are the poor who live near or scavenge the landfills where solid wastes are deposited. Throughout the developing world the number of scavengers is considerable. In Manilla, Philippines, 20,000 people live around a garbage dump where the decomposition of solid waste produces a permanent haze and a rank smell which affects the whole region Some of these people have lived here for 40 years. They make their living scavenging on the dump, sorting with their bare hands. The greater the contamination of the solid waste being sorted with human wastes, animal wastes, and diseased animal scraps, the larger the concentration of pathogens and the associated health risks to scavengers. Recent studies indicate over 40% of people exposed to dump sites have gastroenteritis or parasites; 50%

have extremity wounds and 70% upper respiratory ailments. Other studies have found evidence of elevated levels of respiratory, diarrhea, and skin diseases among Bangkok residents living on or near a landfill.

d. Wastewater

Wastewater is the liquid wastes from homes and commercial premises, industries, and storm run-off. Pathogenic viruses, bacteria, protozoa and helminths pass from the bodies of infected persons in their excreta and are present in wastewater. If the wastewater is discharged untreated into surface waters, these pathogens may reach other people via ingestion or dermal contact. In most developing countries wastewater receives virtually no treatment. As a result, surface waters are seriously contaminated. For example, water quality in one river in Jakarta, Indonesia (which has no sewers) has deteriorated so significantly as a result of untreated wastewater discharge, that the density of fecal bacteria is of the same order of magnitude as that of the human intestine. Not surprisingly, a high incidence of diarrheal disease is reported.

The most effective and reliable strategy for preventing transmission of disease caused by pollution of water resources by human wastes is to collect the wastes from settlements and to provide safe treatment and disposal. Wastewater collection systems are minimal in developing countries. For instance, most cities in Africa and many in Asia have no sewers Rivers, streams, canals, gullies, and ditches are where most human excreta and wastewater ends up untreated Even where conventional systems are in place, 90-95% of the wastewater collected is discharged without treatment of any kind. Where treatment facilities are present, many are functioning below standards due to operational problems. Facilities to remove and safely dispose of human excreta are usually no better in poor urban neighborhoods than in rural areas. In Dar es Salaam, Tanzania, for example, virtually all the population of some 1.5 million rely on pit latrines which regularly overflow; public authorities have equipment to empty only a small proportion.

Raw, untreated wastewater is used for crop irrigation and fish production throughout the developing world. Such practices are often illegal and conducted without the approval of health officials. Significant diseases associated with these practices include typhoid and cholera. For example, in Santiago, Chile, the widespread practice of irrigating vegetables with untreated sewage has been implicated in the unusually high typhoid morbidity rates. In Peru, the same practice is linked to an increased risk of Giardia for farm workers and consumers. The greatest risk of wastewater reuse for irrigation is from helminth infections which are neither detected by conventional microbial

monitoring of wastewater quality nor necessarily removed by common treatment processes.

The rapid industrialization which has accompanied urban growth has led to increases in the volume and toxicity of industrial wastewater Of concern for public health is industrial wastewater containing toxic organic and inorganic compounds. These come from a variety of sources including pesticide, fertilizer, and petrochemical complexes; tanneries; paper and pulp mills; and rubber factories. Both acute and chronic health effects of contaminants found in industrial wastewater have been documented and are discussed in more detail in Section II.A.5.g.

Drainage is the movement of excess water from an area by surface or subsurface means Storm-water run-off is the wastewater most typically associated with drainage structures. Leaking water mains, wastewater from washing and bathing, and the sewage from overflowing septic tanks and blocked sewers may also contaminate surface water and constitute health hazards if an adequate drainage system does not exist. Most new residential developments in developing countries have not installed storm and surface water drains In the illegal peri-urban settlements, the location itself poses a health threat because these sites are often dangerous ones in low flood plain areas or on steep hillsides. In both cases, frequent flooding, water-logged sites, lack of paved roads or paths, and damp housing take a serious toll on health The water related diseases that are often fatal, such as cholera and typhoid fever as well as diarrheal diseases may result from inadequate drainage Schistosomiasis, usually thought of as a rural disease, is often prevalent in urban areas where drainage is lacking.

The contaminated surface water can infect people in many ways. It can contaminate their hands, their utensils or their drinking water supply. Children are exposed to infection when playing outside or bathing in surface water Water-logged soils transmit diseases like hookworm. Stagnant pools of water provide breeding grounds for mosquitoes which spread dengue, filariasis, malaria and other diseases.

e. Air Pollution

Air pollution is a complex mixture of substances emitted to the atmosphere by both human and natural activities. The major air pollutants of concern include those for which air quality criteria have been established, such as particulate matter, sulfur dioxide, carbon monoxide, lead, nitrogen dioxide, and photochemical oxidants (ozone); and other toxic air pollutants, such as benzene, asbestos, and heavy metals. Exposure to air pollutants is associated with health effects which range from death at high concentrations to more subtle biochemical, physiological or pathological effects. Air pollutants may be

toxic to the respiratory system, central nervous system, reproductive system, heart, and other organ systems. Effects may be short-term or chronic in nature, and may be reversible or permanently debilitating. The likelihood that a pollutant will cause adverse health effects depends on the nature and concentration of the pollutant, the effect of simultaneous exposure to other pollutants, and such factors as the age, sex, and sensitivity of the individual.

Ambient, or outdoor, air pollution is no longer a problem that is limited to the urban areas of industrialized countries. Increasing urban populations in developing countries, accompanied by growths in transportation, energy consumption and industrial activity, contribute to the poor quality of the ambient air in many of the major industrializing cities of the world. An estimated 60 to 80% of the urban population worldwide breathe ambient air of marginal or unacceptable quality. At least 1 billion people live in urban or peri-urban areas where the level of particulate matter in ambient air exceeds the WHO guidelines. Dust and soot in city air causes between 300,000 and 700,000 premature deaths a year In Latin America, recent studies suggest that over 2 million children suffer from chronic cough as a result of urban air pollution and that air pollution means an excess of 24,300 deaths a year. The same study estimated that some 65 million person days of workers' activities were lost to respiratory-related problems caused by air pollution. Admittedly, these numbers are rough estimates but they give an idea of the magnitude of the problem. Lead, as an air pollutant, is particularly problematic for health and child development. In Mexico City Metropolitan Area, where 95% of automotive gas remains leaded, 29% of the children have unhealthy blood lead levels.

Indoor air pollution endangers the health of 400-700 million people. Indoor air pollution may play an important role in the etiology of respiratory infections, which are responsible for approximately one-third of the deaths in children less than five years old in developing countries. In many developing countries, the indoor concentration of air pollutants routinely exceeds levels established in WHO guidelines. About half the world's population burns fossil or biomass fuel in the home for cooking and/or heating. Homes may be poorly ventilated and fuel of low quality. The use of open fires or inefficient stoves often generates concentrations of smoke which contribute to serious respiratory problems. The effects on those who spend the most time at home, i.e. women and children, are most severe.

f. Food Hygiene

Food hygiene refers to the handling, preparation, storage, and disposal practices that prevent or control the contamination of food with pathogens that cause illness. The developing world is

at risk of food contamination, as is the developed world. Food contamination exists in urban and rural areas, in homes as well in public eating establishments, and is the result of improper food hygiene practices by all segments of the population.

Although the contamination of food by chemicals or toxins through agricultural and industrial practices can have serious health consequences, far more widespread is the contamination of food with the infectious agents which cause diarrhea. Food becomes contaminated with these pathogens through unhygienic handling, or dirty water and cooking vessels. The storage of food at the wrong temperature can promote the multiplication of the pathogens. Cooking, which could destroy many pathogens, is ineffective if the cooking time is too short, or the temperature is too low.

It has been estimated that between 15 and 70% of episodes of diarrhea suffered by children are food-borne As previously mentioned, diarrheal diseases are also closely related to water supply and sanitation conditions. This illustrates the linkages between subsectors, since food hygiene is often related to sanitation practices. Despite the enormous range of this estimate, one can assume that food-borne diarrhea imposes a significant burden on morbidity and mortality of young children

If the costs of improper food hygiene practices are large, then the benefits are also likely to be large if the problem is controlled. Illness is avoided, as well as the consequent loss of income. as well as the time and cost of seeking treatment. However, the benefits are more far-reaching than this. Food for export that is contaminated by improper handling may cost industry and government millions of dollars when it is rejected by the importing nation. Furthermore, food hygiene interventions, if innovative enough, may improve the nutrient intake of populations, thereby improving health independent of decreased food contamination.

g. Hazardous Materials

The transport, storage, and safe-use of hazardous materials as well as the disposal of hazardous waste are emerging as problems with serious health implications in developing countries. A material is categorized as hazardous if its quantity, concentration, or physical, chemical or infectious characteristics may: 1) cause an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or 2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of or otherwise managed. Hazardous materials originate from a wide range of commercial, agricultural, and industrial sources. Pesticides, herbicides, fertilizers, radioactive materials, heavy metals, and solvents

constitute the most significant materials in this category. With rapid industrialization and an absence of effective planning and regulation systems, little attention is given to health and environmental impacts of industrial pollutants. Consequently, developing country cities with high concentrations of industries often have greater industrial pollution problems than those in industrial cities in the developed world.

Hazardous materials become wastes when they are no longer useful in a production process. The disposal of hazardous wastes is a serious problem throughout the world In general, hazardous materials cannot be handled safely and effectively by the existing wastewater treatment or domestic waste disposal systems. In developing countries, most hazardous wastes are either disposed of untreated into rivers or nearby water sources or they are put into landfill sites with few safeguards to protect against contamination Often there are no regulations dealing specifically with hazardous wastes or a system to implement such regulations. Yet hazardous waste generation is skyrocketing. Although data are limited, Thailand offers an illustrative example of this phenomenon The National Environment Board of Thailand estimates that hazardous waste generation grew by 46% from 1986 to 1991, and is expected to grow an additional 84% in the next five years In countries which do not produce hazardous waste other concerns emerge such as illegal trade and dumping of hazardous waste across national boundaries In 1983, four Sub-Saharan African countries imported over 25,000 tons of hazardous wastes. The challenge of putting into place appropriate systems to monitor, transport, store and dispose of hazardous materials needs to be met.

Health risks of hazardous materials relate primarily to the method of handling the materials. Hazardous materials pose dangers to human health when they are released into the environment and ingested, inhaled, or absorbed through the skin. Some hazardous materials may cause explosions or fires. Contact with others may cause corrosion and etching of the skin as well as severe corneal damage. Skin absorption of certain pesticides may cause acute poisoning. Most empty containers for hazardous chemicals can—if not properly disposed of—result in incidents of severe poisoning if left unguarded at materials storage or dumping sites.

The release of hazardous materials into the environment may result in long-term exposure of the population, causing adverse health effects due to poisoning. The health impact of a hazardous material was dramatically illustrated in the Bhopal tragedy which resulted in over 2,500 deaths and 50,000 injuries from methyl isocyanate exposure.

Reports of problems arising from the careless disposal of chemical wastes containing heavy metals are increasingly

frequent. The problem of mercury-contaminated wastes being discharged into water bodies has been recorded in many cities. Significant build-ups of mercury, lead, cadmium, copper, and chromium have been reported in almost every industrializing nation in Southeast Asia. These pollutants are hard to remove from drinking water with standard purification facilities and are often released untreated into the aquatic environment. They accumulate in shellfish and fish. In a sample of fish and shellfish caught in Jakarta Bay, Indonesia, 44% exceeded WHO guidelines for lead; 30% for mercury; and 76% for cadmium. Besides heavy metals, some organic compounds, e.g. PCBs (polychlorinated biphenyls) and dioxins, are also persistent in the environment, tend to accumulate in the food chain, and lodge in fatty tissues in humans. The precise health significance of this accumulation is still uncertain but experience from accidental high-level exposures has shown that these compounds may cause serious effects on human health.

It is important to note that many health outcomes associated with exposures to hazardous materials have long generation periods Exposures typically associated with hazardous materials are chronic and low dose Long latency periods of many exposures make health risks less visible and seemingly less urgent relative to other environmental health hazards.

h. Occupational Health

Occupational health covers injuries and illnesses which happen in the workplace. Environmental problems in the workplace are evident at all scales of enterprise - from large factories and commercial institutions to backstreet workshops. In all settings, occupational hazards cause millions of illnesses and injuries each year.

Occupational hazards include dangerous concentrations of toxic chemicals and dust; inadequate lighting, ventilation and space; and inadequate protection of workers from machinery and noise. Workers inhale, ingest, or absorb a variety of hazardous chemicals. These include pesticides, which poison an estimated two million workers each year; lead, which damages neurologic, hematologic, and reproductive systems, and which is carried on clothing from the workplace to the home where children are exposed; asbestos, which causes respiratory disease and cancer; and organic solvents, which cause serious neuro-behavioral problems that may go unnoticed until they are very advanced. Physical and mechanical hazards result in injuries including fractures, sprains, abrasions, burns and fatal falls.

As compared to the developed countries, hazardous workplace exposure is generally worse in developing countries for a variety of reasons. Workers are not sufficiently aware of hazards in the workplace. Where poverty and unemployment are high, workers are

reluctant to complain of hazards on the job or to refuse to work in imminently dangerous situations Economic circumstances may focus national attention on the need to industrialize at any cost, including the neglect of worker safety or the acceptance of hazardous materials or industries from developed countries. Shortages of trained staff or spare parts means machinery may not be adequately maintained, or a shortage of needed machinery may lead to the use of machinery in an inappropriate way. Finally, in most developing countries, the majority of the workforce is concentrated in agriculture or in the informal sector of the economy, beyond the reach of the few occupational safety programs which do exist

1. Injury

Injury is unintentional, non-occupational physical harm. Unintentional injuries are a major cause of morbidity, disability, and mortality in the developing world. Injuries represent the leading cause of death in Latin America among people aged 1-44 years. Although the epidemiology of unintentional injuries varies among and within countries by degree of industrialization and urbanization, and by age, sex, and other characteristics, the problem is often more serious in developing countries. Morbidity and mortality rates are aggravated by the lack of institutional infrastructure or policies to deal with injury control.

The sources of injury are diverse. Motor vehicle injuries, which are the leading cause of unintentional injury deaths in developing countries, are increasing sharply. Burns often result from open fires used for cooking and heating, with women, the very young, and the elderly at greatest risk. Drowning, falls, wounds from animals, injuries from sharp objects, poisonings, and natural and human-caused disasters also cause a heavy burden of morbidity, disability, and death.

6. Conformity with the 1991 Environmental Strategy Framework, A I D.

The 1991 Environmental Strategy Framework recognizes that environmental problems directly affect A I.D.'s developmental goals and objectives by "threatening the economic progress of developing countries, impoverish biological and other natural resources, diminish the health and quality of human life, and have impacts well beyond national boundaries...".

The 1992 Environmental Strategy outlines five major categories of threats to the environment which most directly affect the developing world's and USAID's developmental goals and objectives. Of these, four are pertinent to the environmental health project: unsustainable agricultural practices; environmentally unsound energy production and use; urban and

industrial pollution; and degradation and depletion of water and coastal resources. Those portions of the Agency's Environmental Strategy related to environmental health are referenced in Annex B.

Thus, the Environmental Health Project plan is consistent with the Agency's 1991 Framework and 1992 Strategy. and clearly fits into the aforementioned criteria. It protects health and prevents disease and injury through the control of environmental conditions which affect health, and through the reduction of hazards. The EH Project directly supports the assessment, management and prevention of environmental health risks in Strategy subsectors. Technical expertise is to be accessible to work with host-country personnel in conducting multi-disciplinary studies; assisting the public and private sectors in planning for long-term financial sustainability of environmental health activities; educating affected populations about health problems related to environmental conditions; and assessing the macroeconomic impact of diseases related to environmental conditions The project stresses the development of cost-effective, sustainable indigenous capacities through policy dialogue, human resource development and institutional strengthening.

The EH Project consolidates and continues the important and successful activities of the WASH III (No 936-5973) and the VBC II (No. 936-5948) projects and adds subsectoral activities in air pollution control, food hygiene, hazardous material management, occupational health, and injury prevention Though the focus is on comprehensive environmental health, the project will initially concentrate on those subsectors in which A I D. has an established presence - water supply and sanitation and tropical diseases. Additional subsectors will be incorporated over time as needed. The new project will continue to develop linkages with other U.S. Government agencies and international organizations (see III.D.5).

7. Conformity with Regional Bureau Strategies/Programs

The Regional Bureaus have had as health objectives, over the last decade, assisting health systems in developing countries to become more effective in providing broad access to sustainable, cost-effective, preventive health services. This has been carried out through assistance with host country policy formulation, private enterprise development, institutional development and technology transfer. This new project will focus preventive health efforts on the environmental factors affecting the health of developing world citizens.

The six Regional Bureaus have developed their Environmental Strategies based on their region's needs and the Agency's Environmental Strategy Framework. The EH Project will

collaborate with the Bureaus on those aspects of the strategies that pertain to environmental health (see Annex B). Memorandums requesting comments for maximizing collaboration with this Environmental Health Project were sent to each Bureau (see Annex C). Responses received were incorporated in this PP.

B. A.I D. Response to Environmental Health Problems

In response to the pressing needs described above, A.I.D./Washington has engaged in several design-related activities which have been used in the development of this project. In March, 1991, the A.I.D. Office of Health sponsored the "Health in the Urban Setting" workshop in Rosslyn,Virginia. A second workshop, "Urban Health: The Continuing Challenge" held in June, 1991, addressed similar issues. Most recently, A.I.D. Office of Health staff participated in the "Urban Health and Environment - Perceptions from the Field" workshop conducted by REDSO/East in Nairobi, Kenya, in December, 1991. Products from all three workshops have been incorporated into this Project and provide excellent guidance to its implementation.

Regional Bureau and Mission concerns about environmental health have been solicited and included in the design of this project. A worldwide cable was sent out to Missions in December 1990 asking for input to assist the Office of Health in planning the range of environmental health activities that would be needed by missions (see Annex D). This cable was consistent with STATE 424068, which requested input from Missions in developing the broad environmental Strategy for the Agency. The number of responding missions was 36, and indicates the increasing awareness of the severity of environmental health problems. These mission responses, as well as expert papers on the environmental health subsectors of interest presented at a February, 1991 workshop, were used in developing the A I D. Office of Health Environmental Health Strategy. This is summarized in the document Towards a Healthier Environment, published in August 1991.

A worldwide Memorandum was sent to Missions (Annex E) in June 1992, asking whether technical assistance relating to environmental health would be of interest. Fifty-two of the seventy-two Missions responded. The respondents supported the need for environmental health services that the EH Project is to provide (Annex F, Section II.E.).

C. Role of the Private Sector

The private sector has an important role to play in controlling and preventing environmental health risks. For example, much of the competence for developing new drugs to treat tropical diseases related to environmental conditions is in the private sector, i.e. the pharmaceutical industry. Privatization is not

just a donor concept; rather, it is validated by developing country decisionmakers as well. In May, 1990, delegates from 46 African nations met in the Cote d'Ivoire to develop a strategy to reverse the trend in decreasing coverage in water supply and sanitation services The delegates recommended that future investments in water and sanitation be based on effective demand and recovered through user fees - a striking outcome in view of the extreme poverty that characterizes their countries. Moreover, they supported privatization of these services as a means of promoting greater efficiency. These recommendations reflect a growing belief among analysts that more efficient environmental management practices and sounder funding arrangements are required to deal with environmental degradation.

This project will also be collaborating with other projects such as EP3, which is targeting the private sector for pollution prevention (see section III.D.3).

D Lessons Learned from WASH and VBC

The EH Project incorporates key elements of the long-standing and well-accepted WASH and VBC Projects. These projects addressed four of the nine subsectors in the environmental health framework as follows: WASH - water supply and sanitation, wastewater, and solid waste; and VBC - tropical diseases. Continuation of these efforts will be the prime activity on project start-up.

In 1980, A I D. funded the WASH I project. This $13 million, 5-year project was awarded to Camp Dresser and McKee and Associates (CDM) based on a competitive bid The project was conceived as part of A I.D.'s response to the UN's International Decade for Water Supply and Sanitation (1980-89). The WASH I project provided technical assistance, information exchange and support services through ST/H to other Offices, the Regional Bureaus, Missions worldwide, and to host governments on water supply and sanitation issues. It provided technical assistance to bilateral water projects initiated by Missions and host governments, and was well received by Missions and the Regional Bureaus. During WASH I, 151 activities were completed in 47 countries. As personnel and program cuts occurred within AID/W and USAID Missions, the WASH I project increasingly became the institutional memory for the Agency in the water supply and sanitation sector.

