PD-AAG-188

698-0427

6980427004201

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

TRANSACTION CODE: A (A = Add, C = Change, D = Delete)

Amendment Number

DOCUMENT CODE: 3

1. COUNTRY/ENTITY: Multiple

2. PROJECT NUMBER: Multiple

3. BUREAU/OFFICE: Multiple — 06

4. PROJECT TITLE (maximum 40 characters): Environmental Training & Management

5. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 85

6. ESTIMATED DATE OF OBLIGATION (Under "B", below, enter 1, 2, 3, or 4): A. Initial FY 80 B. Quarter C. Final FY 84

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

A. FUNDING SOURCE	FIRST FY 80 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total						
Grant	350	58	408	7,300	1,200	8,500
Loan						
Other U.S. 1.						
Other U.S. 2.						
Host Country		310	310		2,800	2,800
Other Donors						
TOTALS	350	368	718	7,300	4,000	11,300

8. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE	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. ESDA	950				8,500		9,500	
2.								
3.								
4.								
TOTALS					8,500		8,500	

9. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 710

10. SECONDARY PURPOSE CODE: 759S

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

A. Code: ENV

B. Amount: 8,500

12. PROJECT PURPOSE (maximum 440 characters)

To establish training programs in Africa in environmental planning and resource management; to strengthen African institutional capabilities to improve their environmental information base, identify priority environmental problems and to monitor environmental trends.

13. SCHEDULED EVALUATIONS

Interim MM 09 YY 83 — MM 09 YY 83 Final MM 09 YY 85

14. SOURCE/ORIGIN OF GOODS AND SERVICES: 000 — 941 — Local — Other (Specify)

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

Revised Copy 7/28/80

16. APPROVED BY

Date Signed MM DD YY

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

AID 1330-4 (6-79)

USDI Archival Document

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: Africa Regional

3. PROJECT NUMBER: 698-0427

4. BUREAU/OFFICE: AFR/RA — 06

5. PROJECT TITLE (maximum 40 characters): Environmental Training and Management

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 85

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)
A. Initial FY 80 B. Quarter 3 C. Final FY 84

8. COSTS ($000 OR EQUIVALENT $1 =

A. FUNDING SOURCE	FIRST FY B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(325)	(53)	(378)	(6550)	(1075)	(7,625)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country		280	280		2500	2,500
Other Donors						
TOTALS	325	333	658	6550	3675	10,125

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) STA	771S	980				7,625		7,625	
(2)									
(3)									
(4)									
TOTALS						7,625		7,625	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 710

11. SECONDARY PURPOSE CODE: 759S

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

A. Code	ENV					
B. Amount	7,625					

13. PROJECT PURPOSE (maximum 480 characters)

To establish training programs in Africa in environmental planning and resource management; to strengthen African institutional capabilities to improve their environmental information base, identify priority environmental problems and to monitor environmental trends.

14. SCHEDULED EVALUATIONS
Interim MM 09 YY 81 MM 09 YY 83 Final MM 09 YY 85

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

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

17. APPROVED BY
Signature: E. Stanley Carey
Title: Dir., AFR/RA
Date Signed: MM 05 DD 19 YY 80

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

AID 1330-4 (5-79)

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1. Summary and Recommendations

1.1. Face Sheet

1.2. Recommendations

The following actions are recommended herein:

A. Authorization, in an amount not to exceed $408,000 from FY 80 funds, of a project being implemented through a collaborative assistance agreement with the South-East Consortium for International Development and its sub-contractors.

B. Approval of life-of-project funding, subject to the availability of funds, in an amount not to exceed $8,500,000.

1.3. Description of Project

The goal of the project is an improved African capacity to deal with major environmental problems; particularly desertification, soil erosion, water supply and health. The project purpose is to establish training in Africa in environmental planning and resource management and to strengthen African institutional capabilities to (1) improve their environmental information base, and (2) identify priority environmental problems, and (3) monitor environmental trends.

To achieve the above purposes the training element of the project proposes to carry out the following training activities in thirteen African countries;

1. Twenty one-week national or regional seminars throughout Africa to inform and sensitize 600 policy-level government officials on major environmental problems/issues and means by which they can be resolved. Estimated life-of-project (LOP) funding for this element of the project is $1,024,000.

These seminars are based upon seven general topic themes selected by the African steering committee, and will be tailored to deal with specific country or regional environmental problems. Seminar themes will include (a) environmental issues and management, (b) environmental education and awareness, (c) environmental aspects of urban and rural development, (d) agricultural production, agro-forestry, and energy, (e) environmental aspects of rural health, (f) environmental monitoring, and environmental aspects of industrialization.

2. Twenty-eight medium term (4 to 6 week) training programs throughout Africa for 840 working-level technicians to improve their capability to plan, manage and monitor environmental programs and activities. These courses are based upon three basic topic themes selected by the African steering committee. Training course themes will include (a) environmental impact assessment, (b) environmental monitoring, and (c) environmental aspects of industrialization. Estimated LOP funding for this element of the project is $2,112,000.

3. Academic training (average 6 months) for 105 government and university personnel to upgrade their capability in environmental sciences and practices. Estimated LOP funding for this element of the project is $1,097,000.

The resource management element will provide four East and Southern African countries with technical assistance and training to initiate country-specific environmental programs which these countries have identified as high priority. Funds are also requested to assist two additional countries starting in the third or four year of the project. The primary focus of four identified activities is as follows:

- Kenya: Local environmental planning to include development of district resource profiles, establishment of a district monitoring system, soil erosion analysis, and the development of a national resource plan. U.S. support will consist primarily of 25 person months of technical assistance, and funding of research studies at a LOP cost of approximately $864,000.

- Tanzania: Environmental Health, to include environmental health monitoring and the creation of an environmental policy unit within the GOT and environmental and resource mapping. U.S. support will consist primarily of 28 person months of technical assistance, case studies, cartography, and satellite imagery at a LOP cost of approximately $685,000.

- Botswana: Drought monitoring and response systems to include strengthening of the drought watch system, preparation of a national resource profile, training of district officers in drought planning and management, and decentralization of drought response systems. U.S. support will consist primarily of 46 person months of technical assistance, cartography, satellite imagery, and data processing at a LOP cost of approximately $655,000.

- Sudan: Establishment of environmental units at three universities, review of environmental conditions and trends in Kordofan and Darfur, monitoring of trends in desertification, and training. U.S. support will consist primarily of 35 person months of technical assistance, cartography, satellite imagery and data processing at a LOP cost of approximately $611,000.

Due to the collaborative mode of planning and implementation, the project paper specifies only the location and content of the training program through the second year of the project. Subsequent years' programs will be determined in consultation with the African Project Steering Committee and submitted annually for AID approval.

1.4 Financial Summary

The total project costs are estimated at $11.3 million, including a 12% contingency for inflation and $320,000 contingency for the addition of two

countries to the resource management program in the later years of the project. A summary allocation of the proposed funding is as follows:

A. AID: Total financing of $8.5 million (75% of project costs), which represent 100% of the project's foreign exchange costs and 29% of the local currency costs. Of the total of $8.5 million, $7,625,000 will be provided from Africa Regional funds and $875,000 from Sahel Regional Funds. Sahel Regional funds are being provided to finance discrete training activities to be carried out in the eight Sahelian countries.

B. Host Country: The participating host countries will provide $2.8 million or the equivalent value of services for local cost financing. This represents 71% of estimated local project costs and 25% of overall project costs.

C. Summary of U.S. Inputs:

	U.S. 1st Year ($000)	U.S. LOP ($000)	Host Country LOP ($000)	TOTAL ($000)
Technical Assistance	250	5,292	1,182	6,474
Participants	-	630	126	756
Commodities	25	256	-	256
Other Costs	89	1,410	1,194	2,604
Sub-Total	364	7,588	2,502	10,090
Contingency (12%)	44	912	298	1,210
Total	408	8,500	2,800	11,300

1.5 Project Development and Implementation

The project has been designed by, and will be implemented under a Collaborative Technical Assistance contract with the South-East Consortium for International Development (SECID) and their two sub-contractors, North Carolina University and Clark University. It has been developed with a high degree of participation with the host countries and AID missions. The development process included the following steps:

- Site visits by the design contractor to interested countries in January, 1979;

- A meeting in March, 1979, in Dakar of the participating countries to elect a permanent Steering Committee and review the draft PID:

- PID review and approval by A.I.D. in July, 1979;
- Steering Committee meeting in Abidjan in August, 1979, to review approved PID and finalize form and content of training programs;
- Mission endorsements of draft PP in January-February, 1980.

Project implementation will require a high degree of participating between the U.S. contractor and the participating countries and host country institutions. An African Steering Committee was elected at the Dakar conference and will meet annually with the contractor to (1) develop overall training policies and priorities, (2) review training accomplishments, and (3) recommend changes in training programs as required.

Implementation of individual training programs and resource management programs will be subject to (1) AID/W approval of annual program and budget levels and (2) individual memoranda of understanding between the contractor, the participating government(s), and the sponsoring host country institution. These memoranda of understanding will be subject to approval of the respective AID mission director and/or the Director of REDSO. The individual memoranda of understanding will provide the following information:

1. Substance - brief description of activity;

2. Level - nature of invitees by responsibility and position; minimum/maximum number of participants;

3. Sponsorship - name of host institution(s); individual in charge; place of training;

4. Timetable - schedule for preparation of training materials; designation of who will be responsible for which materials; date(s) of training; length of activity; preparation of reports;

5. Evaluation - who will be responsible and format;

6. Logistical Details - responsibility for invitations, hotels, transportation, field trips, clerical support, rosters, a-v equipment, etc.;

7. Follow-up - responsibility for next stages including next stage seminar or course, long term training, regional activities, incorporation of course into regular curriculum, discrete environmental activities, etc.;

8. Contribution of Local Institution(s) - description of staff time, facilities, transport, and other arrangements which will come from local institutions;

9. Financial Arrangements - agreement on who will provide payment and in what manner including who will prepare accounting and reports for particular disbursements.

Since the primary goal of the project is improved institutional capacity, the contractor will be required to establish baseline data on the primary organizations that will be strengthened prior to initiation of individual training or management activities. This will take the form of a brief institutional analysis that will include, among other things, number and level of professional staff, organizational budget, and type and magnitude of organizational activities being undertaken prior to project activities.

1.6 Findings: On the basis of the analysis contained herein, the Director of AFR/RA concludes the project technically, economically, and financially sound. The analysis reflected herein supports the conclusion that the project meets all applicable A.I.D. criteria; and will not have an adverse impact on the environment.

1.7 Issues:

A. Training Costs: During the early stages of the development of the project paper it was felt that the unit training costs being proposed were extremely high; particularly for the one-week seminars. Subsequent investigation of other A.I.D. and private sector training programs reveal that the costs being proposed are reasonable, particularly when the institutional development aspects are considered. The cost for medium-term training courses (4-6 weeks) averages approximately $600 per person-week. This compares favorably with similar in-Africa short term training carried out under the AMDP Project (698-0384). Two training programs of similar length were carried out by the East African Management Institute for REDSO at a cost of $1,191 and $795 per person-week respectively.

The U.S. cost at the proposed one week seminar is approximately $1,675 per person-week. A similar program carried out by a U.S. private firm in the U.S. costs $1,250 per person-week. However, it is felt that the institutional building benefits gained by involving host-country officials in the planning and execution of the program offset the higher cost differential.

B. Training Approach: During the PID discussions questions were raised with regard to the training approach being proposed. This issue is discussed under the "Technical Feasibility" section on page 32.

PROJECT PAPER

ENVIRONMENTAL TRAINING AND RESOURCE MANAGEMENT IN AFRICA

Project No. 698-0427

March, 1980

I. PROJECT GOAL

The goal of this project is to improve African capacity to deal with major environmental problems, particularly desertification, deforestation, soil erosion, water supply, and environmental health. The project's main purposes are the following:

... to establish African environmental training programs on themes related to environmental management and on themes related to environmental constraints;

... to strengthen the capacity of African training institutions to continue environmental training on their own accord;

... to strengthen capabilities of institutions in African countries to improve their environmental information bases, identify environmental pressure points, monitor environmental trends, and have qualified personnel providing this information in a usable form to planners and policy-makers.

II. PROJECT DESCRIPTION

A. The Problem

In international development, issues concerning the management of natural resources and the environment are receiving major attention. As African countries have come to appreciate the importance of these issues in development programs, they have looked increasingly to the United States to assist them. African resource pressures include overuse and mismanagement of soils, forests, range, water, as well as problems of environmentally related diseases. There are two principal concerns: the actual problems of the African environment; and trained manpower available to meet these problems.

1. Problems of the African Environment

Crop lands and pasture lands are subjected to increasing environmental pressures as yields diminish. In Sudan, for example, the introduction of cash crops such as groundnuts and cotton has replaced use of fertile land for food production thereby forcing growers of food to use less reliable and therefore less productive land. Yields in sorghum and maize have decreased by half, and millet and groundnuts by four-fifths in many parts of the Sudan.

Tropical forests in Africa are suffering as a result of pressures on vegetation systems. A recent analysis of energy needs in the Sahel suggests that the problem of desertification and fuelwood depletion is so great that approximately 150,000 to 300,000 hectares of new woodlots and forests will have to be planted each year, simply to keep pace with the energy drain created by current practices. Certain tree species such as the Acacia Senegal in Sudan are disappearing, not only because of the general conditions of desertification but also because it is now being used for fuelwood. Loss of tree cover is also affecting Kenya in the form of soil loss and erosion as well as Malawi in the form of soil erosion.

Availability of water is another resource problem common to many African countries. For example, in Botswana, a recent drought has caused a significant number of boreholes to run dry. Short-run water projections suggest that the pressure of such boreholes may have an adverse affect on the water table. In the Sahel, similar phenomena have occurred because the drilling of boreholes has attracted large numbers of pastoralists with increasingly large herds. In time of drought, as happened between 1968 and 1973, the grasses adjacent to these new boreholes were not sufficient to sustain life. Thus hundreds of thousands of cattle starved during the drought because the boreholes themselves had attracted cattle which should never have been there in the first place.

Resource pressures have also made it difficult for a number of rare and increasingly endangered species to survive. Medicinal plants, used successfully for centuries by local healers, are losing their habitat and finding it difficult to survive. A botanist in Upper Volta engaged in experiments in finding new habitats for such endangered plants cited the work of specie preservation as critical. Specie pressure extends also to wildlife where predictions of extinction of the major game herds by 1990 or 2000 are frequently heard.

Another critical resource pressure is that created by increased use of chemical and pesticides. For example, the Director of the Kenya Institute of Administration cited side effects of chemical fertilizers and pesticides as one of Kenya's greatest environmental problems. Although aggregate statistics are elusive for African countries, it is clear that increased usage of DDT, malathion, and others are resulting in increased toxicity in water, in water species, and ultimately in people and animals that drink the water or consume the aquatic species.

Related to chemical pollution are issues of direct urban and industrial pollution and urban sanitation. A number of African cities are now approaching one million people and a few even exceed it. Although most of these cities are served by sewerage and water systems in the central business district, the densely populated sub-urban areas are not. The dense clustering of such compounds has created serious health problems. Among the greatest of these is infant mortality which is a measure of inadequate water supply and sanitation as well as a problem in its own right.

Linkages between environment and health problems is another concern. Schistosomiasis is identified as a serious problem in Senegal, and Sudan; malaria is on the increase in Zaire, Sudan, and Ghana; onchocerciasis affects between 30 percent and 50 percent of adult males in regions adjacent to the Volta River network.

Due to these multifaceted environmental problems in Africa, there is a critical need to promote sound environmental planning and natural resource management. Such an approach would focus on strengthening African institutional capacity so that current natural resource issues may be dealt with in a comprehensive planning and management structure. All the African countries identified by this project share common weaknesses of detailed environmental information, environmentally oriented institutions and training institutions, trained personnel, and decision-making structures that deal adequately with these issues. Although different African nations are at different levels of institutional maturity, it is clear that environmental problems will continue to worsen if the institutional problem is not addressed. The section of this paper on administrative feasibility deals with institutional capability more directly.

2. Lack of Trained Manpower

Many of the Ministries (health, agriculture, rural development, water and forest, etc.) within African governments lack sufficient numbers of trained personnel to carry out their responsibilities effectively. For example, trained personnel in Botswana in these administrative areas is so scarce that a number of new projects, favored by the Government of Botswana and for which finance is available, are shelved because the only manpower available would be expatriate and, given local politics, the increase in expatriate personnel is becoming increasingly sensitive.

In Upper Volta, there are only 128 water and forestry assistants and only 16 water and forestry engineers. This situation is precarious for a nation of approximately five million people and one

in which desertification has been identified as one of the nation's most crucial problems.

A recent report from the Institute du Sahel identified critical manpower shortages in all Sahelian countries in agroforestry, environmental sciences, ecology, and natural resource management (Lignes Directrices et Actions Prioritaires en Matiere de Recherche et de Formation dans le Domaine de l'Ecologies-Environnement.) In Kenya, recent legislation has required that environmental impact statements be prepared to assess potential impact of development projects. Yet only a handful of Kenyans are trained to carry out such studies. In Zaire, a recent survey has identified the need for training of 305 individuals to work in various resource management capacities in the Departments of Planning, the Environment, and Agriculture.

A recent report from OST/AID (Science for Development in Africa by Isebill V. Gruhn) underscored African manpower needs in scientific and ecological areas. For example, for four countries, the ratio of scientists and engineers per million inhabitants does not exceed 100 (Central African Republic, Rwanda, Somalia and Upper Volta), for 9 other countries they range between 120 and 450 (Cameroon, Congo, Kenya, Malawi, Nigeria, Sudan, Tanzania, Togo and Tunisia). Only for Ghana and Mauritius the ratios are rather considerable (720 and 795 respectively). Nevertheless, the average ratios of scientists, engineers and technicians for all these countries seem to be extremely low when compared with countries of other regions of the world. [A recent report to the Congress (Environmental and Natural Resource Management in Developing Countries, February, 1979) affirmed these shortages in trained personnel].

Such statistics are typical of the scarce supply of trained personnel available to carry out duties in data collection, analysis, monitoring, evaluation, project design, extension work, and research, all related to natural resource pressures. Need for training is self-evident.

However, providing trained manpower alone offers only short term solutions. Longer run answers lie in equipping African training institutions with capabilities to do the trainnng themselves. As in institutions which work in environmental management, African training capabilities are uneven. Some, such as the Institute for Environmental Studies at the University of Khartoum, the Department of Geography at the University

of Nairobi, the Institute of Tropical Ecology at the University of Ivory Coast, or the Environmental Studies Program at the University of Ife already have good, though small, training programs. Yet the vast majority of African training organizations do not yet have comprehensive or in-depth competence to fill manpower needs.

B. Background

This project paper is developed under the Collaborative Assistance mode. The project design phase has involved collaboration between a consortium of three United States University entities, local institutions in thirteen African countries, regional training and environmental management institutions in Africa, international organizations, AID missions, AID/REDSO, and AID/W. It is proposed that activities in environmental management and training take place, principally in Africa, over a five-year period.

Preliminary activities in environmental training and resource management led to the preparation of this PP. The environmental training constituted a series of training seminars in environmental aspects of urban and industrial development which AID has supported for several years. Continued interest in such training was solicited through a cable sent from AID/AFR to African missions in December, 1977. Eleven missions expressed major interest in the possibility of such training. Two other missions indicated potential interest.

These positive responses to the initial cable led to a contract with three United States university entities to undertake a planning effort to organize training seminars on environmental issues in Africa. Details of this process are presented in Annex F.

A summary of the process includes:

1) Preparation of country environmental profiles for each of the potentially participating countries;

2) Site visits in January, 1979 to each country to compile a detailed inventory of priorities, needs, and potential institutional capabilities;

3) Analysis and compilation of January site visit reports to prepare a draft plan of action for training;

4) Working Seminar in Dakar in March, 1979, to which representatives from participating countries came to:

   a) review the draft plan of action.

   b) present summaries of national environmental priorities.

   c) name a Steering Committee for the project including representatives from Anglophone Africa, Francophone Africa, African regional institutions, African continent wide institutions, and international organizations.

5) Revision and expansion of the draft plan of action into a project design document;

6) Meeting of Steering Committee in Abidjan in August, 1979 to revise the project design and to determine its consistency with the recommendations of Dakar delegates.

Preliminary work in resource management has been a series of country-specific pilot projects which AID has supported in seven eastern and southern African countries. Local host country institutions and Clark University have jointly sponsored these activities. They are briefly described here and discussed in more detail in the following section of this paper. Additional details about the pilot project results are contained in Appendix E. The brief summaries include:

1) Botswana: Local institutions have sponsored a national symposium on planning mechanisms to deal with drought and have prepared plans for national drought monitoring and response systems.

2) Kenya: Local institutions have prepared prototype, district-level environmental profiles as a basis for a national program in resource information for project planning at the district level.

3) Sudan: Local institutions are preparing a district-by-district assessment of environmental issues, with particular emphasis on identifying and locating critical environmental pressures such as desertification.

4) Tanzania: Local institutions have experimented with ways in which an environmental unit could assist in the development of an environmental health component to fit into village-level development plans, the mapping of land systems and potential land use, and the completion of a national map of environmental pressure points.

Activities were also undertaken in Malawi, Zambia, and Ethiopia.

Environmental training and institution-building efforts are also consistent with longer range AID goals. In 1977, Congress amended the Foreign Assistance Act (FAA), adding to it a section on environment and natural resources reflecting the mandate to AID which the President then expressed in his environmental message to Congress. This section (118) reads as follows:

> "The President is authorized to furnish assistance under this part for developing and strengthening the capacity of less developed countries to protect and manage their environment and natural resources."

Concern, then, about environmental issues exists both in the U.S. and among the less developed countries. Nevertheless, as indicated in the preceeding section, top-level commitment to resolving these issues and the development of governmental and educational institutions to deal with them are only at an early stage.

The activities proposed below are designed to initiate a major, long-term effort to take action on the lack of detailed information, institutions, trained personnel, and decision making elements which most African countries need for resolving environmental and natural resources issues and for integrating environmental considerations into their development strategies and programs.