In 1984, in anticipation of the project completion, A.I.D initiated a competitive process for WASH II. After consideration, WASH II, funded at $17.2 million for 5 years, was awarded to CDM.

In 1988, A I.D., because of the great demand for WASH technical assistance, competed the WASH III contract one year earlier than anticipated. After the completion of the competitive process,

CDM and Associates was awarded a contract for $24.6 million for 5 years This project has a LOP completion date of September 1993.

In 1985 A.I.D. competed the first contract for the Vector Biology and Control Project. This $19 million 5-year project was to assist developing countries in reducing the incidence of tropical diseases. The Medical Service Corporation International (MSCI) won this contract and also the follow on contract in 1990, for $20 million. The VBC Project has been well received by Missions and Regional Bureaus, and has received top ratings in the last few reviews by its clients in A.I.D.

External evaluations have been conducted on VBC and WASH. Recommendations and lessons learned from these evaluations have been incorporated into this project (See Annex G - Relationship to WASH and VBC Evaluations).

E. Project Demand

This Project is designed to address Bureaus and Missions requirements in environmental health. In June of 1992 a Memorandum was sent to Mission Directors requesting input from Missions regarding their interest in different types of technical services relating to environmental health (see Annex E). Fifty-two of seventy-two requests were returned (72%); these results are summarized in Figures 2 (worldwide interest) and 3 (regional interest) (refer to Annex F for greater detail).

It is anticipated that Environmental Health Project demand will be substantial. This prediction is based on current WASH and VBC subsector activities, both of which will be incorporated into the Environmental Health Project, and the response from the Missions as discussed above The overall demand for WASH and VBC services is illustrated by 1991 expenditure levels in Table 1. The trend in increasing project demand is dramatically illustrated by the increased buy-in and OYB transfer rates by Missions and regional Bureaus as shown in Figure 4. Using 1991 figures, the combined WASH III and VBC II expenditure rate is $11.5 million per year.

Over the course of VBC and WASH, requests for services outside their original technical scopes of work were received. As a result, extensions of the projects included expansion into new sub-sectors. For example, WASH I originally worked in traditional water supply and sanitation but expanded to include wastewater and solid waste in WASH III to meet demands of the Missions This was a natural progression in many cases as the interrelationship between subsectors and their combined impact on health became more clear For instance, improper management of solid waste often interferes with proper wastewater removal when garbage blocks drainage canals. Unremoved wastewater in stagnant pools may lead to many serious public health problems. Thus, solid waste, wastewater, sanitation and water supply can be seen

as interconnected. WASH III allowed for activities in all these subsectors and thus provided a more comprehensive approach to environmental health.

The expansion through the EH Project of R&D/H/CD environmental health activities into the subsectors of air pollution, food

Figure 2: Subsector Interest Worldwide

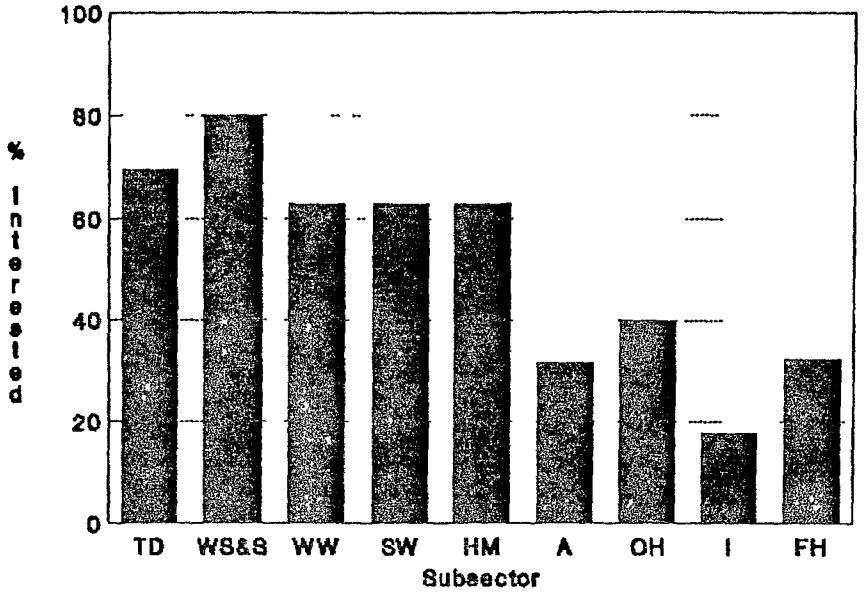
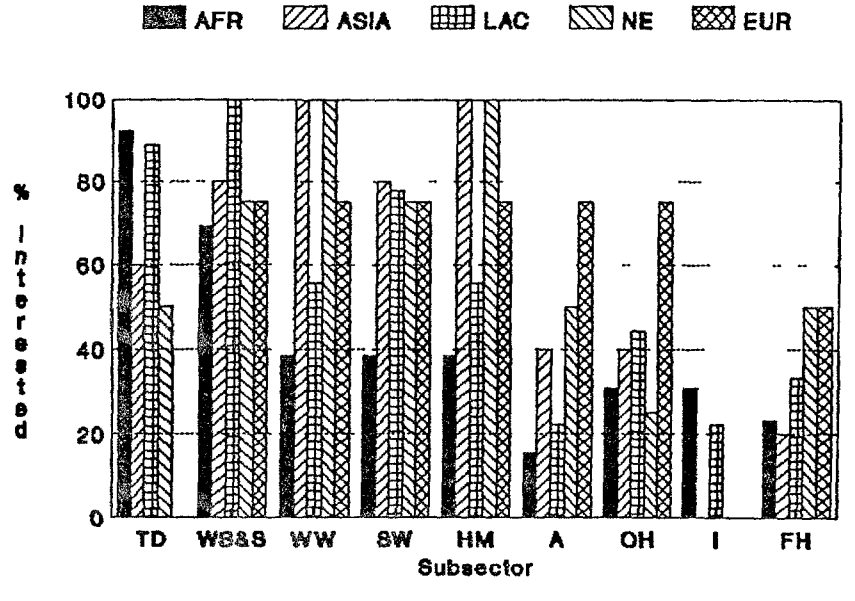


Figure 3: Subsector Interest by Region

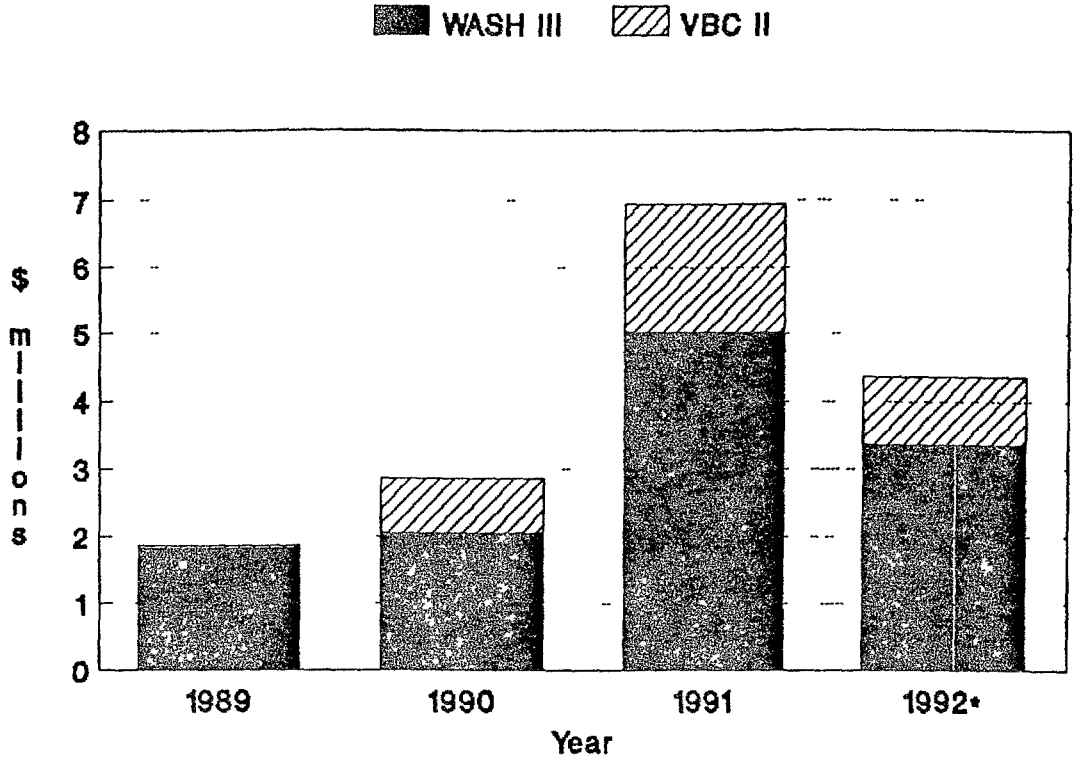


EH Subsector Key: TD - tropical diseases, WS&S - water supply and sanitation, WW - wastewater, SW - solid waste, HM - hazardous materials, A - air pollution, OH - occupational health, I - injury, and FH - food hygiene

Table 1: FY91 Expenditure for VBC II and WASH III

PROJECT	Funds ($ millions)		
	Core	Buy-Ins/OYBs	Total
VBC II	21	19	40
WASH III	25	50	75
TOTAL	46	69	115

Figure 4: VBC II and WASH III Buy-Ins/OYB Transfers



* as of August 31, 1992

hygiene, hazardous materials, occupational health, and injury control is expected to increase over the life of the project from 5% to 20% of total project activities. This comprehensive approach to environmental health concerns will result in specific technical assistance that can be appropriately and cost-effectively tailored to the special needs of each country, as the A.I.D. Mission focuses and concentrates on specific types of assistance. The tailored approach is supported by the data

obtained from the June 1992 inquiry; regional differences are present with regards to subsector interest (Annex F).

In summary, environmental health problems take a very large toll on human health A number of problem areas affect billions of people in the developing world, with the greatest health burden falling on the poor, especially children and women. The problems are magnified in rapidly growing urban areas, and will be exacerbated by continued industrialization and population growth This project provides a major new initiative in the area of environmental health. The project will continue the successful activities of VBC and WASH and expand to new areas of concern.

III. Project Description

A. Goal

Program Goal: To improve the health status of developing country populations exposed to environmental health risks

B Purpose

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

C Proposed Approach and Areas of Emphasis

Within the environmental health framework, the four subsectors of tropical disease, water supply and sanitation, wastewater management, and solid waste management, will continue to have a full range of project interventions and applied research as they have had in the current VBC and WASH Projects. Thus, the Environmental Health Project will incorporate WASH and VBC efforts to provide continuity of services to R&D/H, the Regional Bureaus, Missions, and host countries. Activities in the other five subsectors, will increase over the life of the project as more data are collected proportionate to the need and demand in participating developing countries. It is not the intent of this project to address all issues related to the subsectors simultaneously; rather, it is to enable developing countries to effectively assess, manage and prevent their priority health problems resulting from environmental conditions in these subsectors

Upon initiation of the project, R&D/H will continue its active liaison with Bureau and Mission health, environment, engineering, and programming counterparts and with country desk officers to ensure that Bureaus and Missions maintain active involvement in

decisions and issues of substance, policy, scope, timing, coordination, and implementation.

In order for the project to focus on the above areas, a range of key personnel will be required to carry out the services in the ten subsectors. The key personnel envisaged (see section V H.1) are in the following nine areas

- o Engineering and Technology
- o Institutional and Human Resource Development
- o Policy
- o Public Health
- o Community Participation
- o Information Services
- o Epidemiology
- o Finance
- o Health and Management Information Systems

D. Project Outputs

The main outputs produced by the Project shall consist of the following items: 1) improved design, implementation and evaluation of the environmental health activities by developing country governments and organizations; 2) increased skill levels of developing country professionals, including policy makers and staff involved in environmental health activities; 3) improved operational and cost-effective management of developing country institutions responsible for environmental health activities; 4) increased community health education and involvement, and changes in personal behavior to reduce environmental health associated risks; 5) improved financial planning for long-term operations and maintenance in environmental health activities; and, 6) increased private sector involvement.

E. Project Tasks

Project tasks intended to improve governmental and non-governmental capabilities are meant to be collaborative. The implementor of the Project shall work with appropriate national counterparts in the design and implementation of these tasks. As can be seen from the list, some tasks will be cross-cutting and may require inputs from several of the other eight technical areas. Other tasks are specific to one of the nine areas.

(1) Primary Tasks

To achieve each of the outputs described above the following tasks will be carried out under the aegis of the Project:

1. Output One: Improved design, implementation and evaluation of the environmental health activities by developing country governments and organizations

Tasks in this category are.

a. Work with host governments and local NGOs in development of sector assessments and national environmental health plans,

b. Coordinate planning with multi-lateral and bi-lateral organizations of environmental health subsectors;

c. Work with national governments to establish environmental health policies;

d. Work with national programs to implement environmental health policies;

e Assist in development of country HIS/MIS, and,

f Develop, implement, and manage Project database.

2. Output Two: Increased skills levels of developing country professionals, including policy makers and staff involved in environmental health activities

Tasks in this category are

a. Work with national governments and NGOs in the development and implementation of institutional assessment methodologies;

b. Develop, implement and evaluate training programs for institutional and human resource development;

c. Develop environmental health education materials and activities;

d. Collaborate with multi-lateral, bi-lateral and applied research organizations in institutional development;

e. Assist in institutional assessment; and,

f Link Project tasks with national institutions and on-going in-country training programs.

3. Output Three: Improved operational and cost-effective management of developing country institutions responsible for

environmental health activities

Tasks in this category are:

a. Design and evaluate technical and environmental components of environmental health projects;

b. Assist in the application of appropriate technologies;

c Assist in planning, implementation, and evaluation of operations and maintenance activities; and,

d Assist with assessment of environmental health risks

4. Output Four: Increased community health education and involvement, and changes in personal behavior to reduce environmental health associated risks

Tasks in this category are:

a. Develop community health committees, water user associations, and community environmental management organizations,

b Assist with community participation activities;

c Develop behavioral change activities related to environmental health; and,

d Develop and expand women's networking and leadership skills in relation to environmental health needs.

5. Output Five: Improved financial planning for long-term operations and maintenance in environmental health activities

Tasks in this category are:

a. Develop methodologies and guidelines to assess and improve environmental health institutional capabilities;

b. Integrate finance and cost recovery aspects into environmental health programs;

c. Conduct willingness-to-pay studies;

d. Analyze the gender impact of financing mechanisms, and,

e. Assist with life-cycle cost analysis of interventions

6. Output Six Increased private sector involvement

Tasks in this category are:

a Facilitate private sector involvement in environmental health;

b Work with NGOs and other private sector groups in development, implementation and evaluation of sector programs; and,

c. Advise national governments in the development and implementation of policies that support private sector involvement in environmental health activities.

F Important Assumptions

Several important assumptions are implicit in this description of the Environmental Health Project

- Environmentally safe control technologies are available and instrumental in reducing environmental diseases and improving health status.
- Health education activities are effective in changing community and individual attitudes and behavior.
- Most governments and USAID Missions will continue to initiate field requests and buy-ins to the project
- Technical project management is available and effective.
- New techniques and strategies can increase the efficacy of risk control programs.
- Indigenous personnel will use new skills effectively.
- Required technical skills will be available in the U.S. and other countries.
- Counterpart human resources will be available in developing countries.
- Participating governments will adopt appropriate environmental health standards and regulations and cost recovery policies.
- There exist appropriate levels of government allocations and public expenditure in sectors of environmental risks.

G. Sustainability

Because environmental health is a new area for international development this project will focus on strengthening the capacity of developing country governments and organizations to assess, manage and prevent health problems that result from environmental conditions or are exacerbated by environmental degradation

IV. Project Inputs

A. Cooperating Agency: Prime Contractor

R&D/H proposes to contract in the private sector for multi-disciplinary services for technical assistance, information exchange, technology transfer, and training services in environmental health, which will be provided to assist Bureaus, Missions, and other organizations, such as the Peace Corps and PVOs, engaged in A.I D. environmental health projects.

1 Headquarters Staff. The project's core headquarters staff of 12 would provide assistance to and monitoring of technical assistance activities to Missions and Bureaus .

2. Short-Term Technical Assistance. In order to carry out many of the tasks outlined above the Project will have the capability to provide short-term technical assistance to environmental health activities in A I D.-assisted countries. With the approval of the COTR (Contract Office Technical Representative), such technical assistance will be delivered in response to requests by a mission or regional bureau, or through a mission/regional bureau by a MOH, PVO or other organization. In addition to identifying appropriate consultants the contractor shall be responsible for clarifying scopes of work, providing necessary technical and administrative support to the consultancy, following up on all consultancies to assess the satisfaction of the client, and prepare and distribute copies of the consultancy reports.

3. Long-Term Technical Assistance. Implementation of "sustained A.I D. programs" might require a full- or part-time country representative. If requested by A.I D., and approved by the COTR, the contractor shall identify appropriate consultants for the long-term assignment and shall be responsible for all activities of these representatives. The contractor will keep the COTR/TOs (Technical Officer) fully informed of their activities Anticipated long-term services could range from two months up to two years. The following types of services may be used by the Missions:

a. Assist an institution in developing a workshop or course of study.

b. Assist a university in developing an environmental health curriculum.
c. Assist an organizational unit of the host government in starting up a new unit in the environmental health sector, or strengthen an existing unit or the entire organization, or developing and institutionalizing new policies.
d. Assist the development of a multi-year environmental health sector plan for a host government.
e. Assist the development of private sector activities to support an environmental health program.

B PASA and Grant Awards

The project design includes the procurement, through PASAs and Grants, of technical services that are uniquely available through other U.S. institutions and multilateral organizations. Our experience under the VBC project with such procurrments is that the project's ability to provide direct technical assistance to USAID missions and offices, both overseas and in Washington, D.C., was strengthened. PASAs and Grants will be awarded so as to obtain access to public and environmental health capabilities superior to those available through the private sector

V Project Implementation

A Responsibilities of Cooperative Agency

This project will be implemented by a U.S.-based Cooperating Agency selected through the competitive procurement process. It will be based upon a Contract between A.I D. (Office of Health) and a Cooperative Agency. Once awarded it will be the responsibility of the Cooperating Agency to undertake the following:

Contract Start-up Workshop/Planning Session. The contractor shall hold during the first quarter following the award of the Contract a workshop as a forum for planning implementation of the Contract. It is expected that in addition to Contract staff, the COTR, TOs and other appropriate A.I.D. staff will participate. The workshop shall provide an opportunity to:

- clarify the relationship between the various units of A.I.D. and the contractor;
- review contractual and technical requirements for implementation and management of the Contract;
- define staff roles and responsibilities; as well as,
- develop a "start-up" plan for Contract tasks.

Strategic Plan for Implementation of the Contract. The contractor shall, in collaboration with the COTR/TOs, develop guidelines for implementation of the Contract, within the first quarter following its award. These guidelines shall be the basis for development of a prescriptive outline for prioritizing potential reactive and proactive tasks. The guidelines shall be based on regional and country needs, national and USAID mission strategic plans, Regional Bureau's and R&D/H's priority country profiles, environmental health risk, national and donor resources, and opportunities for leveraging other donor investments. The guidelines shall be updated annually, or as is needed depending on changing conditions. The guidelines shall form the framework for development of the Contract's annual plan and marketing strategy.

Team Planning Meetings. The contractor shall hold a team planning meeting prior to the initiation of all Contract tasks. The purpose of this meeting shall be to facilitate team building, clarify task goals, brief the team on information relevant to carrying out the task, and standardize task outputs.

Conferences and Workshops. With the approval of the COTR, the contractor shall plan, organize, and carry out international, regional, or local conferences or workshops relating to environmental health

Marketing of Contract Services The contractor, with approval from the COTR, shall develop a strategy and materials (eg brochure) for marketing the Contract's services to A.I.D missions and bureaus.

B. A.I.D. Responsibilities

The R&D/H/CD COTR will provide technical oversight and direction to the contractor for services performed by the contractor. The COTR will serve as a technical coordination point for interactions between the contractor and Missions, Bureaus, and other Agency organizations requesting services under the contract. The contractor will not be authorized to meet requests for services without prior approval of R&D/H/CD. R&D/H/CD will receive performance reports from Missions, Bureaus, and Offices of A.I.D. following provision of the contractor services and will seek to ensure that the contractor uses and acts on Agency critiques and recommendations where appropriate.

In managing the contractor the COTR will exercise a variety of functions including the following

1. Instruction in the development of an annual workplan, and all modifications of the workplan, which describes the specific activities to be carried out under the agreement.