C. Detailed Project Description

The project is proposed in a two stage cycle. The present PP contains detailed information for project inputs and outputs for the first two fiscal years (FY 1980 and 81) and general information for the final three years (FY 1982-84). Although there will be no gap in project activity between these two phases, decisions to fund the final three years will be based on the effectiveness of work performed during FY 1980 and 1981.

Section B (Background) reviews the process by which the topics, levels, lengths, sites, and approach for training have been prepared. In this section, a specific program design and format resulting from a meeting of the Steering Committee (Abidjan, August, 1979) details the type and topics of a proposed series of training activities. In order to facilitate the expressed interest and needs of each participating country, the immediate project task is to work out specific "memoranda of understanding" with each country to determine which of the courses, in what order, and which specific local sponsoring institution agreements should be prepared. The Steering Committee's recommendations are contained in Annex J, along with a list of items to be included in a memorandum of understanding.

1. Environmental Training

Steering Committee recommended that the needs of all participating countries be condensed into seven short seminars and three medium length courses (two with overlapping topics) to be offered during the first two years. Steering Committee recommendations are listed below. A more detailed description of these training models is contained in Annex J.

(1) Seminar on Environmental Issues and Management (1 week)
Topics include an overview of the principal environmental issues in the country.

(2) Seminar on Environmental Education and Awareness (1 week)
This seminar is primarily designed to achieve two objectives: (a) to promote incorporation of environmental principles into primary, secondary, and post-secondary schools, and (b) to promote awareness about sound use of the environment.

(3) Seminar on Environmental Aspects of Urban and Rural Development (1 week)
The seminar will focus on the environmental aspects of all types of urban and rural development.

(4) Seminar on Agricultural Production, Agro-Forestry, and Energy (1 week)
This seminar consists of two components which might be offered together or, depending on need, offered as separate components. They are (a) a component on protecting the agricultural environment and (b) a component on agro-forestry and energy.

(5) Seminar on Environmental Aspects of Rural Health (1 week)
This seminar will focus on issues of water-related diseases, hygiene, sanitation and waste disposal, and nutrition.

(6) Seminar or Course on Environmental Monitoring (1 or 4 weeks)*
This seminar/course will entail instruction in techniques of data collection, analysis, surveying methods, remote sensing of natural resources (air, soil, water, forestry, etc.), environmental trends including health, urban-industrial interfaces, climate, land-use practices, and forestry.

(7) A Seminar or Course in Environmental Aspects of Industrialization (1 or 4 weeks)*
Seminar topics will include the environmental aspects associated with large-scale industrial development such as would result from heavy manufacturing, mining, ore processing, oil drilling and refining, timbering, and the infrastructure necessary to support these enterprises.

(8) Course on Techniques of Environmental Impact Assessment (4 weeks)
This short course will concentrate on methods of assessing environmental trends and anticipating the potential impact which individual projects might have upon both rural and urban populations.

The audience for the short-term seminars would be middle to upper level planning and policy personnel who are able to take only brief leaves from current positions. About 30 participants are proposed for each one. The audience for the medium term courses would be technical personnel, policy implementors, and extension personnel who would attend a training course for a period of 4 to 6 weeks and who would return to their position upon completion of the training. Roughly 30 would be enrolled in each medium course. The charts on the following pages indicate the proposed seminar and course activity for the first two years of the project. Topics for both the medium and long-term training would emerge as follow-up activities from the short seminars.

These offerings are designed to orient higher level policy people (seminars) and practitioners and field people (courses) and to introduce the possible benefits of other types of training and resource management activities. They will also impart specific skills and ways of managing local resources. Without exception, host country officials, deletages to the Dakar meeting, and Steering Committee members state high priority for visible training and action that will dramatize their nations' resource problems and provide skills to deal with these problems.

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*At least two of the training models which the Steering Committee proposed lend themselves to both a short (1 week) and medium (4 weeks) format. Programs to fit both the short and medium length model will be included.

The short seminars will lay the groundwork. During the first two years of the project, a heavy assignment of faculty time is devoted to preparation for these seminars. This is a conscious decision, based on several years previous experience. Short seminars will be effective only if training materials are drawn from the actual country or region from which participants come. Second, the seminars will be effective only if the offerings are fully and comprehensively presented in collaboration with local institutions.

Preliminary discussions have set out approximate schedules for each country and for particular themes. Experience in previous programs indicates that the lapse of roughly 12 months between the Dakar meeting and negotiation of individual memoranda of understanding will require some revision or modest alterations in the original schedule. These adjustments will be the first order of business.

Adjusting training themes, working out details with host country institutions, preparing site-specific case studies and other local materials require far more time than simply bringing in a prearranged package. Yet to be effective, the locally based materials are by far the better investment of time and resources.

Second, the initial seminars must be visible and well planned if they are to have a positive impact on both the participants and their superiors. Curriculum materials such as case studies and maps must be well presented; local data must be up-to-date and reflect the nuances of recent revisions in national priorities; potentials for follow-up must be carefully discussed and thought out ahead of time.

For these reasons, the initial three short seminars as well as the medium length course will be conducted in countries where one or more of the three contracting university entities is already well known and visible and where strong linkages with local institutions already exist.

For the third through fifth years of the project, there are quite possible major reductions in cost of seminars and course offerings which can be achieved, thereby enabling the budget dollars to extend to several more courses and seminars than currently proposed in the offerings.

Much of the above holds true for the medium length courses. However, only about the same number of preparatory faculty months will be required (two months faculty time for both seminars and courses) because the courses will utilize more material that comes from the "standard" literature of a discipline or field. The course will blend local case studies with general theory and practice in order to expose participants to general materials as well as to link these general materials to practical and useful skills which can be implemented directly into jobs upon return to work.

In general, the short seminars will be national in scope; the courses will more than likely be regional in character.

The third aspect of training is long-term (2 months to 1 year), individual training. Such environmental training would be arranged to fit individual needs and designed to provide maximum effectiveness for the job which the trainee would perform upon return to his or her country. Some courses would conclude with a formal degree; more frequently, the course would lead to a certificate of some kind. There are two basic models which the long-term training will follow:

(a) Placing one or two individuals in a course already designed and operational at a university or other training institution;

(b) bringing together a group of five individuals or more for whom a particular syllabus would be designed and which would be offered in the future.

In organizing the long-term training, two types of participants would be included: in-service and pre-service. Depending on the need, individuals would be given temporary leave from present positions to enter a course to improve their skills for their existing position; or individuals would be identified and trained to fill positions which they would take up upon completion of the course. In no case would an individual receive long-term training who does not have assurance of a position upon a return home.

A second dimension of long-term training involves institution building. Whenever possible, long-term training will be conducted at a university or other training institution in Africa. African educational institutions with solid foundations have already been identified in Sudan, Kenya, Nigeria, Tanzania, Senegal, and Ivory Coast.

As long-term training needs and participants are organized, courses would be established at these African institutions. The project's regional representatives (Nairobi and Abidjan) as well as faculty personnel from the several U.S. universities would be able to lend assistance, as needed, to design and implement the long-term training. Courses developed in this mode would then be available for offering on subsequent occasions without U.S. assistance. In addition, some of the short seminars and medium length courses will be held at these same African universities, thereby upgrading the materials and skill of individuals there to carry out some of the long term training. Finally, the eastern and western regional representatives may themselves teach for short periods at one of these long term universities or assist faculty in a variety of ways.

Selection of individuals and topics will be coordinated by the project contractor, acting on the advice of the Steering Committee and in cooperation with AID Missions and Regional Offices.

During the first six months of the environmental training activities, (April through September, 1980) no long-term training will be budgeted. However, planning and preparation would begin in the first budget year for placement of fifteen trainees in the second year. There is a compelling reason not to budget for long-term training during the first year. Recruitment, processing, and selection of individual candidates for long-term training takes several months. Were contract to be signed even as early as April, 1980, that would leave only five months to process all papers and initiate the training. Thus, long-term training will begin in the second fiscal year in terms of budget.

All of these arrangements will be subject to final approval in individually drafted memoranda of understanding.

In addition to the training needs noted above, there continues to be need for individuals who will benefit from a three to five year undergraduate or graduate degree program offered at a university in the United States. There are already a number of programs currently in place which meet this need. This PP does not propose funds for such extended training conducted outside of Africa unless no other option is available in Africa. However, this PP hopes to establish a mechanism of cooperation with some of these other training programs in the United States whereby individuals in need of long-term training may be referred to programs such as AMDP and SMDP.

a. Training Inputs (FY 1980-81) (For more details, see charts on Pages 16-17).

The plan of action calls for three short seminars in the first budget year and ten short seminars in the second budget year; it calls for one medium length course in the first year and four medium length courses in the second year; it calls for no long-term training in the first year and fifteen long-term training activities in the second year.

1. Inputs - Short-Term Seminars (one week)

(a) Initial short seminars for countries/regions not previously addressing basic issues.

Two faculty months to prepare: review of environmental issues for that country/region; a training syllabus; and a draft strategy paper for environmental management policies and procedures.

One-quarter faculty month for instructional time.

Logistical support for preparation and presentation including cartography, editing, research assistants, printing, staff travel, and, in the case of regional seminars, assistance for participant travel.

(b) A follow-up country/regional seminar for countries where discussions have already been initiated.

One faculty month for preparation of draft strategy paper for planning and management of natural resources and draft organizational scheme for dealing with environmental issues or a particular environmental task.

One-quarter faculty month for teaching.

Logistical support for preparation and presentation including cartography, editing, research assistants, printing, travel.

2. Inputs - Medium-Length Courses (4-6 weeks)

Two months faculty input for preparation of country specific case studies, training syllabus, and review of country environmental procedures, institutions, and policy actions.

Three faculty months for actual instruction providing a ratio of one instructor per ten participants.

Logistical support for preparation and presentation including cartography, editing, research assistants, printing, travel.

3. Inputs - Long-Term Training

AID procedures determine an average of $6000 per trainee for long-term training to cover travel, board and room, and tuition/fees. This figure is used here although it is merely an average and will vary for each trainee.

Inputs from African institutions in training will consist of staff time, logistical assistance, facilities including rooms and equipment, and administrative assistants in identifying participants and local details. These services are spelled out in budget form in Table D - 2 which is attached as an Appendix to this PP.

b. Training Outputs (FY 1980-81)

1. Outputs - Short-Term Seminars

30 specific individuals x 13 short seminars = 390 middle to upper level personnel trained. The number 30 is determined as an average; a cut-off point of 24 will be the minimum number at which any seminar will operate. Enrollments up to 36 will be accepted and, in unusual circumstances, extended one or two beyond 36.

2. Outputs - Medium-Length Courses

30 trainees x 5 courses or a total of 150 trainees. As with the short seminars, the minimum number for operation will be 24 and enrollments will be allowed to extend up to 36 with one or two additional under unusual circumstances.

3. Outputs - Long-Term Individual Training

Fifteen individuals trained, primarily at African universities or other African training institutions, in technical skills of environmental management.

4. Outputs - Training Materials and Policy/Topic Reviews

For countries/regions where seminars and courses are held, reviews of environmental issues, training syllabi, draft strategy papers for planning and management of natural resources, draft organizational schema for dealing with environmental issues, country specific case studies on environmental issues, and reviews of country environmental procedures, institutions, and policy actions.