2. Collaborative involvement/instruction in selecting Technical Advisory Group (TAG) members, establishing criteria priorities,and developing and modifying the workplan and the information dissemination agenda.

3. Approval of all activities carried out under this agreement including workplan, strategies, protocols, subcontracts, information dissemination, consultancies, task development (e g., scope of work, team planning, briefings, and debriefings) and international travel.

4. Involvement in analysis, interpretation, and publication of reports.

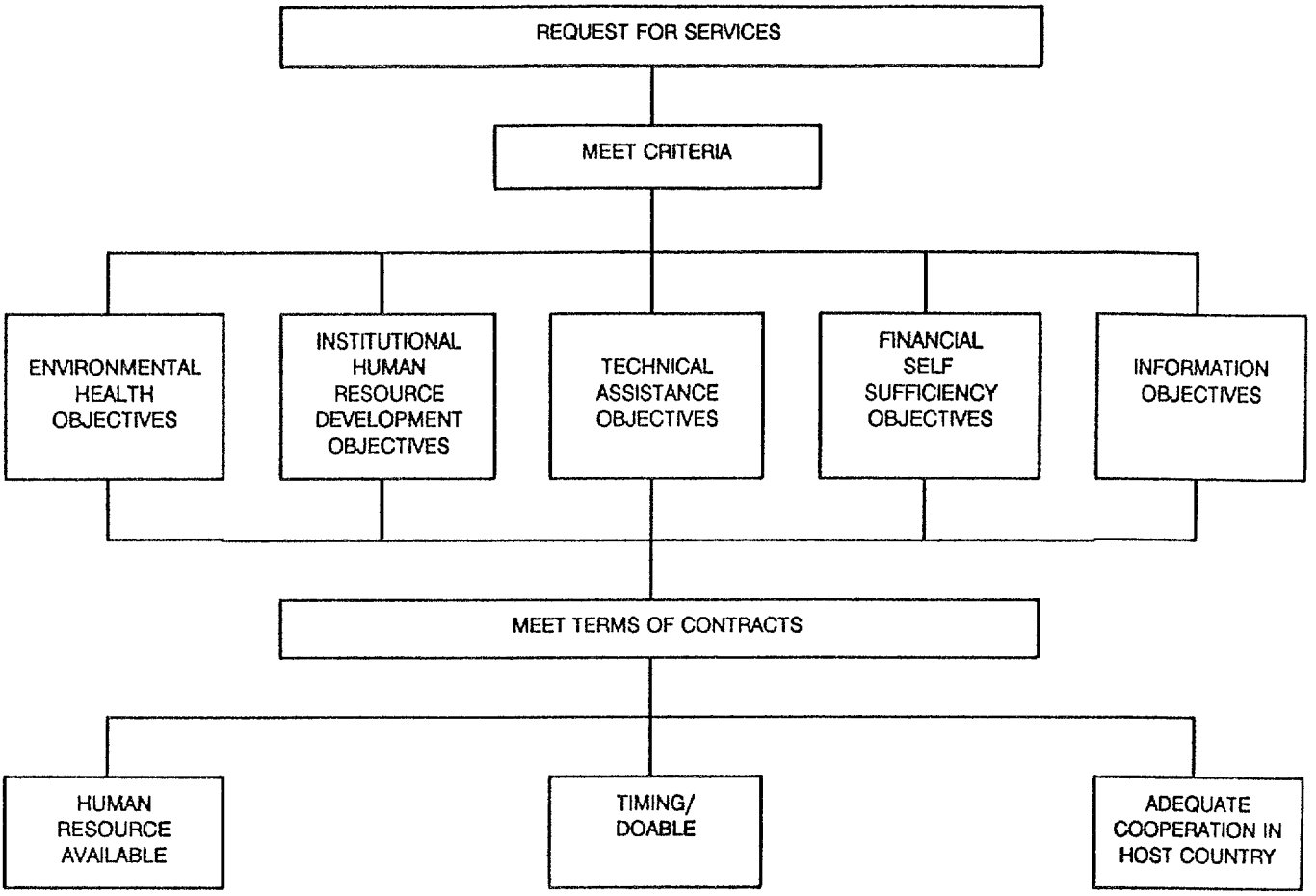
5. Participation in TAG meetings, and evaluations to review program progress and future strategy.

C. Activity Selection

Central to the implementation of the Environmental Health Project is the development of a prescriptive outline for prioritizing potential reactive and proactive Project activities. The Office of Health and the implementing contractor will join with Regional Bureaus and Missions to develop guidelines for this prioritization Among, but not limited to, the issues to be considered during this process are: regional and country environmental health needs, Bureau and Mission strategic plans, USAID priority countries; national and other donor resources, and opportunities for leveraging other investments. This prioritization exercise will be renewed annually as part of the preparation of the Annual Plan. A prototype algorithm for development of an Environmental Health activity is shown in Figure 5

In each country, the selection of most appropriate environmental health subsectors will be based on four criteria. The primary selection criterion is the impact of the problem on human health, where preliminary risk assessments will be essential. Second, the problem must be amenable to known solutions Third, the cost-effectiveness of remedies must be considered Fourth, there are some problems which are suited to A.I.D.'s technical expertise, and others which other donors, NGOs, or universities are more capable of addressing. Therefore, a combined approach to subsector selection involving all the components listed above will be used.

FIGURE 5 : Algorithm for EH Activity Development



D Project Procedures

Limited, basic core services will be available at no cost to Bureaus and Missions. In addition, Missions or Bureaus may fund specific activities through the use of buy-ins or OYB transfers. Procedures for providing technical assistance will be as follows· R&D/H will contact each Bureau and each Mission not less than once a year and determine their long-term and short-term needs for Environmental Health technical assistance. R&D/H, in concert with the EH Contractor, will develop an "Annual Work Plan" with budgets and with contingency provisions On an ongoing basis, the Work Plan will be systematically updated to accommodate requests which were not included in the annual canvass for anticipated Environmental Health Project services.

This regular update will integrate follow-on Environmental Health Project services, which were initiated through the response

mechanism, into the Work Plan and will facilitate efficient planning of Environmental Health Project services. In some instances development of the plan may include direct contractor travel and contact with A.I.D clients to define scopes of work

E. Accessing Project Technical Services

The project, as an Agency-wide project, will respond to appropriate requests for environmental health support services from Bureaus and Missions. R&D/H will serve as a focal point for Environmental Health Project technical assistance services within the Agency. No pre-allocation of R&D/H funds will be made to any one Bureau, Office, or Mission All Offices, Bureaus, and Missions will have the opportunity to have their requests for Environmental Health Project services addressed. Although no formal ranking system for requests is proposed, all requests must meet the tests of need, relevance, and cost-effectiveness. The COTR, in consultation with the requestor, will determine whether core funds or buy-in/OYB transfer funds will be necessary to support a specific request. The size of the request, availability of funds, equitable distribution between requestors, and previous WASH and VBC services may be factors in shaping responses

F. Contractor Management

There are a number of lessons learned from management of the WASH and VBC contracts which have proved useful. The following management description incorporates these experiences.

1 Headquarters Management

The contractor will maintain a core technical administrative and management staff based in close proximity to the R&D/H office. The management staff must be aware of A I D. regulations and operating conditions and must also have considerable project management experience in developing countries. This experience will be necessary in order for the headquarters staff to be able to understand A.I D. programmatic and administration requirements as well as the needs and conditions behind all field requests.

The management and technical staff will:

- o Develop annual workplans, to be reviewed and approved by R&D/H in consultation with other AID/W bureaus.
- o Based upon requests from A I.D. units for short-term services, identify appropriate consultants, clarify scopes of work, follow all proper selection and procurement procedures and follow up on all

consultancies to assess the satisfaction of the client, and prepare and distribute copies of consultancy reports.

o For "sustained support" programs, the contractor may identify, gain approval for and field a resident project representation/technical advisor. The Project Director will be responsible for all activities of these representatives, and will ensure that the COTR is fully informed of their activities. Experience from the WASH and VBC contracts indicates that the full-time presence of a project representative is usually necessary to initiate programs such as institutional reform.

o "Sustained Programs" will include intermittent short-term technical assistance as well as local costs

o The Project Director and his/her professional staff will also be responsible for ensuring that the project and its discrete activities are flexible enough to respond to new opportunities and new requirements which may arise in the areas of institutional and human resource development, financial management and information services.

2 Field Management

o Long- and short-term advisors must have prior country clearance by the USAID and, as appropriate, by the host government and/or target institution. While in the field, they are responsible to report to and consult with the client They are, however, supervised by the Project Director

o As stated above, a full- or part-time country representative will probably be necessary for "sustained programs". While every country intervention will be different, it has been the experience of WASH, VBC and other projects in various disciplines that an effective resident advisor/technician can benefit, if not salvage, critical program interventions which might otherwise falter or fail Therefore, the qualifications and skills of these field representatives will depend upon the situation and conditions in each country No matter what the expertise of the consultants, however, they must be flexible and able to recognize and respond to needs which arise.

Anticipated long-term services could range from two months (generally used at present) up to two years. Inquiries have

elicited the following types of services that would be utilized by the Missions.

- o Assist an institution in developing a workshop or course of study.
- o Assist a university in developing an environmental health curriculum.
- o Assist an organizational unit of the host government in starting up a new unit in the environmental health sector, or strengthen an existing unit or the entire organization, or developing and institutionalizing new policies.
- o Assist the development of a multi-year environmental health sector plan for a host government.
- o Assist the development of private sector activities to support an environmental health program

R&D/H has substantial experience providing long-term advisors through a number of its projects (e.g., PRITECH, REACH, HEALTHCOM) and through other mechanisms (e g , Child Survival Fellows, PHS Details, etc) Use of long-term advisors through this project will be coordinated with other R&D/H projects and their respective advisors/consultants

G. A.I D Management

1. R&D/H

Primary technical and administrative responsibility will rest with the Office of Health. R&D/H will designate a fulltime COTR for project startup and to manage the project for A.I.D. This person, as Contract Officer Technical Representative, has signatory authority on all technical matters within the contract Other R&D/H staff with relevant technical expertise will be identified to serve as Technical Officers (TOs) with responsibility for specific elements of the project. It is the responsibility of the COTR to coordinate and manage the activities of the TOs, who will be responsible for providing both technical oversight and advice. The Contractor shall only be required to deal with one A I.D. representative.

The COTR and TOs will provide the contractor with overall technical oversight and guidance, and ensure that project implementation is consistent with the design set forth in this Project Paper.

Total A.I D. human resource requirements over the ten year length of the project are estimated at 480 person-months of R&D/H/CD

project management and technical expertise, and 30 person-months of Bureau, Mission or R&D/H direct-hire coordination time interacting with the contractor over 120 month project period

2. A I.D Missions, Bureaus, and other A I D Offices

The COTR and the TOs will work closely with Missions, Bureaus and other A.I.D offices This coordination and collaboration will ensure responsiveness of the EH project to their needs.

H. Contractor Staffing

1. Key Personnel

This section (A) describes the responsibilities of key personnel required to support the technical approach of the EH Contract

A General

All key personnel proposed by the contractor are subject to approval by A I.D Key personnel shall have developing country experience in environmental health or related technical areas, in rural and urban settings. Fluency in foreign languages--Spanish, French, Russian or Arabic is desirable Key personnel shall also be available and prepared for temporary duty under hardship conditions. Writing ability is highly desirable. Experience and competence in institutional development and management in environmental health, including rural and peri-urban areas, shall be represented in the mix of personnel proposed. Since the two major subsectors to be covered by the Contract are water supply and sanitation and tropical disease control, it will be advisable for this mix of technical competence to be in the backgrounds of the Contract director and the deputy Contract director.

B. Contract Management

Director

Shall combine at least 10 years of broad environmental health experience and recognized competence with proven management ability, both technical and administrative, and demonstrated performance with intercultural communications. Specific requirements· at least 5 years management experience of a large scale health project, proven leadership skills; advanced graduate degree at *MS/PhD level, fluency in English and either French, Spanish, Russian or Arabic.

Deputy Director

Shall combine at least 7 years of broad environmental health and development experience and recognized competence with proven management ability, both technical and administrative. Specific requirements· advanced graduate degree at MS or higher level; at least 5 years experience as deputy of large scale health project; fluency in English is required; fluency in French, Spanish, Russian or Arabic

C Contract Administration

Administrative Director

Counterpart of Deputy Director for all supporting, administrative activities in the Operations Center. Specific requirements· must have at least 10 years experience in contract and financial management; foreign experience useful but not critical; experience with A.I.D. administrative procedures highly desirable

Librarian

Shall have at least 4 years experience in developing and managing technical information services. Specific requirements: knowledge of environmental health sector desirable as is knowledge of information systems of A I.D., World Bank, WHO, etc , ability to translate French or Spanish useful.

D. Contract Technical Assistants

Technical Director for Engineering and Technology

Environmental engineer with strength in intercultural communications and with ability to work across disciplines as diverse as institution building, community participation, finance self sufficiency and operations and maintenance. Will manage predominately engineering and technology transfer tasks. Specific requirements advanced degree in engineering; at least 10 years field experience in environmental engineering a must; air pollution, hazardous waste and solid waste experience a plus; fluency in French, Spanish, Russian, or Arabic.

Technical Director for Institutional and Human Resources Development

At least 8 years of experience as an HRD manager in international development programs, preferably long-term assignments in the environmental health sector. Specific requirements. advanced degree or

training in ID/HRD; direct personal experience needed in design and delivery of workshops, institutional development, development of training materials and job aids, HRD needs assessment, training system development, job description/task analysis, and contract design and evaluation; fluency in French, Spanish, Russian or Arabic.

Technical Director for Public Health

Requires broad expertise and background in public health in developing countries including strong working knowledge of environmental health, community participation, health education, diarrheal and tropical disease vector borne disease control, risk assessment and epidemiology Specific requirements: advanced graduate degree in health field at MS or higher, at least 5 years field experience in implementation of public health programs; fluency in French, Spanish, Russian, or Arabic

Technical Director for Tropical Diseases

Requires at least 10 years broad expertise and background in tropical/vector borne disease prevention and control Specific requirements: academic credentials at the doctorate level, at least 5 years field experience working with national and international organizations in the design, implementation and evaluation of tropical disease programs; fluency in French or Spanish.

Technical Director for Finance

Requires broad experience and background in development of financial self sufficiency, privatization and the application of cost-effective technologies in developing countries. Specific requirements: advanced degree in economics or financing; at least 5 years experience in infrastructure finance, urban economics, municipal finance and management, rural cost recovery and development economics; fluency in French, Spanish, Russian or Arabic.

Technical Director for Epidemiology

Requires at least 7 years broad experience and background in epidemiology in environmental health related areas in developing country setting. Specific requirements: doctorate in public or international health; broad computer skills for epidemiological and statistical application, as well as knowledge of GIS

and computer mapping technologies. fluency in French, Spanish, Russian or Arabic.

Technical Director for Community Participation

Requires broad experience and background in community participation and health education in environmental health Shall have background and working knowledge in areas of environmental sanitation, hygiene behavior, social science, anthropology,tropical disease vector control, diarrheal disease control and epidemiology. Specific requirements: advanced degree at the MS level or higher, at least 10 years of overseas experience in community participation; fluency in French, Spanish, Russian or Arabic

Technical Director for Health and Management Information Systems

Requires broad technical experience and background in health and management information systems. Shall have a strong background in the design, implementation, and management of databases and information systems in developing countries Must also demonstrate a working understanding of Geographic Information Systems capabilities and computer modeling Specific requirements advanced degree at the MS level or higher; at least 5 years overseas experience in health and management systems development; fluency in French, Spanish, Russian or Arabic.

2. Non-Key Technical Personnel

The contractor shall provide the technical skills, international experience, language fluency (region specific) of potential supporting staff which complement the Key Personnel described in the previous section and strengthen the contractor's ability to implement the tasks outlined in section III.E.

In order to satisfy this requirement the contractor shall maintain a roster of personnel with expertise in the following areas.

Public Health, Epidemiology, and Community Participation

Public Health Administration and Services
Environmental Health
Epidemiology
Health Education

Environmental Quality Surveillance
Sanitary Surveys
Community Participation
Sociology
Cultural Anthropology
Medical Anthropology
Women-In-Development
Housing Sanitation
Occupational Health
Occupational Surveys
Fire and Safety
Food Hygiene
Injury Surveys
Preventive Medicine
Risk Assessment

Institutional and Human Resource Development

Program Planning, Implementation and Evaluation
Needs Analysis
Performance Problem Solving
Institutional Analysis
Management
Training System Development Specialties
(including task analysis, curriculum development, job description, job aids, instructional material development, training delivery, evaluation, cost effectiveness)

Financing

Cost Recovery
Accounting
Development Economics
Utility Economics
Market Analyses

Engineering and Technical

Environmental Engineering
Environmental Sanitation
Groundwater Development
Well Drilling
Technology Transfer in Developing Countries
Solid Waste Engineering
Environmental Microbiology
Water and Wastewater Chemistry, Biology and Treatment
Environmental Assessment Specialists
Water and Sewage Works Operation and Maintenance
Environmental Toxicology
Diseases Ecology
Medical Entomology

Taxonomy
Arbovirology
Malariology
Genetics
Vector Control Specialists
Engineering Economics
Air Quality Assessment
Air Pollution Control
Traffic Engineering
Urban Planning
Industrial/Architectural Engineering
Microbiologist
Industrial Risk Assessment
Hazardous Waste Management/Risk Assessment
Economic assessment

Policy

Policy analysis
Policy development

Information Services

Establish bibliographic database
Evaluations
Translations
Editing
Mass Media
Search Services

I Contractor Requirements

Based on the nature of this Project and experience of the current WASH and VBC project implementations, a number of important factors have been identified which must be accommodated in the EH project in order to maximize effectiveness and efficiency:

1. Contractor Selection

Because of the highly technical nature and dynamic state-of-the-art of the subject of this Project, R&D/H intends to solicit proposals from the most qualified sources of expertise and encourage respondents to propose creative technical and managerial approaches to achieving the Project objectives. Therefore, the RFP will state the Project objectives, desired outcomes, and country selection criteria. Respondents will be requested to demonstrate their understanding of the technical and non-technical aspects of institutional and human resource development, financial self-sufficiency, operations and maintenance, environmental and public health, community participation, risk assessment, epidemiology and information transfer.

a Gray Amendment Consideration:

The request for technical proposals will encourage qualified small business, small disadvantaged, and/or small women-owned business concerns and/or contractors with sub-contracts with similar organizations, for services which they might not have an in-house capability.

2 Technical Qualifications

In recognition that this Project will focus on implementation and strengthening of institutional and human resource development, financial self-sufficiency, operation and maintenance, engineering, environmental and public health, policy, community participation, risk assessment, tropical diseases, epidemiology and information transfer, the contractor must organize and staff itself accordingly

The contractor must have in-house and/or ready access to technical expertise consultants capable of providing short- and long-term technical advisors (TA) in the above subjects in developing countries

The contractor must stay abreast of current international efforts in the field in order to (a) advise A I D of new developments and their implications for the Project; (b) effectively manage problem-solving components, and (c) incorporate findings and adapt the Project approaches to those findings, as appropriate.

The contractor must also be capable of deriving from Project experiences the technical and implementation findings appropriate for dissemination to a wide audience of researchers, program sponsors, and implementors. This will be a part of the more general information dissemination component.

This Project Paper will not prescribe how the contractor should provide the requisite skills. Instead, the RFP for contractor services will define the performance requirements and approximate volume of activity anticipated, and ask the respondents to propose appropriate numbers, mix and deployment of expert staff and consultants to do the job. The next section does describe the responsibilities of key personnel anticipated to support the technical approach of the EH Project.

3. Information Reporting Capabilities

The contractor shall develop a management information system that will keep A I.D. accurately and continuously informed on the

financial, staff, and implementation status of the Contract, using appropriate computer hardware and software. The contractor's office automation and management information system shall be compatible with current A I D. automation systems (i.e ., LANS, E-mail, etc.). In addition, appropriate equipment shall be available for use by consultants in the field.

Formats for the contractor's management information system will be developed in collaboration with the COTR/TOs, to provide full information on the Contract, including but not limited to·

a. Status of tasks· person(s) responsible, locations, needed actions, costs to date, estimated costs to complete, and targeted starting and completion dates

b. Status of expenditures for preceding month, cumulative expenditures through preceding month, remaining balance of funds available, breakdown by Prime and subcontractors.

c. Status of costs and approximate direct time (person days), by country, by regional bureaus, or offices for each task. The contractor's records systems shall be adequate to determine current, cumulative direct costs and approximate time by technical assistance category (i.e. institutional and human resource development, health, engineering, etc), by country and region, and by requesting A.I D bureau/office/mission. These reports shall be reproduced in a standardized format approved by the COTR

4 Information Services

The contractor shall have the ability to generate and disseminate information relating to each of the environmental health subsectors, including:

a. Production of Manuals and Guides. The contractor shall have the ability to produce and disseminate guides and manuals on new technologies, methodologies and strategies relating to the environmental health subsectors. The contractor shall give high priority to the derivation, documentation, and dissemination of guides and manuals based on Contract tasks

The contractor shall ensure that such manuals and guides are not redundant with existing materials produced by A.I.D. or other organizations, unless considerable new information justifies the production of new materials. To minimize redundancies and maximize usefulness the contractor shall coordinate its materials production and dissemination activities with other major organizations working in the environmental health subsectors

b Documentation and Dissemination of Contract Experience The contractor shall document and disseminate Contract experiences and expert analyses. To facilitate this process the contractor shall develop guidelines for capturing "lessons learned" arising from technical assistance, surveys, operation research, and conferences and workshops. The contractor shall prepare articles on environmental health related issues/topics for publication, and shall publish and distribute broadly in mailings, information exchange workshops and conferences findings from the Contract's activities. Products generated from the Contract may include issues papers, case studies, reports, field notes, periodic reviews and abstracts of global literature, newsletters, brief technical communications, "lessons learned" document summarizing key Contract experiences, bibliographies, policy dialogue tools, and videos or other audiovisual materials.

c. Information Center. The contractor shall establish an information center specializing in the literature of each of the environmental health subsectors (including the publication and information products of the WASH and VBC projects when their respective contracts terminate). The information center shall have access to rapid retrieval data bases and have the programming capability to maintain and create information bases which include consultant rosters (conforming to form AID 1420-17) and catalogue specific information on a regional-and country-specific basis. Documents shall include relevant scientific books, and journals and specific information from WHO, PAHO, World Bank, etc Exchange of relevant information among the contractor information center and other bilateral and multilateral organizations will be routine.

d. Conferences and Workshops. With the approval of the COTR, the contractor shall plan, organize, and carry out international, regional, or local conferences or workshops relating to environmental health.

e Marketing of Contract Services The contractor, with approval from the COTR, shall develop a strategy and materials (eg brochure) for marketing the Contract's services to A.I.D. missions and bureaus.

5. Reports and Data Requirements

The contractor shall be responsible for submission to the COTR/TOs the following deliverables:

a. Administrative and Planning Reports

i. Monthly Contract Status Reports (2 copies) - shall be submitted to the COTR Office within 5 working days after the end of each month during the term of this Contract The report shall cover work performed under both this Contract and its companion Contract, and shall include the Contract number, delivery order or central task numbers, ceiling price, estimated level of effort, mission or other client office, status of task, completion date of order/task, and unexpended funds to date.

ii Quarterly Reports (2 copies) - shall be submitted to the COTR within 5 days of the end of each calendar quarter. The report shall summarize the financial status of the Contract, progress towards achieving the Contract's goals and objectives, major activities planned over the coming quarter, changes or deviations from the Annual Plan, and discuss major problems in implementing the contract that arose during the quarter and actions taken to resolve them.

iii. Annual Work Plan (75 copies) - shall be submitted for review and approval to COTR Office within 120 days after the Contract award and 30 days before the beginning of each subsequent fiscal year. The Annual Work Plan shall be updated quarterly in consultation with the A.I.D. COTR/TOs. Proposed modifications in the approved Annual Work Plan must be submitted for A I D COTR approval in the Quarterly Report. One copy of each approved Annual Work Plan and quarterly update shall be forwarded to the A I D. Contract Office.

The annual workplans shall include:

- An action-oriented workplan linked to the Contract goals and objectives, which describes the type and magnitude of planned tasks during the year, the individuals to be involved and the level of effort for each, and where and when the tasks will be conducted. Planned tasks shall be grouped by subject or task category, and then related to Contract objectives;

- A proposed budget for each calendar quarter which corresponds to the workplan;

- Publications, reports, workshops, seminars, other information dissemination activities, and training planned, by calendar quarter; and,

- Milestones and scheduled completion dates for Contract tasks.

iv. Mid-Contract Report (30 copies) - required at time of mid-Contract evaluation to include master lists of Contract inputs, outputs, and objectives, summary descriptions of each significant task undertaken, statistical summaries and analysis of types of assistance and the countries where tasks have been undertaken; costs of tasks; and summary costs by country, region, and type of assistance The format for this report, etc. will be determined during planning stages of the evaluation.

v. Final Report (20 copies) - required at Contract completion, similar to mid-Contract report but incorporating internal evaluations and final, detailed financial statement. To be submitted to A I D. COTR with two copies to A.I.D. Contract Officer.

b. Contract Technical Reports

1 Technical Reports - (2 copies) will be submitted to the COTR, appropriate regional bureau technical officer(s), the appropriate TO, and the mission (number determined by the mission) within 45 days of completion of the task reported Where appropriate five translated copies (generally French or Spanish) will be provided to Missions within 60 days after completion Field consultants will leave a draft copy with the Mission in the country assisted unless otherwise instructed by the COTR. Before finalizing technical reports, the contractor shall insure that the Mission and COTR/TOs have had an opportunity to comment on the draft report. Technical reports shall be reproduced in a standardized format approved by the COTR. Sufficient copies shall be available to meet anticipated demand (approximately 50). At least two archival copies shall go to the information center.

11 Conference Reports (5 copies) will be submitted within 60 days of completion of each conference (or similar task, workshop, seminar) organized and managed by the contractor. The report shall include the agenda, participants, summary of proceedings, conclusions and/or recommendations, and other useful information (i e. distribution of report, due date, etc.), as well as follow-up actions.

111 Special Studies will report on the work undertaken within the operations and information center. These might include regional strategies, policy background documents, issues papers, training manuals, etc.. These will usually follow the standardized Technical

Report Format with the necessary functional modifications agreed upon by the COTR/TOs and the contractor. Number of copies will be determined by the COTR.

iv. Trip Reports (4 copies) - at the conclusion of Contract-related travel, the contractor shall prepare trip reports describing the findings. These reports shall be submitted to the COTR, the appropriate TO, the regional bureau, and the mission within 15 days after completion of each trip. Trip reports may also be requested by the COTR/TOs from regional field staff following attendance at regional/international conferences.

J. SF 1423's

The contractor's performance and the degree of success of the field technical assistance support tasks will be monitored and evaluated during the course of the Contract The contractor will provide the Mission, Bureau, and other relevant entities with standard A.I.D forms provided by R&D/H for evaluation of the contractor's services at the end of the contractor's involvement with each separate scope of work requested.

K Special Performance Requirements

In addition to the standard provisions of A I D contracts, the contractor shall satisfy the following requirements:

1 The contractor must be able to respond within a timeframe specified by the COTR to field requests for technical assistance by mobilizing the appropriate resources

2. All domestic and international travel supported under this Contract shall be cleared in advance by the COTR/TOs. Travel to A.I D.-assisted countries shall also be approved in advance by the relevant Mission and/or Regional Bureau.

3. Copies/transcripts of all correspondence, written or verbal, pertaining to substantive contract matters between the contractor and persons or institutions in the U.S. or other countries shall be continuously forwarded to the COTR/TOs.

4 When specialized services/commodities in support of Contract activities are required, but are not available within the contractor's organization, they may be procured elsewhere, in accordance with standard A.I.D. guidelines and procedures and subject to the written approval of the COTR and/or Contracts Office.

5. The contractor shall be authorized to enter into sub-contracts with U S and developing country organizations and consultants when within the scope of work and in accordance with the review and approval procedures described in the General Provisions of the Contract.

6 The contractor shall be prepared to work collaboratively, when appropriate, with other U.S. Government agencies (e g , the Peace Corps, EPA, HHS, etc) and international agencies (WHO, World Bank, UNICEF, UNDP, etc.) when requested by the COTR/TOs for a coordinated country assistance effort.

7. All key personnel must meet security requirements necessary to qualify for building passes to State Department Buildings.

8 The contractor shall maintain a core technical administrative and management staff based in close proximity to the R&D/H office.

9 The management staff shall be aware of A I.D regulations and operating conditions and shall have considerable contract management experience in developing countries This experience will be necessary in order for the headquarters staff to be able to understand A I D. programmatic and administration requirements as well as the needs and conditions behind all field requests.

10 The contractor, based on the Quarterly Report, shall hold quarterly meetings with the COTR, TOs, and R&D/H staff to review the status of project implementation, and to identify and resolve any financial, programmatic or technical problems.

11 The contractor shall identify within the first six months of the Contract a group of technical experts who, collectively, bring a broad understanding of the issues related to environmental health. As an outside advisory body these experts shall not be directly involved in the activities of the Contract It is expected that at least one representatives from an appropriate A.I.D. centrally-funded project will participate in this group. The technical advisory group (TAG) shall convene at least twice a year to review the status of the Contract and to provide consul to the contractor as to its directions. The outcomes of these meetings will be shared with the COTR/TOs. All appointments to the TAG will be subject to the approval of the COTR.

H. Implementation Schedule

Project Implementation Period - 120 months
Project Funded June 1993 - June 2002

While the LOP is ten years, it is assumed that two contracts will be let during the LOP.

	Action	Date
1.	Approval of PP and Authorization	17 Mar. 1993
2.	Approval of PIO/T FY 93 Funds	17 Mar. 1993
3.	Initiation of RFP	22 Mar. 1993
4.	Receipt of Proposals	30 Apr. 1993
5.	Completion of Technical Evaluation Board Review of Proposals	15 May. 1993
6.	Selection of Competitive Range by FA/OP	31 May. 1993
7.	Initiation of Negotiation by FA/OP	31 May. 1993
8.	Selection of Contractor	30 Jun. 1993
9.	Signing of Contract	2 Jul. 1993
10.	Contractor Initiates Services	26 Jul. 1993
11.	Approval of FY 94 Funds of PIO/T	9 Aug. 1993
12.	Approval of FY 95 Funds PIO/T	1 Dec. 1993
13.	Mid-term Evaluation	1 May 1995
14.	Approval of FY 96 Funds PIO/T	15 Nov. 1995
15	Approval of FY 97 Funds PIO/T	15 Nov. 1996
16.	Final Evaluation	1 May 1997
17	Approval of FY 98 Funds PIO/T	15 Nov. 1997
18.	Initiation of RFP	30 Apr 1998
19.	Receipt of Proposals	20 June 1998
20.	Completion of Technical Evaluation Board Review of Proposals	18 July 1998
21.	Selection of Competitive Range by SER/CM	25 July 1998
22	Initiation of Negotiation by SER/CM	25 July 1998
23	Selection of Contractor	15 Aug 1998
24	Signing of Contract	18 Aug. 1998
25.	Contractor Initiates Services	12 Sept 1998
26.	Approval of FY 99 Funds PIO/T	15 Nov 1998
27.	Approval of FY 00 Funds PIO/T	15 Nov 1999
28	Approval of FY 01 Funds PIO/T	15 Nov. 2000
29.	Mid-term Evaluation	1 Feb. 2000
30.	Approval of FY 02 Funds PIO/T	15 Nov. 2001
31.	Final Evaluation	1 Sep. 2002
32.	End of Project	10 Oct. 2002

I. Budget and Financial Plan

The total life of project funding for activities described in this project paper will be $125 million in R&D/H and Bureau/Mission funds over the next 10 years. Core funding at a level of $50 million and buy-ins/OYB transfers at a level of $75 million are proposed. Based on previous funding for WASH and VBC, these estimates are considered reasonable, and for R&D/H, fall within expected projections. Table 2 shows the proposed financing of the project by fiscal year.

Table 2: Financial Plan ($000s)

FY	SOURCE OF FUNDS							TOTAL
	HEA	ENV	DFA	ESF	ARDN	OYB	BUY-IN	
93	1775	1500	1000	-	-	2000	5500	11775
94	1500	1000	1000	1000	200	2000	5500	12200
95	1500	1500	2000	1000	100	2000	5500	13600
96	1500	1000	2000	1000	100	2000	5500	13100
97	1775	1000	2000	1000	100	2000	5500	13375
98	1500	1000	2000	1000	100	2000	5500	13100
99	1500	1000	2000	1000	100	2000	5500	13100
00	1500	1000	1000	1000	100	2000	5500	12100
01	1500	500	1000	1000	100	2000	5500	11600
02	500	500	1000	1000	100	2000	5500	10600
TOTAL	14550	10000	15000	9000	1000	20000	55000	124550

1 Input Budget

The project design assumes that with the exception of the Administrative Director all contractor staff, both technical and support, will spend a portion of their time being supported by non-core funds. While the level of effort attributed to core and non-core funds is expected to vary based on buy-in/OYB demand, 2/3rds of core staff effort is projected to be assessed against core funds, 1/3rd for non-core (OYB/buy-in) funds. This is illustrated in Tables 3 and 4.

Included in Tables 2 and 3 is the estimated required Level of Effort for non-technical support staff in the operations center. These functions include office manager, travel advisor, clerical/secretarial, word processors, editor, illustrator/drafts person, etc.

The total life of project effort to be supported by core, OYB and buy-in funds is estimated at 6,060 person-months 2,640 person-months for Key and Support Staff, 360 person-months for Long-Term Advisor; 3,060 person-months for Short-Term Consultancies. A detailed budget description is shown in Tables 3 and 4.

For the purpose of this Project, a person-month of effort is defined as 22 working days, 8 hour days

Also included in the financial plan for the life of this project shown in Table 4 is approximately $1,887,000 for PASAs and $2,000,000 for Grants.

Table 3. EH Project Budget for Contractor Staff ($, est.)

Salaries at 5% inflation

TABLE 1 Environmental Health Project – Staff Budget

CATEGORY	FY 93	94	95	96	97	98	99	00	01	02	TOTAL
Director											
Core	55610	58391	61310	64376	67594	70974	74523	78249	82161	86269	699457
OYB Transfer	7470	7844	8236	8647	9080	9534	10011	10511	11037	11588	93957
Buy-In	19920	20916	21962	23060	24213	25424	26695	28029	29431	30902	250552
TOTAL	83000	87150	91508	96083	100887	105931	111228	116789	122629	128760	1043965
Dept Director											
Core	50250	52763	55401	58171	61079	64133	67340	70707	74242	77954	632039
OYB Transfer	6750	7088	7442	7814	8205	8615	9046	9498	9973	10471	84901
Buy-In	18000	18900	19845	20837	21879	22973	24122	25328	26594	27924	226402
TOTAL	75000	78750	82688	86822	91163	95721	100507	105533	110809	116350	943342
Tropical Disease											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
Engineer/Tech											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
ID/HRD											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
Public Health											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
Finance											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
Epidemiology											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
Community Ppt											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452

Table 3. EH Project Budget for Contractor Staff ($, est.)

(continued)

HIS/MIS											
Core	46900	49245	51707	54293	57007	59858	62850	65993	69293	72757	589903
OYB Transfer	6300	6615	6946	7293	7658	8041	8443	8865	9308	9773	79241
Buy-In	16800	17640	18522	19448	20421	21442	22514	23639	24821	26062	211309
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
Adm Director											
Core	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
OYB Transfer	0	0	0	0	0	0	0	0	0	0	0
Buy-In	0	0	0	0	0	0	0	0	0	0	0
TOTAL	70000	73500	77175	81034	85085	89340	93807	98497	103422	108593	880452
Librarian											
Core	33500	35175	36934	38780	40719	42755	44893	47138	49495	51969	421359
OYB Transfer	4500	4725	4961	5209	5470	5743	6030	6332	6649	6981	56601
Buy-In	12000	12600	13230	13892	14586	15315	16081	16885	17729	18616	150935
TOTAL	50000	52500	55125	57881	60775	63814	67005	70355	73873	77566	628895
Secretaries (2)											
Core	40200	42210	44321	46537	48863	51307	53872	56565	59394	62363	505631
OYB Transfer	5400	5670	5954	6251	6564	6892	7237	7598	7978	8377	67921
Buy-In	14400	15120	15876	16670	17503	18378	19297	20262	21275	22339	181122
TOTAL	60000	63000	66150	69458	72930	76577	80406	84426	88647	93080	754674
Adm Assist (6)											
Core	140700	147735	155122	162878	171022	179573	188551	197979	207878	218272	1769709
OYB Transfer	18900	19845	20837	21879	22973	24122	25328	26594	27924	29320	237722
Buy-In	50400	52920	55566	58344	61262	64325	67541	70918	74464	78187	633926
TOTAL	210000	220500	231525	243101	255256	268019	281420	295491	310266	325779	2641357
Receptionists											
Core	16750	17588	18467	19390	20360	21378	22447	23569	24747	25985	210680
OYB Transfer	2250	2363	2481	2605	2735	2872	3015	3166	3324	3490	28300
Buy-In	6000	6300	6615	6946	7293	7658	8041	8443	8865	9308	75467
TOTAL	25000	26250	27563	28941	30388	31907	33502	35178	36936	38783	314447
Computer Asst											
Core	16750	17588	18467	19390	20360	21378	22447	23569	24747	25985	210680
OYB Transfer	2250	2363	2481	2605	2735	2872	3015	3166	3324	3490	28300
Buy-In	6000	6300	6615	6946	7293	7658	8041	8443	8865	9308	75467
TOTAL	25000	26250	27563	28941	30388	31907	33502	35178	36936	38783	314447
Total	1158000	1215900	1276695	1340530	1407556	1477934	1551831	1629422	1710893	1796438	14565200
Overhead @ 100%											
Core	775860	814653	855386	898155	943063	990216	1039727	1091713	1146299	1203614	9758684
OYB Transfer	104220	109431	114903	120648	126680	133014	139665	146648	153980	161679	1310868
Buy-In	277920	291816	306407	321727	337813	354704	372439	391061	410614	431145	3495648
TOTAL	1158000	1215900	1276695	1340530	1407556	1477934	1551831	1629422	1710893	1796438	14565200
Fringe @ 25%											
Core	186206	195517	205293	215557	226335	237652	249534	262011	275112	288867	2342084
OYB Transfer	25013	26263	27577	28955	30403	31923	33520	35196	36955	38803	314608
Buy-In	66701	70036	73538	77215	81075	85129	89385	93855	98547	103475	838955
TOTAL	289500	303975	319174	335132	351889	369484	387958	407356	427723	449110	3641300
Total											
Core	1745685	1832969	1924618	2020849	2121891	2227986	2339385	2456354	2579172	2708130	21957038
OYB Transfer	234495	246220	258531	271457	285030	299282	314246	329958	346456	363779	2949453
Buy-In	625320	656586	689415	723886	760080	798084	837989	879888	923882	970077	7865208
Grand Total	2605500	2735775	2872564	3016192	3167002	3325352	3491619	3666200	3849510	4041986	32771699

Table 4. EH Project Budget ($, est.)