In every case where short, medium or long-term training is offered, the collaborating African institution will also gain experience in offering such training. See page 15 for a chart of outputs.

Inputs and outputs for the final three years of the program are provided in the input-output appendices, attached as Appendix B and Appendix C.

The charts on pages 16,17 summarize a proposed schedule for short and medium term training for the first two years of the project.

SUMMARY TABLE

TRAINING OUTPUTS - INDIVIDUALS, INSTITUTIONS, AND DOCUMENTS

Type of Output	FY 80	FY 81	FY 82	FY 83	FY 84	Total
1. Short Seminar						
a. Individuals Trained	90	300	120	60	60	630
b. Institutions Strengthened	3	10	4	2	2	21
2. Medium Course						
a. Individuals Trained	30	120	240	240	210	840
b. Institutions Strengthened	1	4	8	8	7	28
3. Long-term Training						
a. Individuals Trained	0	15	30	30	30	105
b. Institutions Strengthened (estimate)	0	3	5	5	5	18
4. Documentation and Training Materials (estimate)						
a. Syllabi	4	12	10	7	5	38
b. Review of Env. Trends	4	10	0	0	0	14
c. Policy and Organizational Reviews	1	4	4	2	2	13
d. Case Studies	1	4	0	6	5	24

ENVIRONMENTAL TRAINING AND RESOURCE MANAGEMENT IN AFRICA

Project # 698-0427

SHORT SEMINARS AND MEDIUM COURSES

First and Second Years

Country	Local Institution	1st Year (3 Seminars)		2nd Year (10 Seminars)		1st Year (1 Course)		2nd Year (4 Courses)	
		(1) Topic	US Lead	(1) Topic	US Lead	(1) Topic	US Lead	(1) Topic	US Lead
Sahel (all 8 CILSS Countries)	ENDA/Institute du Sahel	#1/Sahel Regional	SECID					See Ivory Coast	
Mali	Water and Forests: Institute of Rural Economy Polytechnic at Katthougou	(In Sahel Workshop)	Regional	#1/ National	Clark			See Ivory Coast	
Mauritania	No National Seminar in the First Two Years	(In Sahel Workshop)	Regional					See Ivory Coast	
Upper Volta	Ministry of Environment Polytechnic at Ouagadougou	(In Sahel Workshop)	Regional	#1/ National	SECID			See Ivory Coast	
Senegal	No National Seminar in the First Two Years	(In Sahel Workshop)	Regional					See Ivory Coast	
Kenya	National Environment Secretariat/University of Nairobi	No Seminar Planned for First Year		#2/ National	Clark	#8/National (perhaps including Sudan)	Clark/ SECID	See Sudan	

(1) Refer to pp. 8-9 for numerical identification of topics.

ENVIRONMENTAL TRAINING AND RESOURCE MANAGEMENT IN AFRICA

Project # 698-0427

SHORT SEMINARS AND MEDIUM COURSES

First and Second Years

Country	Local Institution	1st Year (3 Seminars) ① Topic	US Lead	2nd Year (10 Seminars) ① Topic	US Lead	1st Year (1 Course) ① Topic	US Lead	2nd Year (4 Courses) ① Topic	US Lead
Sudan	Institute of Environmental Studies/Remote Sensing Center	No Seminar Planned For First Year		#2 or #4/ National	North Carolina			#6/ Regional	Clark/ SECID
Tanzania	Ministry of Health National Science Research Council BRALUP ARDHI	#1 or #7/ National	North Carolina					See	Botswana
Malawi	Chancellor College Bunda College	No Seminar Planned For First Year		#4 or #7/ National	North Carolina			See	Botswana
Botswana	Ministry of Finance and Development Planning University College	#6 National	Clark	#6/ National	Clark			#6/ Regional	Clark/ North Carolina
Zaire	Department of Planning	No Seminar Planned For First Year		#5/ National	North Carolina			See	Ivory Coast
Ivory Coast	Scientific Research Council University of Ivory Coast	No Seminar Planned For First Year		#3/ National	Clark/ SECID			#7/ Regional	SECID
Cameroon	Department of Plan University of Cameroon	No Seminar Planned For First Year		#4 or National #6	Clark or North Carolina			See	Ivory Coast
Nigeria	Federal Ministry of Industries Universities of Ife and Ahmadu Bello	No Seminar Planned For First Year		1,3,6, or 8/ National	North Carolina/ SECID			#7/ Regional	North Carolina

2. Environmental Resource Management

The resource management component, briefly summarized here, is explained in more detail in Appendix E. This Appendix presents detailed summaries of the environmental context of development for each of the four "environmental management" countries; Appendices B and C present both proposed inputs and expected outputs which are probable. The following specific country proposals grow from two to three years previous work in each of the four countries and are based on priorities which have emerged within each of these four countries.

(1.) KENYA

a. Proposed Project Activities - Environmental Management Inputs

i. District Resource Profiles. Continuation of district resource profiles in a small number of new districts — two in the first year, two in the second year, and three to four in each subsequent year. These district profiles will be completed by short term U.S. staff (1 or 2 months per year) in cooperation with staff of the Ministry of Environment and Natural Resources (former National Environment Secretariat). The required inputs are salary for short term personnel and logistical support. The purpose of the resource profiles is to develop base-line environmental data at the district level for use in decentralized project planning and evaluation.

ii. District Monitoring System. Development of an experimental monitoring system, in cooperation with the Ministry of Environment and Natural Resources, to function at the district level, to provide feedback in trends for a limited number of critical variables. The monitoring system would be introduced in cooperation with district staff and local institutions — such as schools — in districts where development plans are actively underway. The list of districts for monitoring includes Kitui, Baringo, Embu, Machakos, and Nyeri. The purpose of monitoring would be to determine the impact, on a continuing basis, of development activities on a local resource basa. The required inputs are budget costs for U.S. personnel, district profiles and the development of the national resource management plan. The experimental monitoring system is an important element of the other proposed project activities and is consistent with the project's purposes and goals.

iii. National Resource Planning. Planning in cooperation with Kenya finance and planning officials, for a national resource management plan to be incorporated into the next Five Year Plan, 1983-87. The required inputs are personnel salaries, such as a short term soil erosion specialist, materials, including maps and landsat imagery coordinated through Kenya's Regional Remote Sensing Facility, reproduction of reports, and materials for soil analysis.

iv. Soil Erosion Analysis. Establish a research effort to analyze the impact of soil loss and sedimentation in the humid regions of Kenya, particularly in Central Province. The combination of new agricultural activity, soil erosion, and siltation in lakes and rivers is becoming critical in Kenya. The required inputs are salary for a soil analyst, and materials to carry out an analysis of soil erosion in the Central Province.

b. Anticipated Environmental Management Outputs

i. Strengthened capability of the environmental section of the Ministry of Environment and Natural Resources in resource planning, monitoring, and evaluation;

ii. Strengthened capability of the University of Nairobi or other training institutions in Kenya to conduct training in environmental monitoring, environmental impact assessment, and district environmental awareness through joint sponsorship of training efforts;

iii. A total of four new district environmental profiles for year 1 and 2 of the project;

iv. Research findings on the rate and causes of soil erosion and sedimentation in Central Province with appropriate policy recommendations;

v. Increased effectiveness in preparation of environmental impact statements, environmental monitoring, and district environmental awareness;

vi. By the end of the second year, a draft statement, eventually to be included in the 1983-87 Five Year Plan on a national policy for environmental resource management:

(Individual outputs by years and with specific numbers are indicated in Appendix C).

(2.) BOTSWANA

a. Proposed Project Activities - Environmental Management Inputs

i. Strengthening Drought Watch System. A short planning seminar will be organized, jointly sponsored by the Department of Environmental Science of the University and the Meteorological Office. Meteorological field officers will be brought together and receive training in operating the drought watch system as well as using the seminar to discuss the system, analyze which station should participate, and how data can be communicated. U.S. input will include short term staff assistance.

i. Strengthening Drought Watch System. (Continued)

In addition, one or two persons either currently in the Met. Office or presently at the University will be trained to operate the system within the Met. Office. U.S. input would require short term assistance to supplement the Department of Environmental Sciences, University College.

ii. District Data Systems. A centrally housed district data system on drought will be organized, supported by a short term officer based in Gaborone for about 6 months during the first two years of the project. The purpose is to pull together existing drought data which are not readily available either to drought officials in Gaborone or in the districts. U.S. input would require one Batswana research assistant, working under the guidance of U.S. short term staff, Botswana drought committees, and staff at the University College.

iii. Training. District officers, particularly district officers-development (DOD), district officers-land (DOL), and district officers-agriculture (DOA) would participate in training seminars concerned with drought planning and drought management. The training would be conducted locally. Topics would include district surveillance systems, information analysis and management, research coordination, livestock nutrition, and emergency food management and distribution. Training materials would include data assembled in recommendation #ii above, a drought management handbook, and samples of materials of items which might be prepared within the districts. U.S. input would be assistance in preparation of materials and actual training, in cooperation with the University College.

iv. District Environmental Officers. Two graduating students at University College in the Environmental Science Program will be trained in cooperation with staff at University College to serve on a pilot basis as district officers-environment (DOE). U.S. input would be staff assistance to University College in the training.

v. National Resource Profile. Preparation of a national environmental inventory or resource profile. Interest for this aspect arises largely from AID initiatives rather than GOB priorities. However, work under item #ii (District Data Systems) parallels the national resource inventory very closely and the effort could be accomplished with only modest additional resources. U.S. input would include local logistical support and assistance for research assistant preparing inventory.

b. Anticipated Environmental Management Outputs

i. A district data base for dealing with drought including district drought surveillance systems with particular emphasis on nutrition, arable agriculture, and rainfall

ii. District drought plans with capability in place to man the plan in time of drought emergency;

iii. A functioning drought watch system for the Central Government;

iv. Strengthened capability within the Department of Envirc mental Sciences, University College, to train Meteorolc Office staff to operate the drought watch system and tc district officials to be responsible for drought planni and management;

BEST AVAILABLE DOCUMENT

(3.) Study

a. Proposed Project Activities - Environmental Management Inputs

i. Development of Environmental Units at Three Universities. Environmental units will be established at three universities: the Universities of Khartoum, Juba, and Gezira. Departments of Earth Science, Geography, Biology, Agronomy, Engineering, Health, Law, and various Social Sciences already exist and would be linked together in forming these units. However, primary contact would continue to be through the University of Khartoum. The major U.S. input components will be staff development through research support, technical assistance, and participation in the regional environmental management activities. Environmental units at each of the three institutions will concentrate efforts on problems of planning, implementation, operation, monitoring, and evaluation of development programs and projects as they relate to environmental impact. These units will make expertise available to government, as needed, on various aspects of environmental resource management.

ii. Review of Environmental Conditions and Trends in Kordofan and Darfur. U.S. assistance will come in the form of financial support, field and office evaluation, data collection, analysis, and presentation, cartography, and publications. The project will select a group of critical indicators that can serve as indices for environmental conditions with special emphasis on desertification. Time line trends for these indices will be established through a search of historic records and than combined with ground observation and remotely sensed imagery. The work will be carried out by Sudanese University personnel with strong input from individuals and agencies in the Government of Sudan.

iii. Monitoring Desertification. In cooperation with the UN University and other interested parties in Sudan, an effort will be launched to monitor trends in areas prone to desertification in Sudan. This effort will not be limited to Kordofan and Darfur and will complement work outlined in item (ii) above. U.S. assistance will be training and technical advise on selecting and analyzing indicators.

iv. Training. Training will be integrated into the four project sub-components and provide skills in monitoring, data management, environment and health, rural development, and energy/agriculture. Details are provided in the Training Design in Appendix E.

b. Anticipated - Environmental Management Outputs

i. Functioning environmental units at three universities in Sudan;

ii. Information base on environmental trends in Kordofan and Darfur, including maps, reports, and project planning guidelines as they relate to environmental issues;

iii. A national desertification monitoring system, based on experimental period of two years, and made operational in the third or fourth year of the project;

iv. Maps, reports, and recommendations related to environmental impact on rural health in southern Sudan;

v. Trained individuals, depending on number of seminars offered and level of funding;

vi. Strengthen training and information management institutional capability for conducting future activities on local resources.