TABLE 2 Environmental Health – Project Budget

CATEGORY	FY										
	93	94	95	96	97	98	99	00	01	02	TOTAL
SALARIES/OH/FR	2605500	2735775	2872564	3016192	3167002	3325352	3491619	3666200	3849510	4041988	32771699
LONG TERM CONSUL.											
Core	214954	225701	236987	248838	261278	274342	288059	302462	317585	333464	2703665
OYB transfer	0	130000	130000	130000	130000	130000	130000	130000	130000	130000	1170000
Buy-in	0	370000	370000	370000	370000	370000	370000	370000	370000	370000	3330000
Total	214954	725701	736987	748838	761278	774342	788059	802462	817585	833464	7203665
SHORT TERM CONSUL											
Core	794861	1027104	1060960	1096508	1133833	1173025	1214178	1257385	1302754	1350391	11410996
OYB transfer	750000	1400000	1400000	1400000	1400000	1400000	1400000	1400000	1400000	1400000	13350000
Buy-in	2000000	2700000	2700000	2700000	2700000	2700000	2700000	2700000	2700000	2700000	26300000
Total	3544861	5127104	5160960	5196508	5233833	5273025	5314178	5357385	5402754	5450391	51060996
TRAVEL & PER DIEM											
Core	100000	250000	250000	250000	250000	250000	250000	250000	250000	250000	2350000
OYB transfer	150000	300000	300000	300000	300000	300000	300000	300000	300000	300000	2850000
Buy-in	400000	800000	800000	800000	800000	800000	800000	800000	800000	800000	7600000
Total	650000	1350000	1350000	1350000	1350000	1350000	1350000	1350000	1350000	1350000	12800000
SUB-TOTAL	7015315	9938581	10120510	10311535	10512112	10722718	10943854	11176046	11419849	11675841	103836360
Commodities	250000	75000	78750	82688	86822	91163	95721	100507	105533	110809	1076992
ODC (3%)	210459	298157	303615	309346	315363	321682	328316	335281	342595	350275	3115091
Regional Meetings	50000	52500	55125	57881	60775	63814	67005	70355	73873	77566	628895
SUB-TOTAL	7525774	10364238	10558000	10761450	10975073	11199376	11434895	11682190	11941849	12214492	108657337
Fee (8 0%)	602062	829139	844640	860916	878006	895950	914792	934575	955348	977159	8692587
Contigency (3%)	225773	310927	316740	322844	329252	335981	343047	350466	358255	366435	3259720
SUB-TOTAL	8353610	11504304	11719380	11945210	12182331	12431308	12692733	12967231	13255453	13558086	120609645
PASAS	150000	158000	165000	174000	182000	191000	201000	211000	222000	233000	1887000
Grants	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	2000000
Evaluations	0	0	50000	0	100000	0	0	100000	0	100000	350000
Financial Audits	0	0	50000	0	0	50000	0	0	50000	0	150000
SUB-TOTAL	350000	358000	465000	374000	482000	441000	401000	511000	472000	533000	4387000
GRAND TOTAL	8703610	11862304	12184380	12319210	12664331	12872308	13093733	13478231	13727453	14091086	124996645

2. Budget Categories

The annual budget for core funds can be expected to be broken down into the categories illustrated in Table 5. The "Life of Contract" category includes 11 essential planning, management, liaison, outreach, coordination and information dissemination activities necessary to support field work and achieve the Contract objectives during the life-of-the-contract.

Core funds are also used to respond directly to Mission and Bureau to support regional and global needs Under "Technical Assistance" core funds can be expected to be used to fund all or part of a field activity Higher priority can be expected to be given to requests for assistance that will.

- improve the policy framework or strategies of host countries to assess and/or manage environmental health risks,
- strengthen and make sustainable the management and operation of host-country institutions;
- promote intersectoral collaboration, particularly in areas of finance, environment and agriculture;
- improve the sustainability of technical approaches to controlling morbidity;
- provide opportunities for communities to participate in managing of local environmental health risks;
- increase institutional access to information, or,
- increase private sector involvement

Based on our experience with the VBC and WASH projects we would expect that approximately 42% of core funds would be budgeted to support "Life of Contract" activities, and 58% to support Bureau and Mission requested "Technical Activities" To ensure flexibility in the contractors ability to respond to unanticipated requests from Bureaus and/or Missions for core supported technical assistance approximately 10% of core funds will be held in reserve.

TABLE 5: BUDGET CATEGORIES

		Years										
Core												
Life of Contract Activities		1	2	3	4	5	6	7	8	9	10	TOTAL
General Office Administration	13%	650000	650000	650000	650000	650000	650000	650000	650000	650000	650000	6500000
Technical Services/Preplanning	3%	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	1500000
Computer Systems Maintenance	3%	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	1500000
Liaison w/Regional Bureaus	5%	250000	250000	250000	250000	250000	250000	250000	250000	250000	250000	2500000
Liaison w/other/WHO/CDC/WB	2%	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	1000000
Activity Development	4%	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	2000000
Intern Program	1%	50000	50000	50000	50000	50000	50000	50000	50000	50000	50000	500000
ProActive Dev./Seminars/Outreach	2%	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	1000000
Info Acquisitions/Dist	3%	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	1500000
Communications	3%	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	1500000
Coordination w/Subcontractors	4%	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	2000000
Subtotal	43%											21500000
Technical Assistance												
Global Activities	14%	700000	700000	700000	700000	700000	700000	700000	700000	700000	700000	7000000
Regional Activities	33%	1650000	1650000	1650000	1650000	1650000	1650000	1650000	1650000	1650000	1650000	16500000
Reserved Mission Request	10%	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000	5000000
Subtotal	57%											28500000
Total	100%											50000000

J. Evaluation

The contractor's performance and the degree of success of the field technical assistance support activities will be monitored and evaluated during the course of the Project. The contractor will provide the Mission, Bureau, and other relevant entities with a standardized form for evaluation of the contractor's services at the end of the contractor's involvement with each separate scope of work requested The Mission or other client will be requested to fill out the performance critique and send copies to the contractor's operation center and to both the COTR and TO.

An annual management review, chaired by the R&D/H/CD Division Chief, and consisting of the Division technical staff and the project COTR/TOs will review the project. The Division Chief will periodically review contractor performance. The TOs will meet at least three times a week with the Contractor's Project Director. There will be quarterly technical reviews to be performed by the COTR.

Formal evaluations of services rendered will be performed in early FY1995 and FY1997 for the first contract and FY2000 and FY2002 for the second contract. The 1995 and 2000 evaluations will serve as input to R&D/H for guidance in the preparation of follow-on contracts A specific set of evaluation criteria for the intermediate evaluations are to be developed during late FY1994 and FY1996. Three financial audits or reviews (FY 95, 98, 01) will take place during the 10 year LOP The three interim and final evaluations (FY 95, 97, 00, 02) will focus on:

- Appropriateness of project design
- Effectiveness of project in achieving project outputs
- Adequacy and quality of A I D. and contractor resources, including budget
- Adequacy of contractor performance, management, and implementation.
- Adequacy of A I D management and coordination.
- Recommendations for modification or extension of project design, management, implementation, budget for time period.
- Value of the project to A.I D.
- Lessons learned for use in follow-on or subsequent projects.

A specific set of criteria for the final evaluations will be developed in November 1996 and November 2001. The evaluation will assess the overall performance of the contractor and the appropriateness of the original project design, appropriateness of operating modifications, and the value of the project to A.I D.

In reality, R&D/H anticipates a continuous evaluation taking place, one which develops out of close working relationships between the various Bureaus and Missions involved and the contractor. The continuing critiques, in-progress evaluations and the management reviews may result in slight changes in direction, emphasis, administrative procedures, or even changes in methodology of provision of services over the LOP. All such changes will be minor and will not constitute changes within the clause of the contract entitled "Changes".

K Commodities

The limited commodity budget of the Project is intended for the purchase of small quantities of new control agents and tools for field testing and training purposes The Project will not finance commodities on an operational scale, except on a buy-in basis utilizing Mission or Regional Bureau funds. Procurement of all items will be managed by the contractor with funds to be provided through the contract negotiated with A I D.

The authorized source and origin for A I D financed commodities procured through this Project is geographic code 000. Legal procurement is eligible in accordance with provisions of A I D Handbook J, Supplement B, Chapter 18. Except for ocean shipping, the suppliers of commodities or services shall have the cooperating country or the United States as their place of nationality, except as A I D may otherwise agree in writing.

Ocean shipping financed by A I D under the Project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

VI. Project Analysis

A. Technical Analysis

This Project is designed to provide technical support for developing project activities, implementing these activities, monitoring and evaluating project implementation, and establishing information networks in the subsectors of tropical diseases, water supply and sanitation, solid waste, wastewater, air pollution, food hygiene, hazardous materials, occupational health, and injury. The technical capabilities available for these tasks exist in the public and private sectors and can be

tapped by the Project. Challenges to this Project will be determining the relationships among the various subsectors and clearly identifying the health-related implications of environmental problems. The technical feasibility of this approach has been demonstrated in the current R&D/H/CD WASH and VBC projects.

The June 1992 query of Missions summarized above and in Annex F indicated that. (1) the Project resources are needed and wanted by the Missions and the Bureau technical offices, (2) the Project design is appropriate for the stated purpose, and (3) the Project is feasible to implement and cost-effective for the magnitude of the services provided This last point is supported by experience of R&D/H/CD with the WASH and VBC projects, evaluations of which are summarized in Annex G.

B. Administrative/Institutional Analysis

In order to implement this project successfully, responsible officials in A.I D /W and in the field must be able to assume the responsibility of project management and to work in coordination and cooperation among themselves, with participating host country public and private institutions, and with contractors and grantees.

1 R&D/H/CD Management Responsibilities

A specified R&D/H/CD Cognizant Technical Officer (COTR) has been identified as the overall Project Manager. The project management responsibility will occupy approximately 75% of the Officer's time. Project management will require shifts in current portfolio management to assure that technical responsibility is appropriately assigned to R&D/H/CD staff The total burden will be similar to the combined burden of the current WASH III and VBC II Projects.

- The R&D/H/CD Administrative Assistant will be responsible for all Project-related documentation, tracking actions, logging, and developing a computerized system for Project monitoring.

- This Project will begin at a time when the WASH III and VBC II are winding down Management of these existing projects takes approximately 75% of the time of each of two R&D/H/CD Project Managers.

- The availability to the Missions of the consultants provided by this Project should significantly reduce the number of separate contracting requests by Missions for short-term services which R&D/H/CD would otherwise be required to backstop.

In summary, while the project management burden placed upon R&D/H/CD by this Project will be significant, particularly during start-up and the preparation of annual plans-of-work, efficiencies resulting from the consolidation of current projects will improve the overall effectiveness of R&D/H/CD in managing its environmental health portfolio

2. Coordination Among Responsible Parties

There are many actors in the implementation of this Project. In addition to the R&D/H/CD COTR, the TOs, and the A.I.D. Contracts Officer, there are representatives of the participating Missions and host country institutions, representatives of the prime contractor, and sub-contractors. In order to assure cooperation and coordination among all responsible parties, the R&D/H/CD COTR will:

- at the earliest time appropriate after this Project is authorized, provide a detailed description of the responsibilities of all participating parties. This description will be prepared after consultation with all interested parties, will be distributed to all interested parties, and will be revised as necessary.

- hold quarterly meetings with the representatives of the contractor, the TOs, and R&D/H staff to review the status of project implementation, and to identify and resolve any technical problems Minutes of these meetings will be prepared and distributed to Missions, as appropriate

C. Social Analysis

1. Beneficiaries

Project beneficiaries will include developing country populations in rural and urban (particularly peri-urban) areas in need of improved environmental health conditions. Secondary beneficiaries will include those institutions charged with provision and management of environmental health services in these countries.

2. Participation

A I D /W, Bureau, and Mission staff, and host country professionals will participate in project design and implementation. In addition, the selected U.S. contractor and subcontractors will participate in the implementation of the project. A.I D. personnel, U.S. contractors, U.S. experts outside of A.I.D., and host country professionals will participate in the scheduled evaluation of the project.

3. The Role Of Women

Environmental conditions with a negative health impact disproportionately affect women and children. This project, through promotion of improved environmental health conditions will have a direct benefit to women in developing countries In addition, the collection of water for domestic use falls upon women and children, particularly girls; therefore, improved access and availability of water supplies will release women from the burden of water collection and allow them to spend more time in productive activities and schooling.

It is expected that professionals participating in project implementation will include qualified professional women as part of the contractor team.

4. Cultural Adaptation

During R&D/H/CD's experience with WASH project, it has been found that successful water supply and sanitation projects result when community participation and hygiene education are an integral part of the project The process of involving the community from project conception through design and construction, and transferring the responsibility of operations and maintenance to the community assures both a successful and a culturally appropriate project.

D Environmental Analysis

Because the environmental health project will not directly construct or provide capital assistance for capital development activities or projects, the environmental health project will have little significant direct effect on the environment No significant, adverse environmental effects have been evident during WASH or VBC.

Field activities and projects, assisted by WASH and VBC have undergone environmental review procedures during their own project development phase In the event that the technical assistance of this project leads to significant redesign of field projects, normal A.I.D. environmental procedures will be followed for that particular project or activity Since both WASH and VBC have undertaken environmental examinations or studies for field projects when requested, it is expected that this project will receive similar requests. Thus these types of activities will be included in the Annual Work Plan. Should the project directly undertake any field installation, e.g., a small demonstration or pilot activity, an Initial Environmental Examination (IEE) will be prepared and cleared with the appropriate Mission and Regional Environmental Coordinator as required.

Consistent with A I.D. Handbook 3, App 2D, Para. 216.2(c), the project will not require an initial environmental examination, since it falls under the criteria 216.2(c) (iii) (2) and (ii). These criteria exempt "educational, technical assistance, or training programs except to the extent such programs include activities directly effecting the environment (such as construction of facilities)" Therefore, no further environmental examination will be undertaken for the project

VII. Relationship of the Project to Other Programs

A Relationship to A I D.'s Bureau for Private Enterprise (PRE)

Discussions are in the preliminary stage to develop collaborative relationships with the Capital Development Office of PRE Items for discussion include·

- o Environmental Health Assessments,
- o Institutional Development, and
- o Financial Sustainability.

The activities of A I D 's Office of Housing and Urban Programs and the Environmental Health Project will be complementary. The Housing Office emphasizes urban environmental issues and recognizes the existence of health problems associated with the home and its environment The Housing Office's involvement in urban environmental issues includes site-specific housing projects for the poor and the financing and management of municipal infrastructure programs The Housing Office and its seven Regional Housing and Urban Development Offices (RHUDOs) provide technical assistance to Missions to improve A I D.'s capacity to analyze urban environmental problems. The RHUDOs queried (Annex E) supported this Environmental Health project. Technical assistance in all environmental health subsectors were of interest.

The Environmental Health COTR will consult the Housing Office on project activities related to the housing subsector and seek to provide the Missions with a broad menu of technical services as a result of such collaboration.

B. Relationship to A.I.D 's Trade and Development Program

Where environmental health concerns are an issue, the Environmental Health Project could provide technical assistance to relevant Trade and Development Projects.

C. Relationship to R&D Bureau Activities and the Agency Environmental Forum (EF)

The Office of Environment and Natural Resources(R&D/ENR) has primary responsibility within R&D for environmental issues, and the Environmental Forum (formerly the Environmental Working Group, EWG) coordinates and contributes to Agency strategy for environmental issues. The Office of Health has worked closely with both the EWG and R&D/ENR on the development of this project

R&D/ENR has recently developed the 5 year Environmental Pollution Prevention Project (EP3). The goal of EP3 is reduction in environmental pollution associated with urbanization and industrialization. The prupose is to create the necessarty conditions for decision makers in the public and private sectors to undertake proper urban and industrial pollution management. The approach taken is one of developing a strategic plan which is the context for various pollution prevention efforts.

It is our expectation that the Environmental Health project and the EP3 project will work closely together The Environmental Health project will assist with identification of serious health risks which EP3 can address (EP3 does not analyze the health risks of the industries reviewed) The EH project can also serve as a mechanism to assist in prioritization for EP3 activities, e g which industries should be targeted. To facilitate communication, it is recommended that staff from each project sit on the TAG of the other project.

Collaboration is also expected with the Environmental and Natural Resources Policy and Training (EPAT) project EPAT focuses on economic policy as it relates to environmental quality and could be useful in addressing environmental health policy-related concerns.

The Environmental Education and Communication (GREENCOM) project of R&D/ED will support change in individual behavior and institutional practices to promote a sound environment. The EH project can work with the GREENCOM to target appropriate groups whose health is adversely affected by environmental conditions.

Other R&D/H Projects which will complement the EH project are Data for Decision-Making (DDM) and Healthy Workforce 2000. The purposes of these projects are to facilitate data-based decision-making in the health sector during a period of rapid demographic, epidemiologic, and economic change.

The purpose of this Environmental Health Project is to assess, manage, and prevent health problems in the environmental health sector. In addition, the EH project will complement the proposed Basic Support for Institutionalizing Child Survival (BASICS) project, which is a consolidation of the current REACH, PRITECH, and HealthCom projects. BASICS will continue to provide technical assistance in the areas of immunization for vaccine-preventable diseases, and accessible methods of diagnosis and

treatment for diarrhea, ARI, and malaria in children. It will also emphasize building sustainable, institutionalized programs to carry out these functions. Finally, it will promote prevention, through collaboration with the EH Project when appropriate, of diarrheal diseases, ARI and malaria transmission using personal and family-based interventions Coordination between the Environmental Health and BASICS Projects will assure that the preventive strategies promoted through BASICS are consistent with and complementary to the policies and activities of the Environmental Health Project.

D. Relationship to Regional Bureaus

This Office will work closely with the Bureaus to tailor regional requirements in the field of environmental health. Conformity with regional bureau strategies was discussed in section II A 6.and Annex B. Collaboration opportunities are summarized in Annex C. The Bureaus will be given pertinent updates on environmental health matters of relevance.

E Relationship to International and Other US Government Agencies

A.I.D , through the Environmental Health Project, may negotiate grants and PASAs/RSSAs with international and other USG agencies. However, of primary importance are the continuation of collaborative efforts already underway with various agencies and organizations.

During the Seventeenth Meeting of the Executive Committee of the Directing Council of PAHO, an analysis of the LAC Regional Program in Environmental Health was reviewed and a program entitled "Towards a New Approach for Environmental Health Development in Latin America and the Caribbean" was approved. Many aspects of this program are consistent with the EH Project, efforts will be made to maximize collaboration of the A I D. project with the PAHO program

A.I.D., through the existing VBC and WASH Projects, has collaborative working relationships with a number of US Government Agencies, including the Center for Disease Control, Environmental Protection Agency, Peace Corps, and the Indian Health Service of the U S. Public Health Service. These working relationships are expected to continue, and might be expanded to include other Agencies such as the Food and Drug Administration or NIOSH.

ANNEX A

LOGFRAME

Project name Environmental Health
Est Completion 2002
Date of Revision 3 5 93
Design Team R&D/H/CD

Narrative Summary (NS)	Measureable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
Goal 1 To improve the health status of developing country populations exposed to environmental health risks addressed in the areas of tropical disease prevention and control, water supply and sanitation, wastewater management, air pollution, occupational health, injury prevention and control, and, food hygiene	1 1 Technical assistance provided in decreasing morbidity and mortality and improvement in health status 1 2 Technical assistance provided to reduce the prevalence of environmentally related health problems 1 3 Technical assistance provided to reduce the incidence of environmentally related health problems 1 4 Technical assistance provided to increase the number of people that have access to adequate water supply and sanitation systems, wastewater systems, and solid waste systems 1 5 Technical assistance provided to improve air quality, hazardous waste management, occupational health and food hygiene 1 6 Technical assistance provided to improve financial planning and long term sustainability of developing country institutions responsible for environmental health programs 1 7 Technical assistance provided to improve indigenous capability to assess envrionmental health risks and put into place prevention programs	1 1 Statistics compiled by host countries, USAID, WHO and other development organizations, entomological and epidemiological data compiled by environmental health program, end of project reports by USAID	(Goal to Supergoal) 1 That environmentally safe control technologies are available and instrumental in reducing environmental diseases and improving health status

Narrative Summary (NS)	Measureable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
Purpose 1 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	1 1 Increased capacity of developing country governments and organizations in the areas of environmental health prevention and control 1 2 Positive change in developing country strategic approaches to environmental health issues 1 3 Increased number of tropical disease prevnetion and control systems, safe water and sanitation systems, wastewater systems, solid waste systems and air pollution control systems 1 4 Cost effective and environmentally sound use of commodities 1 5 New techniques, technologies, and/or control agents field tested and adopted in developing country programs 1 6 Improved developing country environmental regulatory policies 1 7 Improved sector level, multidisciplinary planning for environmental health risks 1 8 Increased consciousness of how to prevent environmentally caused health diseases	1 1 Observation of indigenous activities 1 2 Review of AID/W, Mission contractor records, reports and evaluations 1 3 Review of MOH reports, records and evaluations 1 4 Review of WHO and other multi- and bi lateral reports, records and evaluations	(Purpose to Goal) 1 Host government and USAID missions will continue to initiate field requests and buy ins to project 2 Technical project management is available and effective 3 New technologies and strategies can increase the efficacy of risk control programs 4 Indigenous personnel will use new skills effectively
Outputs 1 Improved design, implementation and evaluation of the environmental health activities by developing country governments and organizations	1 1 Technical assistance and workshops provided to 10 countries to assist host governments and local NGOs in development of sector assessments and national environmental health plans	1 1 Field monitoring	(Output to Purpose) 1 Required technical skills will be available in the U S and other countries 2 Counterpart manpower will be available in developing countries

Narrative Summary (NS)	Measureable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
	1 2 Technical assistance to 10 countries to establish environmental health policies	1 2 Review of Contractor, USAID, MOH, WHO etc records, reports and evalutions	3 Participating governments will adopt appropriate environmental health standards and regulations and cost recovery policies
	1 3 Technical assistance to 10 countries to implement environmental health policies		4 There exists appropriate levels of government allocations and public expenditure in sectors of environmenal risks
2 Increased skills levels of developing country professionals, including policy makers and staff involved in environmental health activities	2 1 40 50 developing country program recipients of technical assistance, and implementing improved strategies for preventing and controlling diseases related to inhealthy environmental conditions	2 1 same as above	
	2 2 Expanded coverage of 2 3 existing regional training centers, assistance in the development of 2 3 training centers		
	2 3 Up to 1000 developing country professionals and staff recipient of project technical training assistance		
	2 4 Technical assistance to 10 15 research institutes		
3 Improved operational and cost effective management of developing country institutions resposnsible for environmenatl health actvities	3 1 Technical assistance to 40 50 developing country programs on the design and evaluation of the technical and environmenal components of EH projects	3 1 same as above	
	3 2 TA to 40 50 country programs in the application of appropriate technologies		
	3 3 TA to 40 50 country programs in planning, implementation and evaluation of operations and maintenance activities		
4 Increased community health educations and	4 1 Workshops held and educational programs	4 1 same as above	

Narrative Summary (NS)	Measureable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
b U S training, conferences	6 Contigency and Inflation 13,750 TOTAL 125,000		
3 1 Publications and distribution of all consultant reports, proceedings of meetings and workshops, and recent scientific publications to all project participants	Up to 1000 developing country professionals and staff recipient of project technical training assistance	3 1 Annual Project reviews coordinated by AID/W COTR	
4 1 Training materials (in the appropriate language) and supplies for testing control tools and demonstrtions	Technical assistance to 10 15 research institutions	4 1 External Evaluations	
5 1		5 1	
6 1		6 1	

Narrative Summary (NS)	Measureable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
Involvement, and changes in personal behavior to reduce environmenal health associated risks	started in 10 countries		
5 Improved financial planning and long term operations and maintencance in environmenal health activities	5 1 TA to 20 country programs to integrate finance and cost recovery aspects into EH programs	5 1 same as above	
	5 2 Conduct willingness to pay studies in 10 countries		
	5 3 Analysis of the gender impact of financing mechanisms in 20 countries		
	5 4 Assist with life cycle cost analysis of interventions in 20 countries		
6 Increased private sector involvement	6 1 Facilitate private sector involvement in EH in 30 countries	6 1 same as above	
	6 2 Assist NGOs and other private sector groups in development, implementation and evaluation of sector programs in 20 countries		
	6 3 Advise 20 national governments in the development and implementation of policies that support private sector involvment in environmental health activities		
Activities 1 1 Technical Assistance a Direct hires, PSCS, PASAs, RASAs b Contractor services c NGOs, Universities 2 1 Participants a Short term training in developing countries	Inputs/Resources ($000's U S) 1 Contractor Technical Services 105,222 2 Grants & PASAs 3,997 3 Evaluations/Audits 500 4 Commodities 1,070 5 Regional Meetings & Conferences 628	1 1 Review Contractor accounting records 2 1 Finacial Audits	(Activity to Output) 1 Continuing budgetary support by R&D/H, USAID missions, host countries and others 2 Same as above 3 Same as above 4 Same as above

issues that significantly constrain development at the country level through negative impacts on the quality of human life. ...