(4.) TANZANIA

a. Proposed Project Activities - Environmental Management Inputs

i. An Environmental Policy Workshop. A policy meeting to be held during the first year of the project, to consider a number of questions related to the creation of an environmental unit and how environmental responsibilities could be organized within the GOT. These questions include:

- which ministry or organization within GOT could most effectively house the environmental unit;

- what duties the unit should assume, including work in village health monitoring, environmental information, environmental evaluation, and training;

- what additional environmental responsibilities would best be carried out outside of the environmental unit, within existing government bodies;

- how or whether the environmental unit would best either fit into or complement its work with the proposed urban and industrial unit which is soon to be launched within the Ministry of Lands, Housing and Urban Development.

Currently, the following ministries and organizations in GOT cooperate in a cross-ministerial group to consider environmental affairs:

Water
Agriculture
Tourism and Natural Resources
Education
Lands Housing and Urban Development
Health
Foreign Affairs
The Office of the Prime Minister
National Scientific Research Council

The U.S. required inputs for such a conference include one faculty month for conference preparatory work, conference case studies, and materials.

i. Land Potential, Environmental, and Resource Mapping. To be coordinated by ERALUP until such time as GOT determines a final host institution (perhaps ERALUP) for the environmental unit. The land potential mapping initiated in Rukwa will serve as a model for activities in subsequent districts and regions. The U.S. components are materials and personnel for data collection and cartographic work.

i. Environmental Health Monitoring. Monitoring and evaluatio of environmental health systems to begin in the second year of the project, to determine the effectiveness of village health activities in one or more of the following village health or health-related projects:

- UNICEF village water supply development plan in Njombe;
- Rukwa Development Plan, especially the Health sector;
- Tanzania School Health Project;
- Village Health Worker Project;
- Sanitary waste disposal in Morogoro;
- Rufiji Basin Irrigation-Hydro Project;
- New projects to be considered at future date.

b. Anticipated - Environmental Management Outputs

i. A plan and structure (end of first year) for either (1) an environmental unit (EU), possibly to be housed in ERALUP but perhaps to be located in the Ministry

of Health, the Department of Community Medicine of the Medical School, or the Ministry of Lands, Housing, and Urban Development; or (2) a structure whereby proposed activities are incorporated into the pilot unit currently under development within the Ministry of Lands, Housing, and Urban Development;

ii. A plan (end of first year) for the EU to monitor and evaluate the effectiveness of village health systems in one or more districts, as determined by planning discussions;

iii. A functioning EU with responsibility for environmental mapping, village health evaluation, and environmental services including monitoring, information, and evaluation;

iv. A completed training component, based on training performed through the ETLA component, which will have both strengthened training institutions in Tanzania as well as prepared individuals to work within the EU.

D. Resource Management Strategy 1/

Four points are important when considering how the work will actually be initiated:

a. In every case, activity is undertaken only in close cooperation with local institutions. Thus a first step will be to set a schedule and work agreement with the primary local institution such as the National Environment Secretariat in Kenya or the Ministry of Finance and Development Planning in Botswana.

b. The second step involves reaffirmation that the earlier proposed activities continue to be a priority in the form originally proposed. In Kenya, for example, the district environmental profiles have been highly effective in getting planning officials to think in terms of decentralized decision-making molds. Soil erosion is becoming an alarming problem and may well take precedence over district profiles as a first priority. Thus the memorandum of understanding must be cast in terms which permit completion of work agreed upon but also allow latitude to adjust as needs shift.

1/ $320,000 has been provided in the project budget to finance the expansion of the resource management activities into two additional countries during the third or fourth year of the project. The selection criteria for selecting these additional countries will be based on (1) resource vulnerability (need), (2) host country interest and priority and (3) available institutional infrastructure.

c. Third, in beginning, it is crucial to contact related ministries and institutions in the host government, project activity sponsored by UN and other donor agencies, and work underway already within AID. Such cross-checking is critical if various agencies are to cooperate at later stages of the project and if the training and management activities are to have a lasting impact on a broadly based group of institutions.

d. Fourth, it is fundamental to set out a precise schedule and timetable, with agreements as to personnel and resources, for all work to be completed. For example, the environmental conference in Tanzania or the review of desertification in Darfur and Kordofan (Sudan) must be clearly planned with host country institutions. It is not possible at this stage to set the precise schedule as the actual timing and contracting are dependent on funding, timing, and local mission activities. However, once the project is approved and funds confirmed, a specific set of project activities, based on this PP, will be agreed upon and carried out.

Previous work with the environmental management component of this PP in Sudan, Kenya, Tanzania, and Botswana (AID/afr-G-1356) has produced an impressive set of materials that have heightened awareness, influenced policy, assisted in project planning, and reduced resource degradation. The positive experience has also increased both the capability and visibility of local institutions concerned with managing environmental resources. The tradition of these collaborative efforts suggests that a modest expansion, as proposed herein, will yield an equally constructive set of responses, further strengthen local institutions, increase exchange between and among local institutions of different African nations, and spread the awareness to additional countries.

E. End of Project Statement

The PP will also benefit from a brief statement of what might be expected by the end of the project. What can one realistically expect to happen as a result of spending an average of $100,000 in each country, each year, for five years?

... Greater institutional awareness

... New or reoriented institutions

... A network of trained personnel at several levels

... National capacities to assess and monitor environment issues in development.

Greater institutional awareness of environmental issues is already occuring as a result of pilot activities. For example, in Botswana there is a real difference in institutional attitudes toward drought, drought surveillance, and decentralized drought planning. The problems are by no means solved, but there have been measurable changes. There is now a functioning interministerial committee to coordinate drought in the Ministry of Finance and Development Planning. There is a second drought committee to coordinate emergency food distribution within the

Ministry of Local Government and Lands. A third drought committee is based in Agriculture. These institutional shifts are by no means totally dependent on our pilot project efforts. Yet discussions with AID officers, GOB officials, district officers, and Botswana University personnel would reveal that the drought symposium and related efforts made a difference.

Such visible institutional change may not occur in every country, yet change can be expected. The following are end of project possibilities:

In Nigeria - environmental inspectors monitoring industrial waste emission in coastal lagoons and inlets along the south coast and having technical capability and legislative authority to enforce Nigeria's recently formulated regulatory codes.

In Kenya - village women's councils, working with the National Environment Secretariat and other ministries in a national expansion of their village woodlot program to reduce soil erosion, increase animal fodder, and decrease deforestation.

In Upper Volta - a broad-based, popular environmental education program underway, primarily through the schools, emphasizing the way in which energy needs can be met by reforestation.

In Tanzania - an environmental unit advising GOT and AID on the most effective way to improve village health in integrated rural development projects.

In Mali - the curriculum of the Polytechnic at Katibougou supplemented to include case studies and an environmental overview of the rate of change of desertification in the country.

In Botswana - district officials able to use elementary school science classes to gather district drought data with links established to an operational drought watch system.

In Sudan - remote sensing data, gathered and analyzed by the Environmental Studies Unit and submitted to the Ministry of Agriculture, to assist in planning locations for new agricultural schemes, both rain-fed and irrigated systems.

These are a few examples of the institutional dimensions which could be expected. There are many more.

III. Project Specific Analyses

A. Economic Feasibility

A cost benefit analysis of this type of project is of course possible but the large number of assumptions and imputed values, particularly on the benefit side, make its value doubtful. As a preliminary attempt, an input/output analysis is attached in Appendices B and C. This document shows that the project is cost-effective in relation to other possible approaches to the problem. Some non-quantitative data are also pertinent.

The major objective of the project is to minimize environmental constraints in order to lead to an outward shifting of the production possibilities curve. We therefore expect to avoid policies which may be optimal in the short run but lead to severe long run negative externalities. As a result of avoiding negative externalities, the training and environmental management efforts should reduce variance and uncertainty costs in the long term growth path of national economics as well as increase aggregate output over time.

The participating countries, without exception, lack trained and/or experienced personnel at all levels. These manpower constraints hinder both the quality and rate of economic and social development. In the field of environment and development, numbers of experienced or trained specialists are especially low because environmental issues have not been a priority until the last few years in Africa.

The rationale for such work is straight forward. Environmental problems, are not merely sectoral or technical issues that require simple technical or single sector responses. Rather, they are issues which simultaneously assume political, social, economic, and cultural as well as technical dimensions. In addition, problems such as soil erosion, water quality, health, and deforestation are issues which creep slowly rather than explode. Public and governmental awareness and willingness to act upon these issues require special information and perspectives.

Present trends in Africa are clear enough. In many countries, soil productivity is down, soil erosion up, nutrition levels down, deforestation up, and urban pollution up. Failure to approach these issues on a broad integrated base and at several levels of responsibility will almost certainly result in a continuation of adverse environmental and economic impact. Therefore, by increasing African-trained personnel, resource managers, and technicians, this project will improve comprehensively the participant countries' resource management effectiveness.

Given these long term objectives, initial project costs are relatively high because the current training and management infrastructure is weak. In order to alleviate the present reliance upon expatriate assistance for the future project implementation, this project seeks to meet the need for significant training programs for high level personnel. Project preparation and implementation costs are relatively

low considering that it will instigate and enhance indigenous training capability as well as improve local management, administrative, and technical capabilities.

On the micro-level approximately three professional months are required to plan, prepare, and implement a short seminar to train approximately 30 medium to high level policymakers and planners. These trainees would return to their job with increased knowledge in environmental management and planning skills.

There are a number of related benefits. For example, each short seminar will produce a review of national and regional environmental issues, strategy papers for national resource management and planning, and organizational schemes for institutional responses to environmental planning. The medium length courses will produce country-specific environmental case studies and lectures for use by local institutions in both continuing training programs as well as special workshops. The topics will vary from country to country and from course to course and will, therefore, create the possibility of exchange of case study materials between and among cooperating institutions. When this method of strengthening local institutions is compared with the costs of importing technical personnel for purposes such as preparing environmental impact assessments, monitoring water or air pollution, project planning, or conducting training itself, this PP becomes cost effective. The other option, that of conducting training in the United States isolated from work with local African institutions, is discussed in the section on administrative feasibility.

Similar cost effectiveness is applicable for the work in environmental management. These country specific activities will influence the quality of the environment but will not necessarily produce any quantifiable or negative economic impact.

Some of the local efforts first involve environmental monitoring and the development of local information systems. A strong argument can be made for the effectiveness of using local institutions and primarily local technologies in these efforts. Local systems for environmental review, data gathering and analysis, and presentation to host country planning officials are far more effective in influencing policy making than information gathered by outside agencies using methodologies and technologies not available to or controlled by local institutions.

Other resource management efforts involve strengthening environmental units within existing government structures. Responsibility for environmental units will include monitoring information systems but will also include longer range responsibility for resource planning, environmental legislation, and techniques of environmental code enforcement. In each case, the cost effectiveness of such work comes from the capability of performing these tasks with local personnel rather than bringing in high-priced, expatriate, technical experts. Salaries from $5,000 to $10,000 or, in some cases, as much as $15,000 paid to local personnel are but a fraction of the AID estimate of the cost of $100,000 per technical expert per year in a host country.

B. Social Soundness Analysis

The project design has responded to both environmental and social improvement priorities since its primary goal is to increase environmental awareness for the betterment of both rural and urban standards of living. No training and management activity will impair social structures or patterns. Rather, it will seek a positive impact on land productivity through environmental training and improved natural resource management and planning techniques.

Beneficiary participation is one consideration. In this project, it has been fundamental insofar as the primary beneficiaries are officials in environmental training and resource management institutions. First, in designing the project, many steps were taken to discuss all aspects of proposed activity with appropriate host country officials. Second, no activity will take place in any country without previous agreement, in writing, drawn up between the cooperating host country sponsored institution and U.S. contractor. Third, all training and resource management activities will be conducted jointly with local institutions. This PP is born in the concept of host country expressed priorities and interests as the basic dimension of the project. That concept will continue into the operational stage.

The initial beneficiaries of the project will be the government decision makers, policy planners, trainers, technicians, and evaluation/research personnel who will participate directly in the training and management activities, as well as host country training and management institutions. These beneficiaries, upon return to existing or new positions, will participate in environmental work related to project analysis, planning, implementation, training, or evaluation. The concept of this approach at the institutional level is consistent with Section 118 of the Foreign Assistance Act which states that building institutional capabilities in less developed countries will, if successful, have greater influence on total country development strategies than simply concentrating on the environmental impact of individual projects.

The ultimate beneficiaries will be the rural majority whom the immediate beneficiaries are to assist. The project participants will directly affect resource management, allocation and quality of water and sanitation services, soil utilization, pesticide policy, health programs, forestry projects, livestock practices, and many other related environmental issues which enhance the basic life support package. For example, drought surveillance and planning in Botswana's districts will proceed for district level staff but will affect the quality of Botswana's villagers and pastoralists.

A special word is appropriate on the role of women in this project. Women in Africa play a major role in agriculture as well as in child rearing and education, food processing and storage, cooking, health, and marketing. Within the agricultural sector, the women's role is not limited to food crops. They are frequently involved in the laborious tasks of hoeing, weeding, and harvesting of cash crops.

The role of women in host-country ministries and local institutions is limited because of their traditional and primary role in production. For example, in Tanzania, although women represent twenty-four percent of professionals, they constitute only two percent of the overall Tanzanian managerial cadre.

Thus, in development planning and decision making, women in Africa have been excluded. In like manner, they have had only limited access to education and training which is a basic tool for development in both the rural and urban sectors. Although in recent years, it is being acknowledged that women do play a crucial role in development, their current status and active participation has not yet caught up with the newer vision.

Because the ultimate beneficiaries of the project are the rural majority, awareness of the substantial role of women in development will be a continuing and basic theme in both training and resource management activities. For example, some of the proposed activities fit into work which women's organizations have already launched. In Kenya, women's village councils have taken initiative in planting reforestation projects. Through resource management pilot activities in Kenya, seeds have been made available through women's groups and plans call for incorporating the experience in Kenya's first seminar on environmental issues and needs.

Planning programs which take these critical elements into account are not easily executed. However, the important point is that both planners and project implementors are aware of these perspectives. In order to improve natural resource management and strengthen indigenous capacities for environmental training and management, this educational orientation and process must occur.

C. Technical Feasibility

Training

There are several options to provide training and institution building in response to Africa's environmental problems.

1. Training as an Integral Part of Every Project

One method is to assure that bilateral projects routinely provide for environmental training. Under this rubric, health projects would provide health-related training, etc. Such training is important, it should be encouraged, and should be an integral part of as many bilateral projects as possible. Yet this PP goes well beyond project specific training in at least three ways: (1) It identifies a need to strengthen training institutions themselves which would not normally be a principal beneficiary of a sector-specific, bilateral project; (2) This PP strengthens integrative or cross-ministerial units with specific responsibilities for co-ordination and management of environmental problems. These integrated institutions would not normally participate in bilateral project activity nor would they be primary beneficiaries of most bilateral projects; (3) This PP includes as a target audience middle to upper-level policy people and decision makers whose responsibilities probably preclude extensive participation in detailed operation of bilateral projects. Yet these policy people are a crucial audience in terms of understanding ways in which development activity interfaces with the resource base and in considering ways in which project planning and design should anticipate potential resource impact.

2. Training in the United States

Another training approach brings African personnel to the U.S. This approach is appropriate for imparting very specific skills to carefully selected individuals, especially in some of the technical fields related to environmental problems. Yet there are disadvantages. Out-of-country training has an uncertain impact on local training institutions: it pulls people away from jobs for an extended period, frequently meaning that their position is not available for them upon their return; it sometimes provides emphasis on either social or technical issues not directly relevant to African needs; it may equip individuals with technical skills which require support technologies not available in African countries: and conceivably, out-of-country training has resulted in a "brain drain" of highly specialized individuals, pulling them away from their own countries toward employment in Europe or the United States where their specializations are in demand.

In spite of these potential dangers, out-of-country training does have a place and, on a carefully selected basis, should

be pursued. Moreover, the present PP allows for the possibility of limited US training in situations where environmental training capabilities simply are not available in Africa. However, the major emphasis of this PP is toward collaborative activity with local and regional African institutions. On the rare occasion where a clear-cut, rifle shot approach warrants an individual program in the United States, it should be pursued. Moreover, this PP seeks ways to cooperate with existing training efforts which bring Africans to the United States.

3. In-Country Training

A third approach is that which is recommended here: collaborative, in-country training. Extended discussions with African institutional representatives have identified a three-fold approach of short seminars, medium length courses, and selective long term training.

Several arguments support this option:

a. Need for breadth and speed

Those who will benefit from training vary from district level officers to high level policy makers. Need exists to achieve this training in a reasonably short period of time. Project specific training and US training are not the most effective or cost efficient way to provide rapid and broadly based training. In-country effort is far more effective.

b. Specialized and topical skills

Many of the skills in monitoring, health, agroforestry, etc. are techniques which can be taught in a reasonably short period of time. They do not require a formal academic program. In-country seminars are well suited to accomplish this need.

c. Strengthening institutional capabilities

Training will be designed both to provide immediate skills and to strengthen African training institutions. Conducting training in Africa, in direct collaboration with host country institutions, can accomplish both goals.

d. In-service training

Frequently, long-term training or training in the United States involves trainees not presently employed within African governments or universities. Employment is not always assured for them upon their return. This PP places emphasis on short-term, practical, problem-oriented courses in order that people need take only brief leaves from current positions.

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African colleagues during site visits in January and during the Dakar Workshop Seminar in March placed extremely high priority on in-service training. They cited several reasons why:

(i) Trainees will already have experience related to environmental responsibilities;

(ii) Short courses enable trainees to return to their specific positions, thus assuring continuity in their work and direct benefit to their government or other employing agency;

(iii) Training materials will be country or region specific and will incorporate local case studies, local environmental data, field trips, local specie analysis, and other factors which are specific to the technical needs of the country or region from which trainees come;

(iv) Technologies which are available in Africa and are used in the training are more likely to be consistent with local technologies available to monitor and manage African systems.

e. Follow-up

In-country training is much more likely to promote meaningful follow-up by the cooperating institution.

Resource Management

The second component in this PP focuses directly on activities of resource management. These activities result from collaborative planning and pilot activities which have taken place over three years and which have been monitored by AID/Washington and AID Mission Staff in the participating countries.

Several strategies could be pursued to strengthen capabilities of local institutions in resource management. One option would be to establish a unit, name a director who would then be brought to the US for both training and internship work with a comparable US institution. A second possibility would be to bring in a continuing stream of outside technical experts to "do the work" in a range of environmental analysis and planning. Both of these methodologies have problems and seem to be less effective ways to lend assistance. A third option is proposed.

The experience of three years of pilot work suggests the merit of on-the-job shared work. In this manner, work can be accomplished more quickly and job related training can take place simultaneously. An example from Kenya will offer concrete testimony to the feasibility of such shared work and ways in which the proposed project will build upon the pilot beginnings.

In Kenya, environmental pressures have been building for several years. Between 65 percent and 75 percent of the nation is semi-arid and subject to dramatic fluctuations in climate and production. Of the remaining 25 percent of the land, much is lost due to mountains and other factors. Thus, population pressures which are increasing at approximately 4 percent per year, are confined to a rather small percentage of the country and as a result, land use is becoming increasingly intensive. Coincidental with increased pressure on the land has come a government mandate to decentralize the development planning and development decision-making process. Thus, many agriculture, livestock, water, and health projects in Kenya are underway, many of them now beginning to be planned at the district level, some of them soon to require environmental impact statements or other environmental assessments, and all of them bringing potential threat to Kenya's fragile productive base. The National Environment Secretariat stands ready to assist in this project planning from the perspective of balanced resource management. Yet there are problems. First, at the district level, planners are not yet thinking in terms of resource impact of development activities. The NES experience suggests that district authorities must learn to understand local trends in soil erosion, water siltation, fuelwood depletion, rangeland condition, local health and nutrition, pesticide impact, and other resource issues. Second, district officials must have access both to local resource data as well as be able to monitor a limited number of critical indicators which will aid in evaluating the impact of development activities.

The institutional infrastructure to do this work is in place in Kenya, both in Nairobi and in the districts. The priority has been officially mandated in the existing Five Year Plan, both in terms of decentralization and resource impact assessment. Individuals at the central and district levels have committed themselves to the concepts. What is lacking is trained and experienced manpower to do the actual work of project planning and implementation from a district resource management perspective. This PP proposes that the training and experience be provided.

These factors are taken to suggest that it is institutionally and technically feasible to launch a small-scale effort, in collaboration with key institutions in Kenya, to train key personnel in both the central and district governments and to establish procedures to assist Kenyans to increase the effectiveness of their environmental management systems.

D. Administrative Feasibility

Embarking on a major program requires a careful look at existing institutional capabilities. Site visits to African countries and the Dakar meeting have determined that a core of institutions already exist in Africa which will benefit from and contribute greatly to the effectiveness of the training. Actual selection of collaborating institutions will depend upon a variety of criteria including:

(i) Field or topic for particular training;

(ii) Preferences of host country government;

(iii) Recommendations of local AID missions;

(iv) Interest and time available of staff in particular training exercises.