2) Emphasize the most urgent environmental problems that are significant constraints to development. USAID will focus on environmental problems where failure to take immediate action will likely result in significant threats to human health .

3) Concentrate resources on problems that host countries themselves have identified as priorities, and are capable of and committed to addressing."

USAID will:

" support activities that:
1) attack root causes of environmental degradation;
2) support local empowerment and public participation;
3) improve scientific understanding of environmental issues affecting developing countries, and improve data on the natural resource base; and

4) promote cooperation with other environmental and developmental organizations "

" emphasize three broad categories of approaches that most effectively integrate environment and development: strengthening human/institutional capacity and building public awareness; supporting developing country efforts to reform wasteful or unsustainable economic and environmental policies and procedures, and encouraging private sector participation in promoting environmentally sound activities "

The role of the Research and Development Bureau (R&D)

"is to provide technical support to geographic bureaus, upon their request, including assistance in the design, implementation, monitoring and evaluation of mission projects and programs".

Africa (AFR) Bureau

The Plan for Supporting Natural Resources Management in Sub-Saharan Africa supports USAID's Environmental Strategy Framework by focusing on two critical problem areas : (1) unsustainable agricultural practices; and (2) loss of tropical forests and other critical habitats for biological diversity. Of these two problem areas, the former is pertinent to the environmental health project. This is because sustainable agriculture includes issues of soil and water conservation and pest management. The latter addresses the issue of pesticides hazardous to the environment and to human health.

" Africa's villages still largely depend on wells and streams for potable water "

Water mismanagement has lead to

" increased incidence of water-borne diseases (schistosomiasis and malaria); pollution from agricultural chemicals and to some extent from urban and industrial wastes .."

" Each of these problems directly threatens the quality of human life and the sustainability of agricultural production in Africa."

The focus of the AFR Bureau's Strategy is supported by the regional response to the environmental health query (ANNEX E). Of all regional responses, AFR had the lowest interest rate (58% positive). The primary reason given for no interest was the "focus and concentrate" issue. Of those Missions interested in at least one environmental health subsector, there was greater than 60% interest in tropical diseases and water supply and sanitation. This is consistent with the issues of water mismanagement and tropical disease highlighted in the strategy.

The types of technical assistance most requested by the Missions included: engineering and technical (19%); cross cutting services (15%); community participation (14%); and institutional and human resource development (12%). From this one can see that the Bureau's recommendation for an initial focus on training, research, and institutional development is generally supported.

Asia Bureau

The Asia Bureau recognizes four problem areas in the Region, the three pertinent to the environmental health project are: 1) urban and industrial pollution; 2) degradation and mismanagement of water and coastal resources (compounded by industrial and urban pollution and toxic waste dumping); and 3) energy shortages, inefficiencies, and environmental impacts of energy development.

Cited problems impacting on environmental health are

" severe water and air pollution, toxic waste dumping, and inadequate sanitation and solid waste management systems ."

There are three root causes of environmental degradation identified in the Asia Region: rapid population growth; the expansion of urban and industrial areas; and market and policy failures which do not accurately reflect the real value of natural resources and products, including environmental costs of production and use.

In order to address these problems the Asia Bureau discusses three strategic approaches:

"1) policy reform includes establishing incentives for greater empowerment and participation of local population and increased land and resource ownership and management rights."

"2) institution building and public awareness"

"3) private sector participation"

The Asia Bureau is also projecting increasing environmental problems due to several factors. Those pertinent to the environmental health project include:

"a growth in population, income and markets ."

"b expansion of urban centers and rapid industrialization ."

"d. conflicts over declining land and water resources ."

"e greater demands for equity and security of resource tenure systems in rural areas..."

"f rising public concern over health and safety from severely polluted air and water and accidents related to hazardous wastes."

ESP - The Bureau Environmental Support Project, is a regional program to assist the ASIA Bureau and missions to develop and implement the Asia Bureau Environment and Natural Resources Strategy. Another program is The Presidential Initiative, the US-Asia Environmental Partnership (US-AEP), which is coordinated by USAID's ASIA Bureau. It is a coalition of American and Asian businesses, governments, and community groups working together to enhance Asia's environment and promote economic progress. It is comprised of three components: 1) fellowship and training; 2) technology cooperation and the environment and energy infrastructure; and 3) the Regional biodiversity conservation network.

The Environmental Health Project will complement those activities that are conducted at the Regional and Mission level by adding the health perspective. All Missions that responded from the Asia Bureau where interested in at least two subsectors of environmental health - 100% interest in hazardous materials and wastewater. There was an 80% interest in water supply and sanitation and solid waste subsectors. Though mentioned in the Asia Strategy as a concern, only 40% of Missions were interested in the air pollution subsector.

The types of technical services of interest to the Missions through the environmental health project are primarily in the areas of: finance (31%), engineering and technical (23%), cross cutting (17%), and institutional and human resource development (16%).

Europe Bureau

The Europe Bureau's Environmental Strategy states:

"The countries of Central and Eastern Europe (CEE) are suffering the effects of the worst pollution in the world. Effects include: increased

respiratory diseases and mental retardation, shortened life spans, rivers too polluted for industrial use or drinking (50% of Poland's rivers), and the degradation of conservation areas."

Priorities of the region are

" .to reduce immediate threats to human health and support economic restructuring and to protect the remaining important conservation areas "

The targeted activities of the Strategy, relevant to the environmental health project are:

"1) energy efficiency and urban and industrial pollution reduction
2) strengthen environmental institutions . adopting management tools such as risk assessment and environmental impact assessment ..
4) increase public participation in government decision making "

Environmental health and management have a high priority in Czechoslovakia and Romania. The focus of activities will be technical assistance.

The environmental health project can provide the Europe Bureau with technical assistance. All the Missions responding to the query were interested in at least one subsector of environmental health. There was a 70% interest in the following subsectors: water supply and sanitation, wastewater, solid waste, hazardous materials, air pollution, occupational health and food hygiene. The types of technical assistance of interest to the Missions include: public health (31%); community participation (21%); institutional and human resource development (13%); and finance (13%).

Latin America and the Caribbean (LAC) Bureau

The LAC Bureau's Environmental Strategy cites five major regional problems, four are pertinent to the environmental health project: 1) unsustainable agricultural practices; 2) degradation and depletion of water and coastal resources; 3) environmentally unsound energy production and use; and 4) urban and industrial pollution.

The regional problems cited:

" pesticide contamination of the environment, food supply, and export crops is widespread and serious problem "

" sulfur dioxide emissions from combustion of sulfur containing fossil fuels, smelting of ores and industrial pollution can cause respiratory tract disorders ."

" rapid urbanization and unregulated industrialization have led to major environmental problems. Sever water pollution is common in the rivers, streams, and water-supply systems in and around urban centers.

Untreated sewage is a primary contaminant. Air pollution chokes many LAC cities, while solid and hazardous wastes pose other serious health hazards and threaten economically important activities such as tourism."

LAC defined the main constraints involved in the region and principles for strategic action as follows:

"The main constraints to resolution of environmental problems can be grouped in six general areas: economic forces, inappropriate subsides, and policy distortions; poverty; institutional weaknesses; lack of education and information; lack of popular participation; and lack of diffusion of appropriate technologies."

"Principles for strategic actions:
1) attack root causes underlying environmental degradation, stressing prevention of problems;
2) integrate environmental considerations broadly into USAID-supported sector and programs;
3) promote economic and environmental policies for sustainable development;
4) strengthen institutions, including non-government organizations and government agencies for resource management;
5) strengthen education and training in all areas of environmental management;
6) build participation and empowerment of the public in environmental initiatives."

Individual missions will generally be expected to focus on three or fewer of the priority environmental problem areas.

LAC recommended approaches for improved management and protection of water and coastal resources included:

" help increase efficiency and equity in the distribution and supply of water, and help reform water subsidy and pricing policies so that water prices reflect actual supply costs plus social costs "

" strengthen institutional capacity and strengthen monitoring an control of industrial effluent, waste and sewage disposal, petrochemical industry activities "

For the reduction of urban and industrial pollution:

" promote greater private-sector responsibility for resolving problems of solid waste management and water and air pollution through support for policy and regulatory reforms, technical assistance, and feasibility studies..."

" encourage the U S private sector to provide technical assistance, technology and training in industrial pollution control, and occupational health and safety "

" catalyze and work with other donors to support the development of infrastructure, technologies, and services for supplying potable water in urban areas "

" collaborate with other donor agencies and the U.S private sector to demonstrate cost-effective approaches to reducing water and air

pollution in urban areas, and to encourage the expansion of recycling programs in the region "

As the LAC Bureau's Strategy indicated, there was great interest in the environmental health project (75% positive response rate). Of those Missions interested in environmental health, there was 100% interest in the water supply and sanitation subsector, 90% interest in tropical diseases, 80% interest in solid waste, and 65% interest in the wastewater and hazardous materials subsectors. The types of technical assistance requested is also consistent with the Bureau's Strategy; the primary areas of need include: cross cutting (19%); community participation (17%); engineering and technical (13%); finance (13%); and institutional and human resource development (12%).

Near East (NE) Bureau

The Near East Bureau's Environment and Natural Resources Strategy cites the most critical environmental challenge is primarily associated with water resources. Of the environmental critical constraints cited in the Environmental Framework, 4 are pertinent to the NE Bureau: 1) degradation and depletion of water resources; 2) urban and industrial pollution; 3) environmentally unsound energy production and use, and 4) unsustainable agricultural practices."

Of the four strategic approaches to be used by the NE Bureau the two pertinent to the environmental health project are:

"1) providing technical support to missions on the environmental and natural resources dimension of their projects and programs .;

3) providing support for critical policy reforms and development of institutional capability in environment and natural resources, with priority towards water resources .."

As mentioned, the highest priority has been given to degradation and depletion of water resources.

"Increased degradation of existing water resources, through mismanaged irrigation systems, ill conceived cropping systems and unabated industrial waste discharge, has jeopardized long term sustainability of quality water for the region... this is recognized as an important issue of environmental health."

"The water resources crisis is also being manifested in the deterioration of the general public's health".

The second priority is urban and industrial pollution.

"The emergence of urban and industrial pollution is not a recent phenomenon in the region, but has only recently reached crisis proportion."

"Growth industries like iron and steel, cement, textiles, chemicals, fertilizers, food processing, and petroleum contribute unchecked pollution to the nation's water, soil, and air".

There are also environmental "hot spots" identified in the region. An A I.D. project supporting activity in the region is PRIDE (Project in Development and the Environment). It is the primary environmental assistance project available to the Near East Bureau. PRIDE's goal is to promote sound environmental and natural resource policies and programs in support of long-term sustainable economic growth.

"The project's purpose is to assist missions and host country institutions, through the Bureau offices, to identify and address critical environmental issues that threaten economic growth, public health and ecological sustainability through a broad range of technical assistance resources "

Other projects include Irrigation Support Project for Asia and the Near East (ISPAN) and the Environmental Pollution Prevention Project (EP3).

The Mission response to the environmental health query supported the Bureau's Strategy and the pertinence of the environmental health project to this region. There was 100% interest in the environmental subsectors of wastewater and hazardous materials, and 75% interest in water supply and sanitation and solid waste. The principle types of technical assistance requested are: engineering and technical (29%); cross cutting (26%); information services (17%); and public health (11%).

Newly Independent States (NIS) Task Force

The NIS Task Force is still identifying priority areas for assistance to the former Soviet Union in all sectors. Within the area of environmental health, priorities may include: assistance with risk assessment methodologies; identification of environmental hazards, including those to maternal and child health; training programs; public policy formulation, including community participation and NGO's; and financing of public health and interventions.

Priorities undoubtably will evolve as the environmental health status in each of the new republics becomes clearer. The Environmental Health Project can provide technical assistance to the NIS Task Force and Missions as the need arises.

ANNEX C

REGIONAL BUREAU COLLABORATION

MEMORANDUM

TO: AFR/ARTS/FARA, John Gaudet
AFR/ONI/TPPI, Constance Collins
ASIA/DR/TR, Molly Kux
ASIA/FPM, Peter Davis
EUR/DR/HR, Jerry Norris
EUR/DR/ENR, Ron Greenberg
LAC/DR/HPN, Glenn Post
LAC/DR/E, Jim Hester
NE/HPN, William Jansen
NE/DR/PIE, Gilbert Jackson
NIS, Dennis Long
NIS, Paula Bryan

FROM: R&D/H, John H. Austin

SUBJECT: Environmental Health Project

DATE: 1 September, 1992

The Environmental Health Project hopes to work closely with the Regional Bureaus and Missions. We have obtained Mission responses regarding interest in environmental health technical assistance. These results are attached and show regional interest by subsector and type of technical assistance.

In order to complement your activities in the Environmental arena we have reviewed your Region's Environmental Strategy (see attached summary), highlighting those areas in which this project may be useful.

We would appreciate any comments or your suggestions for collaboration with your bureau, which you want to include in an annex of the Environmental Health PP. If you would like to discuss any aspects with Helga Rippen (54500) or myself (54472), please call.

ANNEX D

MISSION RESPONSE TO WORLDWIDE CABLE

The December 1990 worldwide cable sent out to Missions (STATE 435002, 28 December 1990) is attached. In summary, it asked for input to assist the Office of Health in Planning the range of environmental health activities that would be needed by the Missions. Of the 36 responses, 28 ranked country preferences, "8" indicating the highest preference. These results are shown in total and by region.

UNCLASSIFIED

OUTGOING
TELEGRAM

AGENCY FOR INT'L DEV.
TELECOMMUNICATIONS CENTER

PAGE 01 STATE 435002 2805182 0607 055607 A107180 STATE 435002 2805182 0607 055607 A107180
ORIGIN AID 00

ORIGIN OFFICE S/S-I 02
INFO AFCA 03 AFSA 03 AFEV 04 AFOV 03 AFPD 01 AFTR 05 AAAF 02
ENAA 01 LADP 03 LADR 03 LACE 01 LASA 01 LACA 03 AALA 01
SAST 01 PPCE 01 PPPB 02 IG 01 ES 01 AAID 01 STER 02
STEM 01 IGLC 01 EMME 03 IGAH 02 AHAD 01 TELE 01 EMCA 02
EMEU 02 EMPO 05 EMTR 06 EMSA 01 /073 A0 28/11312

INFO LOG 00 AF 00 AAA 00 EAP 00 EUR 00 IO 10 NEA 00
OCS 05 OIC 02 /0360

DRAFTED BY: AID/ST/H/CD:EAORDSON:MP 2955S
APPROVED BY AID/ST/H:MPIELEMEIER
AID/ST/H/CD ADLONG AID/ST/H/CD EWEIN
AID/AFME/TR MJORDAN (INFO) AID/LAC/DP/RPH TPARK (DRAFT)
AID/EME/TR/RPH JMORRIS (DRAFT) AID/AFR/TR/RPH GMERRITT (INFO)
AID/A LKRAUSKAR (INFO) AID/ES DMEIN
2F530E 2805112 /38

R 2605072 OCT 80
FM SECSTATE WASHDC
TO AID WORLDWIDE
INFO RUCNGV/USMISSION GENEVA 6874

UNCLAS STATE 435002

AIDAC GENEVA FOR PSA

E O 12356 N/A
TAGS
SUBJECT DEVELOPMENT OF A COMPREHENSIVE ENVIRONMENTAL HEALTH STRATEGY

1. AID/W IS NOW STARTING TO DEVELOP A COMPREHENSIVE ENVIRONMENTAL HEALTH STRATEGY. THIS IS AN OFFICE OF HEALTH INITIATIVE BUT IS ALSO INCLUDED UNDER THE AGENCY ENVIRONMENTAL INITIATIVE DESCRIBED IN STATE 424056

2. AT THIS EARLY STAGE THE OFFICE OF HEALTH REQUESTS MISSION ADVICE IN THE DEVELOPMENT OF THE STRATEGY. WE WOULD APPRECIATE RECEIVING YOUR ADVICE REGARDING THE HIGHEST PRIORITIES FOR ASSISTANCE IN THE PERSPECTIVE OF THE MISSION/HOST COUNTRY

3. IN PRELIMINARY DISCUSSIONS WE HAVE IDENTIFIED EIGHT ELEMENTS WHICH COULD CONSTITUTE A COMPREHENSIVE ENVIRONMENTAL HEALTH PROGRAM. THEY ARE, AS FOLLOWS
A. WATER SUPPLY AND SANITATION
B. WASTEWATER MANAGEMENT
C. SOLID WASTE MANAGEMENT
D. AIR POLLUTION CONTROL

E. TOXIC, RADIOLOGICAL AND HAZARDOUS WASTE MANAGEMENT
F. OCCUPATIONAL HEALTH AND PUBLIC SAFETY
G. FOOD HYGIENE
H. VECTOR-BORNE DISEASE CONTROL
(THE OFFICE OF HEALTH IS CURRENTLY ACTIVE IN A-C VIA THE WASH PROJECT AND H VIA THE VBC PROJECT)

4. PLEASE RANK THE ELEMENTS IN THE LIST BASED ON YOUR COUNTRY NEEDS

5. THE MOST APPROPRIATE INTERVENTIONS BY A, B, D WOULD PROBABLY BE IN THE FOLLOWING CATEGORIES
A. INSTITUTIONAL AND HUMAN RESOURCE DEVELOPMENT
B. HEALTH AND MANAGEMENT INFORMATION SYSTEMS
C. REGULATORY AND POLICY DEVELOPMENT

6. YOUR COMMENTS ON THE VALIDITY OF THE LISTS OF PROGRAM ELEMENTS AND CATEGORIES OF INTERVENTIONS ARE SOLICITED. SUGGESTED ADDITIONS WILL BE APPRECIATED

7. PRIORITIES FOR THE AGENCY MUST TAKE INTO ACCOUNT PRIORITIES AT THE MISSION AND COUNTRY LEVEL. THEREFORE WE WOULD APPRECIATE RECEIVING YOUR FEEDBACK, AS FOLLOWS

-WHICH OF THE PROGRAM ELEMENTS LISTED IN PARA 3, ABOVE, APPEAR TO BE MOST IMPORTANT?