Nonetheless, during the planning phase, discussions have moved quite well with a number of groups and the following list, by country, indicates the institutions that are ready and able to collaborate. Final approval is subject to the preparation and signing of memorandum of understanding. These institutions include:

Ivory Coast, Université National de Côte d'Ivoire
Scientific Research Council

Nigeria, Federal Ministry of Industries
Ahmadu Bello University
Ife University

Zaire, Université de Kinshasa
Department of Planning

Kenya, University of Nairobi
Nairobi Regional Center for Remote Sensing
National Environmental Secretariat

Sudan, University of Khartoum
The Institute for Environmental Studies

Tanzania, University of Dar es Salaam
Ministry of Health
Bureau of Resource Assessment and Land Use Planning (BRALUP)
National Research Council

Senegal, Université de Dakar

Malawi, University of Malawi: Bunda College Campus, Chancellor College Campus, and Polytechnic College Campus at Blantyre

Upper Volta, Institut Supérieur Polytechnique, Ouagadougou
Ministry of Environment

Mali, Institut Polytechnique Rural, Katibougou
Institute of Rural Economy

Cameroon, University of Yaoundé
Ministry of Planning

Mauritania, Agency for Environmental Protection

Botswana, University College
Ministry of Finance and Development Planning

Discussions have also gone forward with regional institutions. Among these are:

Institut du Sahel

Environmental Training Program (ENDA) in Dakar

United Nations Environmental Program

Man and the Biosphere (UNESCO)

Pan African Institute for Development
(Douala, Buea, and Ouagadougou)

East African Management Institute (Arusha, Tanzania)

These regional institutions in several cases have already undertaken environmental efforts. For example, the Institut du Sahel is currently sponsoring a veterinary medicine and environment training course in Dakar; the Environmental Training Program in Dakar has sponsored several training courses for rural sociologists and village development workers as they relate to the environment; the Pan African Institute for Development has currently underway a six month course on environmental management; the East African Management Institute has courses indirectly related to environmental management such as work in health care services, production management, and agro-management.

The Regional Remote Sensing Facility in Nairobi has developed training programs in remote sensing and environmental monitoring. Discussions with the Facility indicate their interest in joint work on seminar/course #6 as well as monitoring and surveillance components of management work.

Special mention will also be helpful concerning selection of African institutions for third country training. Final assignments will depend on careful assessments of (1) host country needs and priorities; (2) third country training competence; (3) language compatability; (4) costs; and (5) space available. Capabilities and experience to perform this institutional assessment currently

exist within the membership of the U.S. contractor. Previous discussions and reviews with African institutions indicate that capabilities for third country training do exist now at institutions such as:

Kenya - University of Nairobi

Nigeria - Ife University
University of Ibadan

Sudan - University of Khartoum

Ivory Coast - Université National de Côte d'Ivoire

Senegal - Université de Dakar

Cameroon - University of Yaoundé

Part of the work of the first year will be to make more precise assessments of these needs and capabilities in order to implement a limited number of long-term, individual training activities in the second and subsequent years for the program.

Another dimension of administrative feasibility concerns government institutions charged especially with environmental responsibilities. In some countries, very little explicit attention has been paid to such needs. In other nations, however, significant beginnings have been made. For example, in Kenya, a National Environmental Secretariat, housed in the Office of the President was charged with activities related to the environment. In the last few months, the NES has been integrated into the newly created Ministry of Environment and Natural Resources. In Sudan, an Institute of Environmental Studies, based within the University, and working closely with the National Scientific Research Council, has been given support as well as jurisdiction to coordinate efforts on activities such as desertification and other environmental pressures. In Nigeria, a special environmental section within the Federal Ministry of Industries is now in charge of environmental policy, legislation, enforcement, and codes.

An explicit goal of this proposed project is to assist African nations to consider institutional options for environmental management, especially as they may bring together different ministries or departments. Enough African nations have now experimented with such agencies for discussion and exchange of experience so as to provide a data base for careful evaluation and consideration of such managerial options.

IV. Financial Plan

A. General

The total cost of the project is estimated at $11.3 million, including $1.5 million for contingencies and inflation. Foreign exchange costs are estimated at $7.3 million or 68 percent of total project costs. The proposed U.S. contribution of $8.5 million will finance 100 percent of the foreign exchange costs and 39 percent of local currency costs. The host country contributions of $2.8 million will be used to finance the balance of the local cost expenditures and represent 25 percent of total project cost. The total cost estimate includes a 12 percent inflation factor and $320,000 to finance the expansion of resource management programs into two additional countries in the third or fourth year of the project.

B. Cost Attribution

1. AID: The AID contribution of $8.5 million will be used to finance a foreign exchange cost of: (a) 100 percent of the project development and support costs ($1,215,000 in the U.S. and $815,000 in Africa), (b) 100 percent of the foreign exchange costs of the training element ($2,190,000), (c) 100 percent of the foreign exchange costs of the resource management program ($2,150,000), (d) program evaluation costs estimated at $185,000, and (e) an inflation contingency for foreign exchange of $785,000. The AID contribution for local cost expenditures will cover (1) $505,000 for in-Africa participant training costs, (2) $314,000 for local support of U.S. contract technicians, (3) $216,000 for non-recurrent local staff and operating costs, and (4) $125,000 as a contingency for inflation.

2. Host Country: The participating host countries will provide an equivalent contribution of $2.8 million to support various local costs associated with the project. Host country contributions are both in cash and in kind and cover:

a. Salaries and allowances for local project staff ($1,068,000);

b. Travel and per diem for training ($133,000);

c. Salaries for personnel in training ($350,000);

d. Other local cost program support ($951,000);

e. Contingency for inflation ($298,000).

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C. Summary of U.S. Inputs by Cost Component:

Cost Component	Amount ($000)	(%)
Technical Assistance	5,292	62
Participants	630	7
Commodities	256	3
Other Costs	1,412	16
Sub-Total	7,588	88
Contingency	912	12
Total	8,500	100

D. Financing of Project Activities in Sahelian Countries:

The project proposes to carry out the following training activities in the Sahelian countries:

- 5 short-term seminars
- 4 medium-term training programs
- 19 long-term participants

In order to finance these discrete Sahelian activities the following funding will be provided from funds appropriated specifically for Sahel development activities:

FY	$000
1980	30
1981	180
1982	220
1983	265
1984	180
TOTAL	875

The $875,000 for the Sahel is included in the total 8.5 million AID contribution.

Of the above amount, $325,000 will be allotted to program support costs and $550,000 will be for program activities. Fifty percent of the costs of the full-time staff person assigned to Abidjan ($190,000) will be funded from the above program support funds.

E. Recurrent Costs:

The recurrent cost implications of this project to participating host countries are minimal. There are virtually no direct recurrent costs developed as the result of the training element of this project and this accounts for slightly more than 50 percent of the total project cost. The recurrent costs of the resource management element of the project is limited to approximately $725,000 for the four participating countries, an annual average of approximately $36,000. Even then the bulk of the recurrent costs are for host country staff personnel, who would most likely be working in the public sector in any case.

F. Other Donors:

Exploratory discussions have been held with many other donor and international agencies including United Nations Environment Program, United Nations Development Program, The Ford Foundation, Man and the Biosphere Program, United Nations Educational, Scientific and Cultural Organization, International Development Research Center, African Development Bank, and International Bank for Reconstruction and Development. No formal requests for funding were submitted to these agencies. However, all indicated interest in and priority for such training and resource management efforts.

G. Cost Calculations:

Extended budget notes follow Annex D which clarify relationships between inputs and outputs. The following additional principles are pertinent to cost calculations in this financial plan.

1. For professional months in the United States, an average amount of $6,000 per month was used. This figure includes a month's salary plus estimated provisions for indirect costs and fringe benefits. It is an AID formula and is determined as an average for participating universities.

2. For professional months overseas, an average amount of $10,000 per month was used to include fringe benefits, indirect costs, local subsistence, Defense Base Act Insurance, etc. This also is an AID formula.

3. Costs for long-term training in Africa are computed on an AID average of $6,000 per trainee per year. This is an AID average formula.

4. Costs for medium-term (4 to 6 weeks) courses are averaged at about $65,000 with a breakdown of expenses found in Annex B. This figure is an estimate and will no doubt change as experience is gained on conducting the courses. They average to approximately $360 per trainee week. 1/

5. Costs for the short-term courses fall into two categories. For initial offerings, they will average between $28,000 or $30,000 per offering or roughly $1000 per person per course per week; for follow-up seminars which require one less faculty month in preparation, costs will average about $24,000 per offering or roughly $800 per trainee per week.1/ Break downs of these costs are provided in Annex B. If the output were merely 30 trained individuals per seminar, such costs would be excessive. However, the short seminars will also produce country specific environmental reviews, maps, and organizational recommendations, all of which will be used by planning and policy people in carrying out their jobs. The short seminars will also be largely national (as opposed to regional) in character as the goal of the short seminars is to provide orientation and an awareness of environmental and resource issues to middle and high level policy officials. Overseas experience with such work has demonstrated the effectiveness of country specific materials in such settings.

6. Project development and support costs are divided between training ($728.5) and resource management ($486.55). Training components will be managed by the University of North Carolina and SECID; Clark University will manage the resource management work.

1/ Direct training costs only; does not include support costs. See page 49 for additional explanation.

In addition to the financial information provided in the following tables, supplementary financial information is contained in:

Annex B - Budget explanation for Inputs
Annex C - Budget explanation for Outputs
Annex D - Part 1. AID funded activities,
Part 2. Host country funded activity.

Extended budget notes follow Annex D.

TABLE I

SUMMARY COST ESTIMATE AND FINANCIAL PLAN

FY 80-84

(in $ 000)

Source 1/	AID (698-0427) FX	AID (698-0427) LC	Host Country 2/ FX	Host Country 2/ LC	Other Donors 3/	Total
I. PROJECT DEVELOPMENT AND SUPPORT COSTS						
A. United States						
1. Technical Contract Personnel	927.50	-		0		927.50
2. Support Contract Personnel	158.95	-		0		158.95
3. Other	128.60	-		0		128.60
B. Africa						
1. Technical Contract Personnel	710.00	80.00		0		790.00
2. Support Contract Personnel	-	-		0		0
3. Other	106.00	-		0		106.00
II. PROJECT PROGRAM COSTS						
A. Training (ETLA)						
1. Short-Term Seminars (1 week)	509.15	48.00		273		830.15
2. Medium-Term Courses (4-6 weeks)	1553.30	90.00		952		2595.30
3. Long-Term	126.00	504.00		126		756.00
B. Evaluation (Project Wide)	186.00	54.00		0		240.00

TABLE I
(Continued)

Source	AID (695-0427) FX	AID (695-0427) LC	Host Country 2/ FX	Host Country 2/ LC	Other Donors 3/	Total
II. PROJECT PROGRAM COSTS (Continued)						
C. Resource Management (EMID)						
1. Botswana						
US Contract Personnel	425.50	12		0		437.50
Other	91.50	5		174		270.50
2. Kenya						
US	254.00	-		0		254.00
Other	142.00	104		204		450.00
3. Tanzania						
US	285.00	-		0		285.00
Other	189.50	88.5		152		430.00
4. Sudan						
US	318.00	30		0		348.00
Other	123.00	18.5		196		337.50
III. Contingency	320.00	-		0		320.00
IV. Space, Meeting Rooms, Equipment	-	-		425		425.00
Sub-Total	6554.00	1034.00		2502.00		10,090.00
12% Inflation	786.00	126.00		298.00		1,210.00
TOTAL	7,340.00	1,160.00		2,800.00		11,300.00

NOTES FOR TABLE I

1/ Overhead and fringe benefits are included in cost estimates.