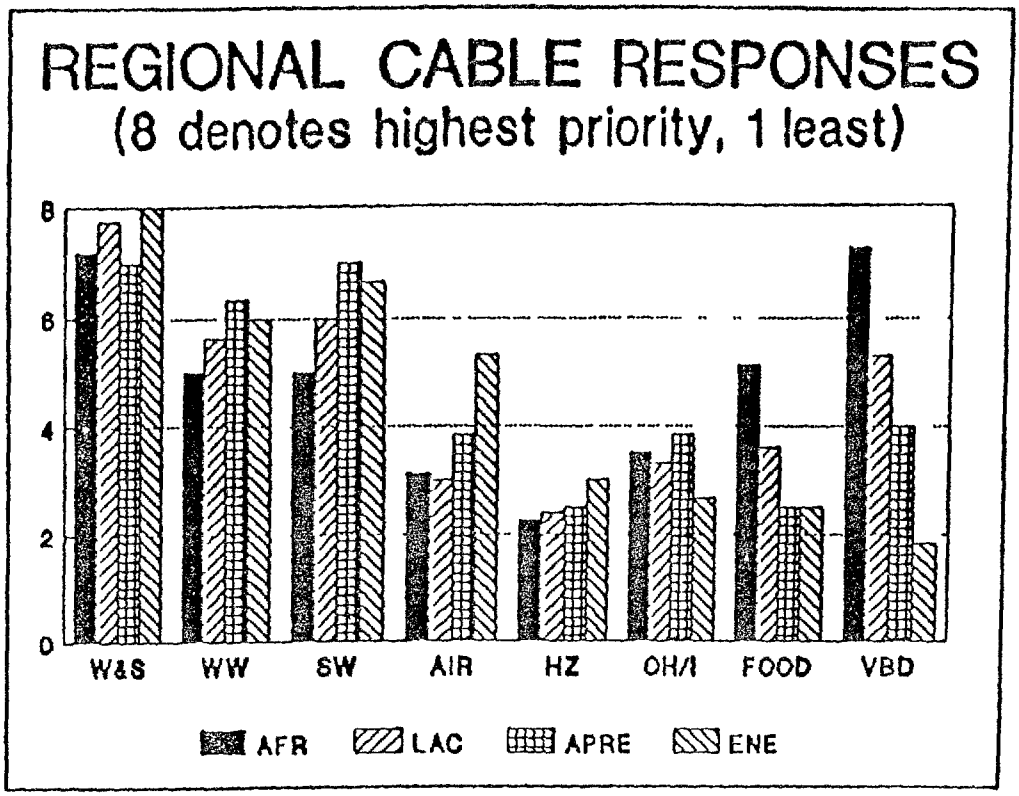
-DO YOU FORESEE ENVIRONMENTAL PROBLEMS WHICH WILL DEMAND EXPERTISE INVOLVING SEVERAL OF THE EIGHT PROGRAM ELEMENTS?

-WILL ADDRESSING ENVIRONMENTAL HEALTH PROBLEMS BE LIKELY TO RECEIVE SUPPORT AT THE MISSION LEVEL? AT THE NATIONAL LEVEL? ARE THERE STRONG LOCAL ORGANIZATIONS (INCLUDING INDIGENOUS PVOS, OR WHICH TO BUILD AN APPROPRIATE INTERVENTION POLICY? IS THE APPROPRIATE REMEDY MOST LIKELY TO BE EDUCATIONAL, INSTITUTIONAL, OR REGULATORY?

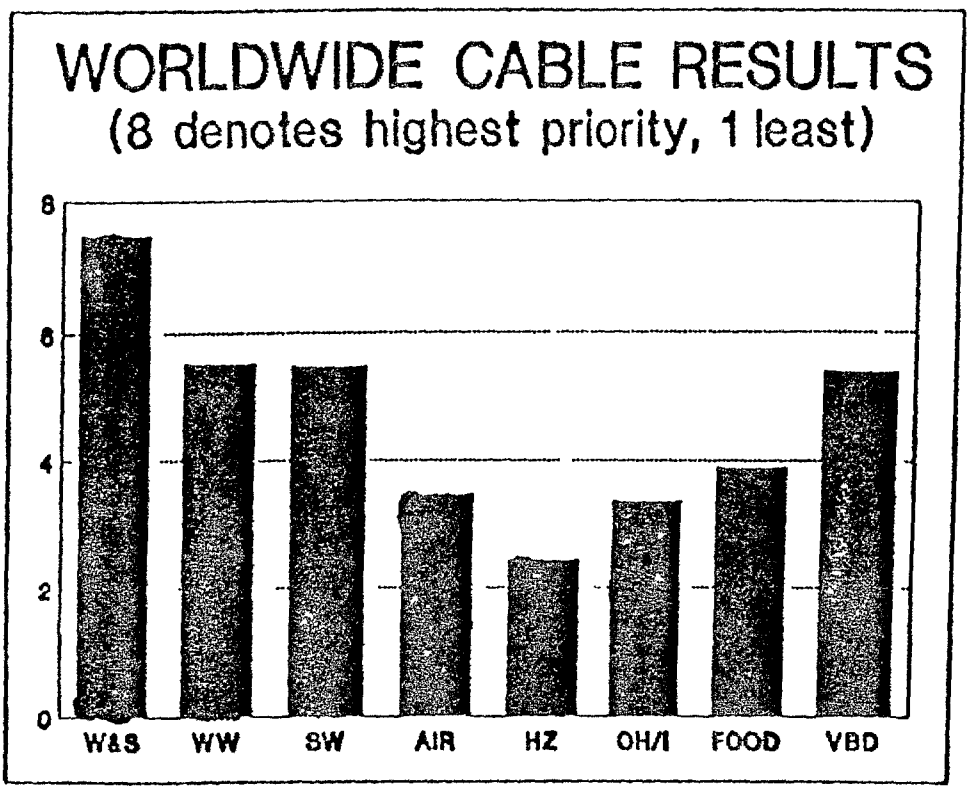
8. WITH THE HELP OF CONSULTANTS, WE ARE PLANNING TO CONDUCT A WORKSHOP IN EARLY JANUARY TO EXPLORE ALL POSSIBLE OPTIONS FOR ADDRESSING ENVIRONMENTAL HEALTH PROBLEMS. WE EXPECT THE DEVELOPMENT OF THIS STRATEGY TO BE AN ITERATIVE PROCESS. THEREFORE YOU WILL HAVE ADDITIONAL OPPORTUNITIES TO CONTRIBUTE TO THIS STRATEGY

BEYOND YOUR RESPONSE TO THIS CABLE, AT THIS EARLY STAGE OF STRATEGY DEVELOPMENT YOUR PRELIMINARY INPUT WOULD BE GREATLY APPRECIATED. PLEASE RESPOND ATTN: ST/H/CD, DR. DENNIS LONG, BARTHOLOMEW

UNCLASSIFIED



Key: W&S-water & sanitation; WW-wastewater; SW-solid waste; AIR-air pollution; HZ-hazardous materials; OH/I-occupational health and injury; FOOD-food hygiene; VBD-vector borne disease.



ANNEX E

ADDITIONAL QUERY OF MISSIONS ON ENVIRONMENTAL HEALTH

MEMORANDUM

TO: Mission Director

FROM R&D/H/CD; Robert Wrin, Division Chief

SUBJECT. ACTION : Input for Environmental Health Project

DATE: 9 June, 1992

This is an ACTION request for your Health Officer, Environmental Officer or Program Officer. It entails indicating your Mission's interest regarding different types of technical services relating to environmental health.

The Environmental Health Project will be a continuation of services provided by WASH and VBC, with additions in other subsectors such as occupational health & injury, air pollution, hazardous materials, and food hygiene

Given that filling out these sheets can be tedious, and takes time, we appreciate your help. It is only with your Mission input that we are able to provide you with the technical assistance most pertinent to your needs These questions were developed in collaboration with all of the Regional Bureaus

We would like to have a response by the 17th of July or ASAP.

INTRODUCTION AND INSTRUCTIONS

First, thank you for taking the time to read this and giving us an indication of your Mission's interest. We will use it to tailor our Environmental Health Project to fit your needs.

The Environmental Health Project is designed to cover all sectors of environmental health. It will incorporate WASH and VBC activities into one project and add subsectors such as occupational injury, hazardous materials, and food hygiene.

With your input we will estimate the distribution of technical assistance requests to be serviced by the Environmental Health Project.

Many thanks for your assistance in helping us prepare a project that will address your environmental health needs over the next few years

EXPLANATION FOR COMPLETING TABLE

1. Column 1: SUBSECTOR : Contains the major subsectors that are being considered for the Environmental Health Project. These subsectors include those currently covered by the WASH and VBC Projects and new subsectors recommended during Environmental Health Workshops and Mission requests.

2. Column 2 TOPIC: Lists some of the major topics in each subsector that might be of interest to you, your Mission, and the government of your country. Blanks are left in each subsector if you would like to make additional suggestions.

3. Column 3: INTEREST: Asks for your response as to whether you, your Mission, and the government has interest in the topics of each subsector. Just place a check in the appropriate yes or no box. If you have checked "YES" further clarification is requested in column 4.

4 Column 4 INTEREST IN THESE TYPES OF ACTIVITIES: Is divided into nine areas of technical assistance (TA) activities available.

1 CC - Cross cutting
2 TD - Tropical disease
3. ET - Engineering and technical
4. HR - Institutional and human resource development
5. PH - Public health
6. CP - Community participation
7. E - Epidemiology
8 F - Finance
9. I - information Services

Examples of activities for each area of technical assistance are included below.

For each topic that you checked "yes" in column 3, please indicate the type of assistance you might request by placing the appropriate letter(s):

A will request long term advisor
B: will request service through buy-ins
C. will request services through use of core funds in the project
O: will request services through OYB transfers
U. undecided at this point, but interested

In some cases you may use more than one letter to indicate your proposed request (e.g. A/B for use of a buy-in to obtain a long term advisor, or A/O for use of an OYB transfer to obtain a long term advisor).

28

Examples of the types of TA available in each of the categories

1. CC - Cross cutting
   - o Assistance to host governments in development of sector assessments and national environmental health plans
   - o Project design assistance
   - o Project implementation review, assistance and revision
   - o Project evaluation
   - o Disaster assistance
   - o Coordination of sector planning with multi-lateral and bi-lateral organizations
   - o Assistance in provision of private sector involvement
   - o Institutional assessments of host country sector organizations
   - o Assistance in development of sector and subsector strategies
   - o Assistance to NGOs in developing, implementing and evaluation of sector programs
   - o Assistance with risk assessment methodologies and management
   - o Assistance to host governments in public education and social marketing
   - o Collaboration with multi- and bi-lateral organizations in establishing information networks
   - o Assistance in identifying environmental hazards, particularly to women and children
   - o Collection of data on human health as affected by environmental contaminants
   - o Applied Research

2. TD - Tropical Disease
   - o Development of activities to prevent, control and treat tropical diseases at the community level and within the PHC system
   - o Strategic appraisal of modes of intervention for integrated vector control based on empirical investigation
   - o Strengthening the collection of epidemiological, entomological and social data, data analysis and data for decision making capabilities of country tropical disease control programs
   - o Development and evaluation of new tool efficacy and field utility
   - o Elucidation of the broad range of entomological factors contributing to vector mediated transmission of tropical diseases
   - o Epidemiological prevalence studies and establishment of surveillance systems for tropical diseases
   - o Identification of priority intervention areas within a country prevention, control and treatment activities
   - o Development and implementation of training modules for tropical disease control

- o Elucidating the socio-cultural factors which influence tropical disease transmission
- o Development of local health education messages capabilities

3. ET - Engineering and Technical
   - o Assistance in the design and evaluation of technical and environmental components of environmental health projects
   - o Assistance in technology transfer
   - o Assistance in the application of appropriate technologies
   - o Assistance in planning, implementing and evaluation of O&M activities
   - o Assistance in selecting environmental health equipment and materials and in writing specifications or selecting standards for such
   - o Assisting in the integration of community participation and health education in to activities

4. HR - Institutional and Human Resource Development
   - o Assistance in institutional assessment
   - o Assistance in the development of training programs for institutional and human resource development
   - o Collaborate with multi-lateral, bi-lateral and applied research organizations in institutional development
   - o Collaborate with partners who can support follow-up programs
   - o Linkage of project activities with national institutions and on-going in-country training programs

5. PH - Public Health
   - o Assistance with assessment of risks
   - o Assistance with assessment of occupational health
   - o Assistance with assessment of injuries
   - o Assistance with the assessment indoor air pollution
   - o Assistance with the conduct of epidemiological studies
   - o Assistance with the development of health education materials and activities
   - o Assistance with community participation activities

6. CP - Community Participation
   - o Assistance with community participation activities
   - o Assistance with public health activities
   - o Assistance with behavioral change activities related to environmental health
   - o Assistance with development of community health committees, water user associations, and community environmental management organizations

7. E - Epidemiology
   - o Assistance with public health activities

- o Assistance with epidemiological studies of tropical vector borne diseases and enteric diseases
- o Collaboration with multi-lateral organizations in epidemiological studies
- o Collaborate with PEEM
- o Assistance with evaluation of field epidemiological studies
- o Evaluation of toxicological data

8. F - Finance
   - o Develop methodologies and guidelines to assess and improve environmental health institutional capabilities
   - o Integrate finance and cost recovery aspects into environmental health programs
   - o Assistance with willingness to pay studies
   - o Assistance with life cycle cost analysis of interventions

9. I - Information Services
   - o Dissemination of project developed documents (e g. Field Reports, Technical Reports, News Letters, etc.)
   - o Special studies
   - o Information gathering
   - o Literature search to support subject syntheses and bibliographies
   - o Dissemination of information materials on Environmental Health to Missions, Bureaus, and others

DATE: MISSION:
NAME & POSITION:

I. SUBSECTOR	II. TOPIC	III. Interest		IV. Interest in these types of TA activities *								
		Yes	No	1 CC	2 TD	3 ET	4 HR	5 PH	6 CP	7 E	8 F	9 I
Tropical Diseases	Malaria											
	Onchocerciasis											
	Schistosomiasis											
	Filariasis											
	Arbovirus (dengue, yellow fever)											
	Leishmaniasis											
	Trypanosomiasis											
	Chagas											
	Guinea Worm											
Water Supply and Sanitation	Rural water											
	Rural Sanitation											
	Periurban water											
	Periurban Sanitation											
	Urban water											
	Urban sanitation											
Wastewater	Industrial											
	Periurban											
	Urban											
Solid Waste	Rural											
	Periurban											
	Urban											
	Industrial											

* Column IV CC Cross Cutting TD Tropical Disease, ET Engineering & Technical HR Institutional & Human Resource Development, PH Public Health, CP Community Participation E Epidemiology F Finance and I Information Services (See text for examples)
RESPOND WITH A request for long term advisor B request services through buy ins C request services through use of core funds in the project, O request services through OYB transfers U undecided but interested

DATE: MISSION:
NAME & POSITION:

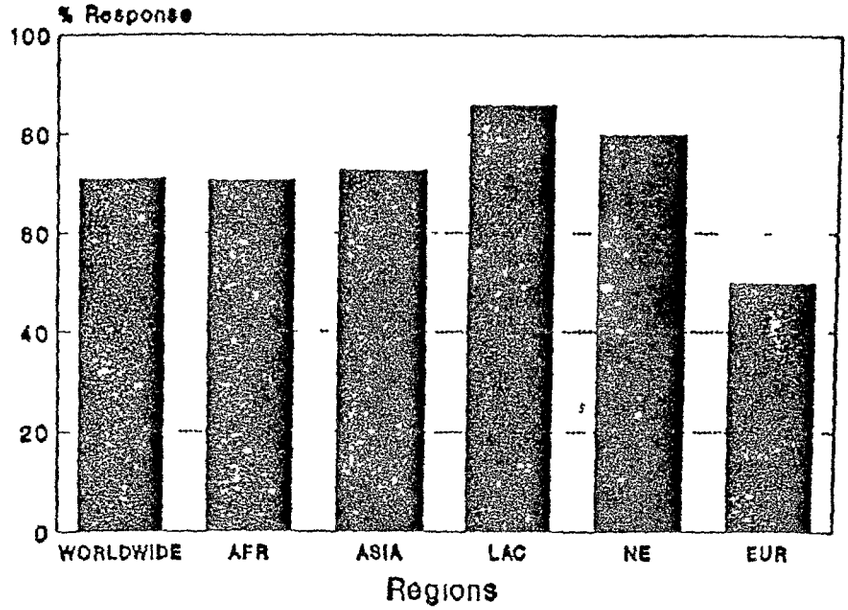
I. SUBSECTOR	II. TOPIC	III. Interest		IV. Interest in these types of TA activities *								
		Yes	No	1 CC	2 TD	3 ET	4 HR	5 PH	6 CP	7 E	8 F	9 I
Hazardous Materials	Rural											
	Periurban											
	Urban											
	Industrial											
	Accidents											
Air Pollution	Indoor											
	Moving source(car)											
	Stationary											
Occupational Health	Chemical											
	Mechanical/ physical											
	Biological											
	Psychosocial											
Injury	Transport related											
	Burns											
	Drowning											
	Falls											
	Poisoning											
Food Hygiene	Domestic											
	Commercial											
	Transport											

* Column IV CC Cross Cutting TD Tropical Disease ET Engineering & Technical HR Institutional & Human Resource Development, PH Public Health CP Community Participation E Epidemiology F Finance and I Information Services (See text for examples)
RESPOND WITH A request for long term advisor B request services through buy ins C request services through use of core funds in the project, O request services through OYB transfers U undecided but interested

ANNEX F

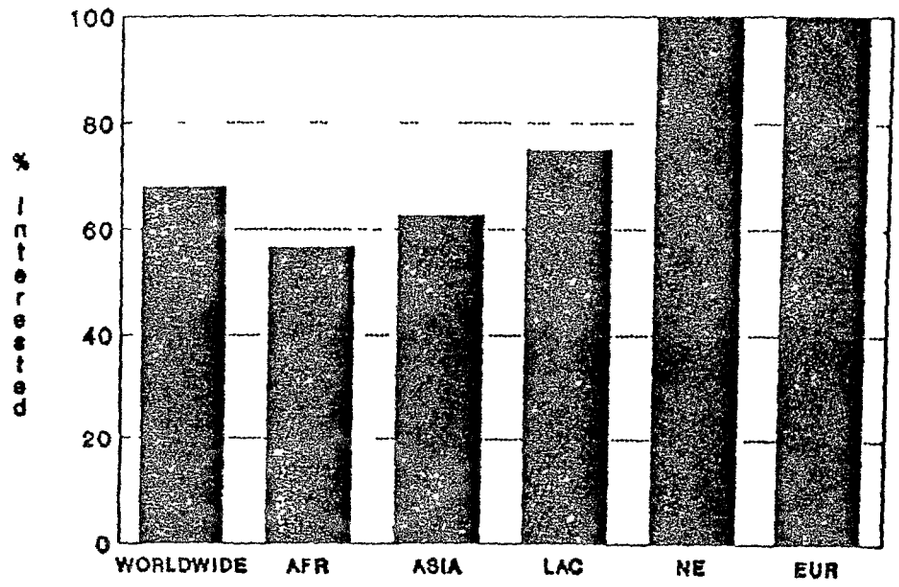
RESULTS OF ADDITIONAL QUERY OF MISSIONS

RESPONSE RATES TO EH INTEREST QUERY



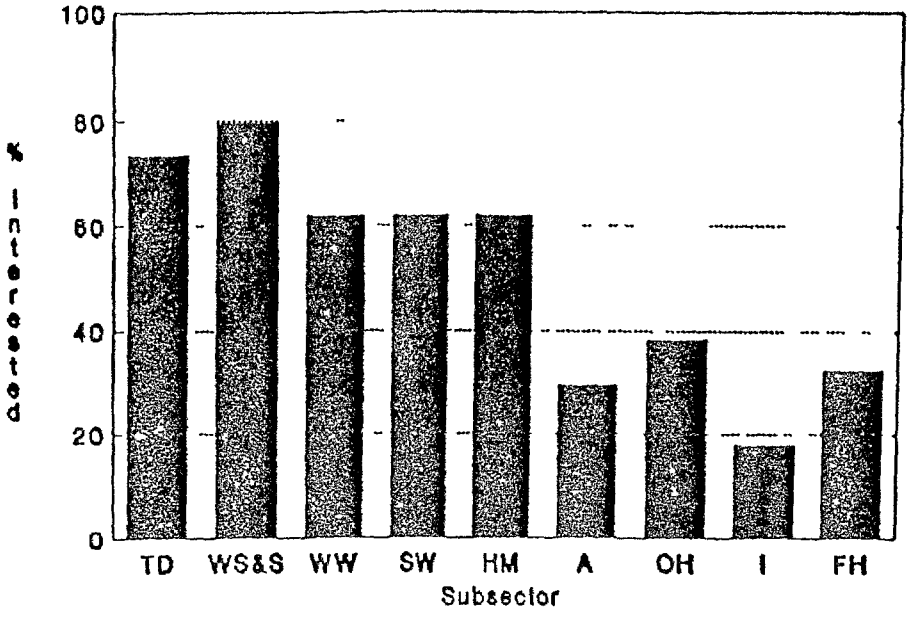
(72 sent, 52 returned excluding CIB)

% INTERESTED IN EH SECTORS
(of those replying to query)

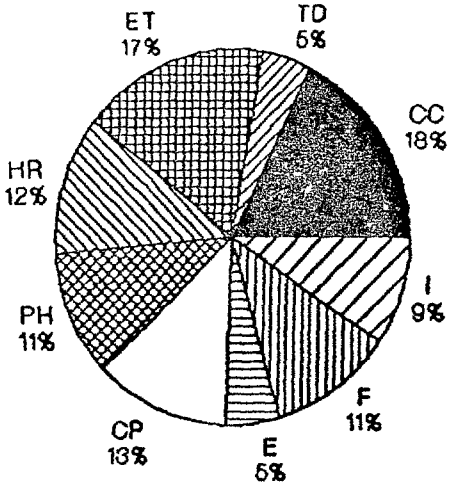


EH Subsector Key. TD - tropical diseases, WS&S - water supply and sanitation, WW - wastewater, SW - solid waste, HM - hazardous materials, A - air pollution, OH - occupational health, I - injury, and FH - food hygiene

EH SUBSECTOR INTEREST WORLDWIDE



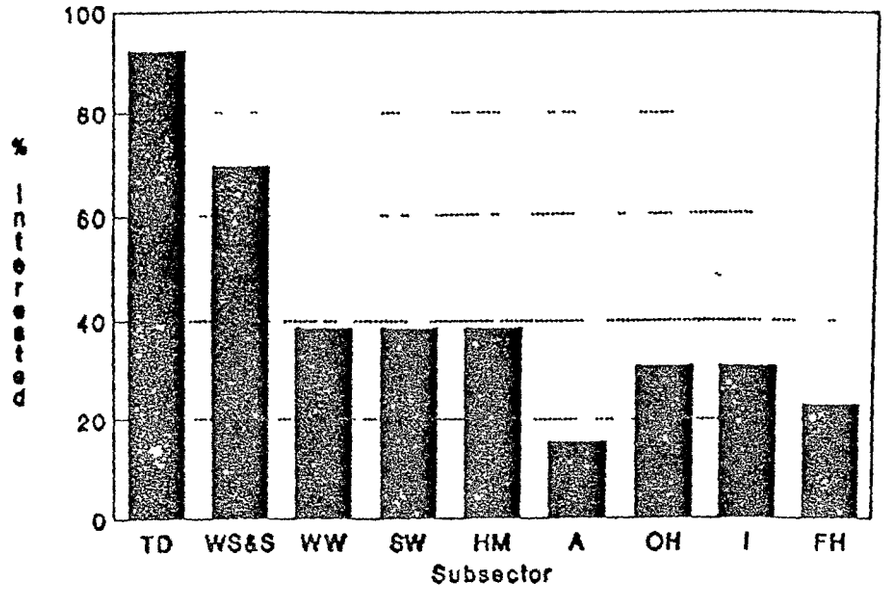
TECHNICAL ASSISTANCE INTEREST WORLDWIDE



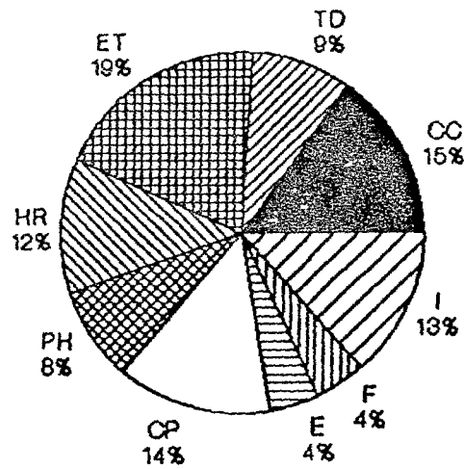
EH Subsector Key TD - tropical diseases, WS&S - water supply and sanitation, WW - wastewater, SW - solid waste, HM - hazardous materials, A - air pollution, OH - occupational health, I - injury, and FH food hygiene

Technical Assistance Key CC - cross cutting, TD - tropical disease, ET - engineering and technical, HR institutional and human resource development, PH - public health, CP - community participation, E - epidemiology, F -finance, and I - information services

EH SUBSECTOR INTEREST
AFRICA



TECHNICAL ASSISTANCE INTEREST
AFRICA



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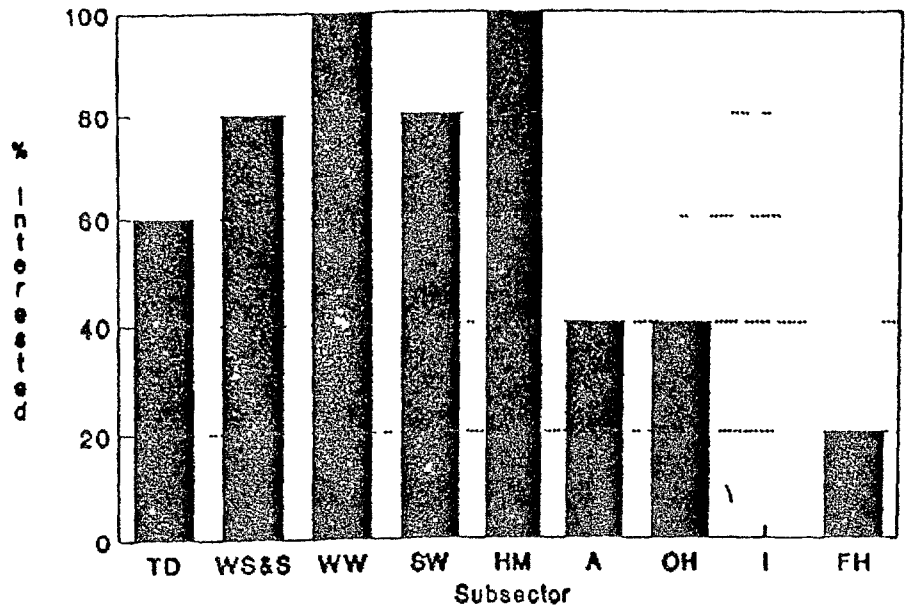
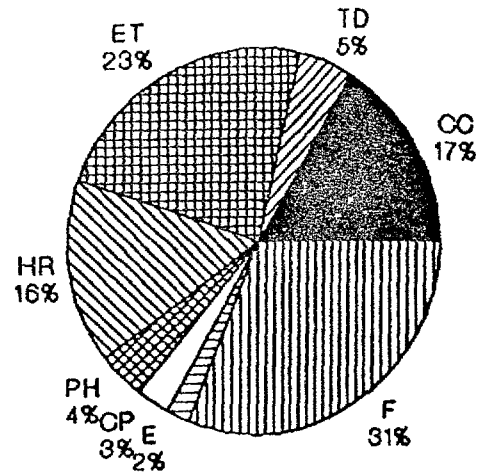
Technical Assistance Key CC - cross cutting, TD - tropical disease, ET - engineering and technical, HR - institutional and human resource development, PH - public health, CP - community participation, E - epidemiology, F -finance, and I - information services

EH SUBSECTOR INTEREST
ASIA



TECHNICAL ASSISTANCE INTEREST
ASIA



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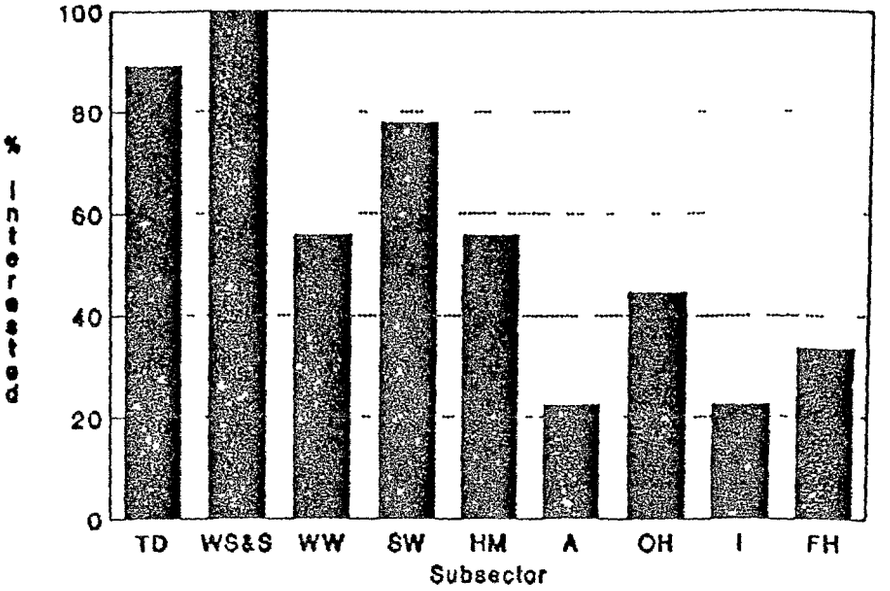
Technical Assistance Key. CC - cross cutting, TD - tropical disease, ET - engineering and technical, HR - institutional and human resource development, PH - public health, CP - community participation, E - epidemiology, F -finance, and I - information services

EH SUBSECTOR INTEREST
LAC



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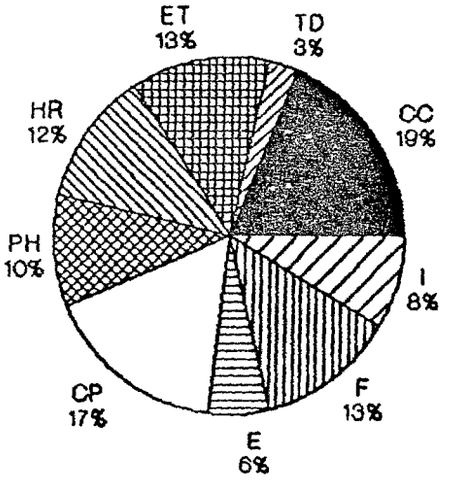
LAC



EH Subsector Key
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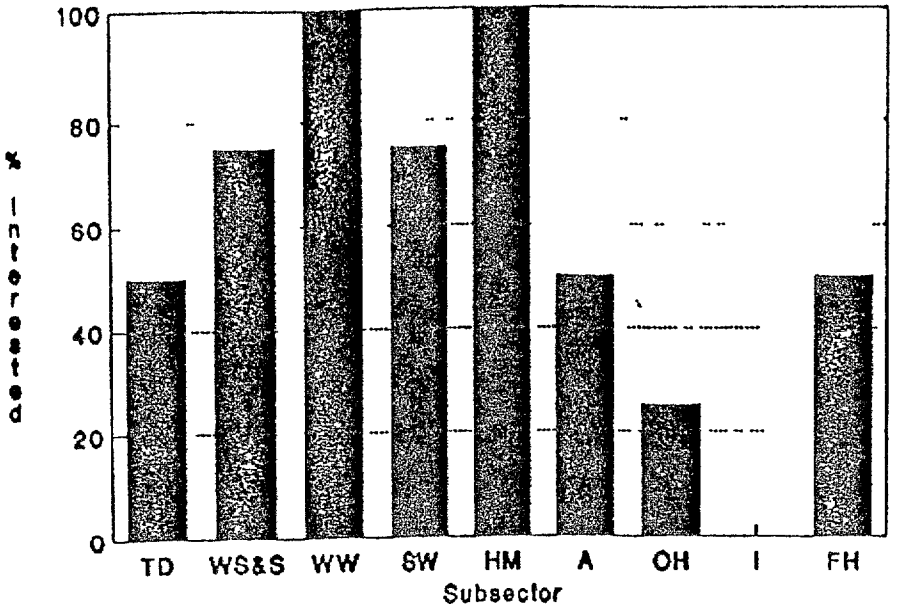
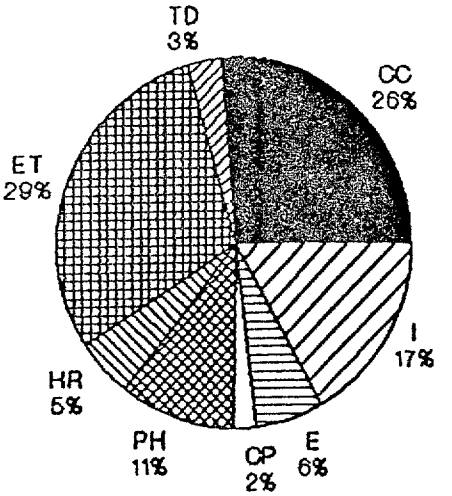
Technical Assistance Key· CC - cross cutting, TD - tropical disease, ET - engineering and technical, HR - institutional and human resource development, PH - public health, CP - community participation, E - epidemiology, F finance, and I - information services

EH SUBSECTOR INTEREST
NE



TECHNICAL ASSISTANCE INTEREST
NE



EH Subsector Key
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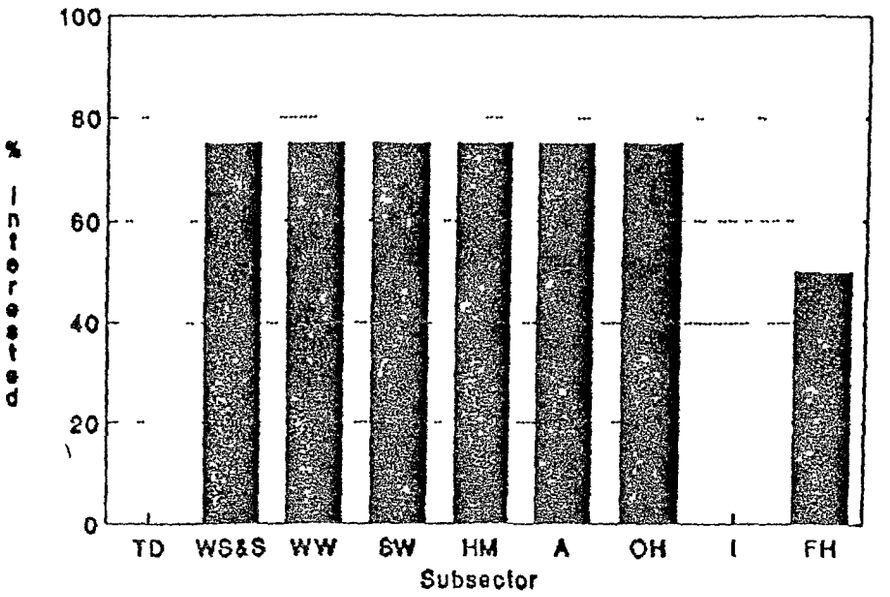
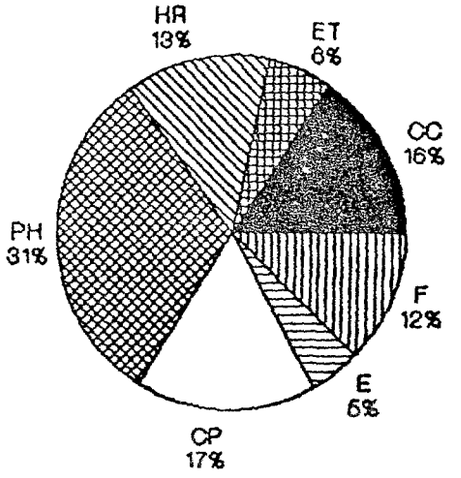
Technical Assistance Key CC - cross cutting, TD - tropical disease, ET - engineering and technical, HR - institutional and human resource development, PH - public health, CP - community participation, E - epidemiology, F -finance, and I - information services

EH SUBSECTOR INTEREST
EUR



TECHNICAL ASSISTANCE INTEREST
EUR



EH Subsector Key
TD - tropical diseases, WS&S - water supply and sanitation, WW - wastewater, SW - solid waste, HM - hazardous materials, A - air pollution, OH - occupational health, I - injury, and FH - food hygiene

Technical Assistance Key: CC - cross cutting, TD - tropical disease, ET - engineering and technical, HR - institutional and human resource development, PH - public health, CP - community participation, E - epidemiology, F finance, and I - information services

ANNEX G

RELATIONSHIP TO WASH AND VBC EVALUATIONS

The WASH III mıdterm evaluatıon carrıed out ın 1991 represents the thırd evaluatıon undertaken sınce the ınception of WASH in 1980 Lıke its, predecessors, this evaluation found that WASH III management deserves very high marks. The Project is on track wıth respect to its contract scope of work yet sufficiently flexible to respond effectively to missions' needs. The evaluation noted that this flexibility was a particularly ımportant quality to WASH's success because in these times of shıftıng populations, urbanization, and industrialization new health concerns are evolving. The evaluation pointed out that ın accordance with previous evaluations' recommendations, WASH III was addressing emerging urban and peri-urban health problems - a shıft from the traditıonal rural focus.

WASH has responded to task requests whıch ınclude concerns about fınance and cost recovery, perı-urban and urban water and sanıtatıon needs, and envıronmental protectıon, includıng solıd waste dısposal. These actıvitıes reflect a departure from the more traditıonal WASH tasks and theır lınkages to conventıonal health ıssues that have been the maınstay of WASH. WASH has acted upon recommendatıons made ın previous evaluations as well The WASH I recommendatıon suggested placıng stronger and additıonal emphasıs on the "softer" aspects of water and sanıtatıon projects, ı e. health educatıon, behavıor modıfıcatıon, and partıcıpation of women. The emphasıs of the WASH III contract, staffıng patterns and actıvities performed clearly demonstrate that these evaluatıon concerns were addressed. Lessons learned by WASH ın over ten years experıence ın providıng technıcal assistance in the water supply and sanıtatıon sector have shown that people and ınstitutıons make for sustaınable development. Accordıngly, many WASH III actıvitıes have focused on ınstitutional development, human resource development, and community partıcipatıon. Indeed, ın a policy paper on community participation ın A.I.D., "Policy and Practice of Community Participation in the U.S. Agency for International Development,", 1991, WASH was noted as beıng ın the forefront of A.I.D. projects in relatıon to ımplementıng a community participation focus.

An overarchıng concern of the WASH II and III evaluatıon was the declining ımportance of water supply and sanıtation for the Agency's health strategy and its omıssion from USAID's child survival program.

A mıd-term evaluatıon conducted in August, 1988 noted that VBC received high marks from regional bureaus and missions for responsıveness and quality of assıstance provıded. The

evaluation concluded that the project management and implementation had been successful. The focus of many of the evaluation recommendations was strengthening of activities or operations rather than rectification of errors. Proactive and collaborative activities were recommended for expansion. More activities with the Africa regional bureau and missions was recommended and an increase in buy-ins for training activities recommended. Operations research in vector biology and ecology were to be expanded as well as collaboration with international and regional organizations.

In the spring of 1992 a mid-term evaluation of VBC II was carried out. The evaluation team found that the VBC II project had encountered significant problems in making the transition from VBC I to VBC II. In particular, there was identified a serious need to improve VBC II's capabilities in planning, leadership and management, personnel staffing practices and in the marketing of VBC services. Because VBC II has had little success in broadening its operations it continues to function much as its predecessor, VBC I did. This has meant that efforts to expand R&D/H's capabilities into a more disease oriented approach to tropical disease prevention and control have met with limited success.

Based on the recommendations of the evaluation team concrete steps to improve VBC II's performance have been initiated.

In 1990 VBC was ranked first among S&T/H projects in a survey to determine the priorities of A.I D.'s regional bureaus and their view on the relevance of technical assistance provided. WASH received high mission ranking as well. This project builds on the success of WASH and VBC; continues moving ahead on the recommendations, and remains responsive to the needs of the missions.

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