2/ All host-country government contributions are in-kind.

3/ Preliminary discussions have been conducted with international organizations such as UNEP, MAB, and the Ford Foundation. Each organization has expressed that they share similar priorities in environmental training and resource management activities. Although there has been no formal agreement with any of these organizations, it is clear from these discussions that they would participate in some capacity.

TABLE II

COSTING OF PROJECT OUTPUTS/INPUTS FY 1980-84
(In $ 000)

X New

Project No. 691-0427

Title: Environmental Training and Resource Management

Project Outputs (References in parentheses refer to pages in Annex C.)

Project Inputs	Seminars (C 2-4)	Courses (C 3-5)	Long-Term (C 5-6)	Project-Wide Evaluation	Sudan (C 8)	Tanzania (C 9)	Kenya (C 10)	Botswana (C 11)	Contingency	Totals
AID APPROPRIATED										
I. PROJECT DEVELOPMENT AND SUPPORT COSTS										
A. United States	242.83	242.83	242.83	-	121.62	121.62	121.62	121.62	-	1215.00
B. Africa	224.00	224.00	224.00	-	-	-	224.00	-	-	896.00
II. PROJECT PROGRAM COSTS										
A. Training										
1. Short-Term Seminars (1 week)	557.00	-	-	-	-	-	-	-	-	557.00
2. Medium-Term Courses (4-6 weeks)	-	1645.00	-	-	-	-	-	-	-	1645.00
3. Long-Term	-	-	630.00	-	-	-	-	-	-	630.00
B. Evaluation (project Wide)	-	-	-	240.00	-	-	-	-	-	240.00
C. Resource Management										
1. Botswana	-	-	-	-	-	-	-	533.00	-	533.00

TABLE II

Project No. 698-0427 Title: Environmental Training and Resource Management

Project Inputs	Seminars (C 2-4)	Courses (C 3-5)	Long-Term (C 5-6)	Project-Wide Evaluation	Sudan (C 8)	Tanzania (C 9)	Kenya (C 10)	Botswana (C 11)	Contingency	Totals
	Project Outputs (References in parentheses refer to pages in Annex C.)									
C. Resource Management (Continued)										
2. Kenya	-	-	-	-	-	-	500.00	-	-	500.00
3. Tanzania	-	-	-	-	-	563.00	-	-	-	563.00
4. Sudan	-	-	-	-	489.00	-	-	-	-	489.00
III. CONTINGENCY For New Countries	-	-	-	-	-	-	-	-	320.00	320.00
Sub-Totals	1024.00	2112.00	1097.00	240.00	611.00	685.00	846.00	655.00	320.00	7588.00
HOST COUNTRY CONTRIBUTIONS	328.00	1147.00	151.00	-	239.00	182.00	247.00	208.00	- -	2502.00
TOTAL Without Inflation Contingency	1350.00	3259.00	1248.00	240.00	850.00	867.00	1093.00	863.00	320.00	10,[illegible]00.00
12% Inflation Contingency	160.00	390.00	150.00	34.00	100.00	104.00	130.00	104.00	38.00	1,210.00
TOTAL	1510.00	3649.00	1398.00	274.00	950.00	971.00	1223.00	967.00	358.00	11,300

Explanatory Notes: Table II

(Cost in Project Outputs/Inputs)

Per person per week breakdowns for short and medium term training, including cost of project support:

Short Seminars

Total Estimated Cost	$1,024,000
Trainee Weeks	630
Cost per trainee week (includes country overviews, etc., as explained on page 42)	$ 1,625

Medium Length Courses

Total Estimated Cost	$2,112,000
Trainee Weeks (840 x 6)	$ 5,040
Cost per trainee week	$ 419

TABLE III

PROJECTION OF EXPENDITURES BY FISCAL YEAR

(US $ 000)

FISCAL YEAR	TOTAL AID		HOST COUNTRY		TOTAL OBLIGATED
	Obligated	Expended*	Obligated	Expended*	
1980	408	285	310	217	718.00
1981	1702	1314	590	506	2292.00
1982	2424	2208	676	650	3100.00
1983	2138	2224	645	655	2783.00
1984	1828	1921	579	598	2407.00
1985	0000	548	000	174	0000.00
SUB TOTAL	8500	8500	2800	2800	11,300.00

*Amount expended is estimated at 70% of amount obligated during fiscal year.

V. Implementation Plan

A. Management Structure

The chart on the following page indicates the structural relationship of the Coordinating Committee, Steering Committee, Project Board, US Contractor components, Field Staff, etc. Responsibilities include:

1. Coordinating Committee

Countries, as represented at the Dakar meeting, will continue to provide overall policy and guidance for the project. The group will assemble periodically to review work of the program and make recommendations for the future.

2. Steering Committee

Steering Committee was named at the Dakar meeting and consists of representatives for Francophone Africa, Anglophone Africa, (possibly East Africa also), African regional organizations, Africa-wide organizations, and international organizations. It will provide direction and guidance in the management of the training component.

3. Prime Contractor and Project Board

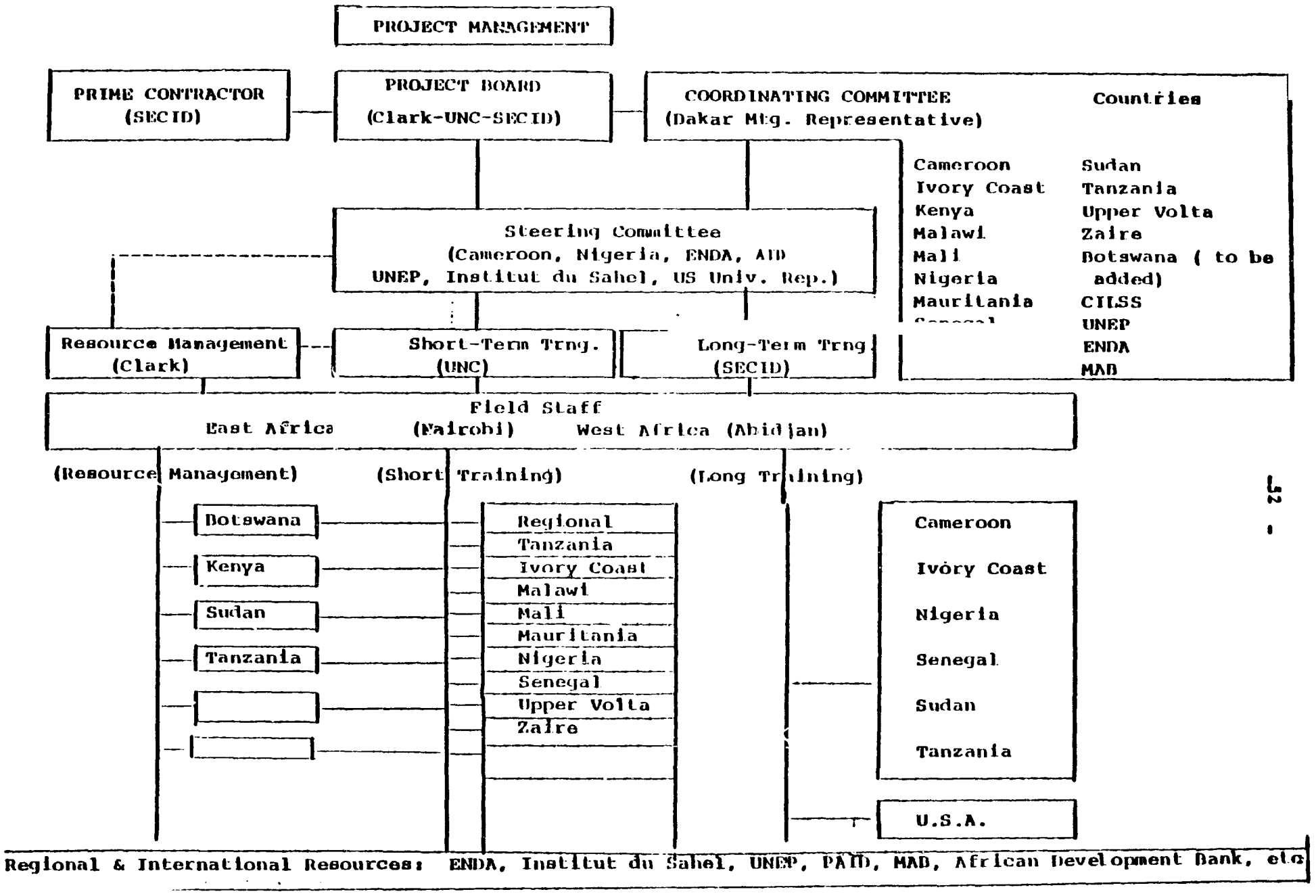
SECID will be responsible for contract negotiations, preparation of sub contracts with each of the university entities, monitoring of budgets, providing cash disbursements to the subcontracting institutions, and for other fiscal and central managerial functions. SECID's Washington Office will also serve as prime contact for AID. Twenty percent of a senior SECID administrator will provide managerial direction.

A Management Committee, consisting of one representative from the University of North Carolina, one from SECID, and one from Clark will meet six to eight times each year to guide SECID in the execution of these coordination responsibilities.

4. Coordination of the Training Component

The University of North Carolina, which has already developed and conducted such courses, will manage the organization and administration of the short seminars and medium length courses. A senior faculty member will devote half-time to the management of these seminars for the first two years of the project. Percentage of time for the third and subsequent years of the project will be determined on the basis of level of activity of training.

ENVIRONMENTAL TRAINING AND RESOURCE MANAGEMENT IN AFRICA



5. Coordination of Long-Term Training

SECID will be responsible for coordinating long-term training. Activity for long-term training will not begin in the first year as time to identify institutions and individual training needs will be required. However, by the second year, it is hoped that as many as fifteen individual long-term training activities will be underway at appropriate African institutions, and if technical needs require, at U.S. institutions. SECID has already surveyed capabilities of a number of African institutions and is in touch with organizations that have information about such African institutional competence.

6. Coordination of Environmental Resource Management Component

Clark University will be responsible for coordination of of the resource management activities and for integrating training into resource management activities in the four countries initially involved in management. In each of the resource management countries, local steering committees or managing committees have been or will be identified. Details for individual countries are provided in the Appendices to the project paper. The equivalent of half of a senior faculty person will coordination services.

B. Implementation Actions

1.	Project Authorized	April 30, 1980
2.	PIO/T issued for contract assistance	May 15, 1980
3.	Contractor selected and contract signed	May 30, 1980
4.	Contract staff stationed in Nairobi	June 15, 1980
5.	Contract training agreements developed and signed	June 15 - August 15, 1980
6.	Syllabus design	July 15 - August 15, 1980
7.	3 seminars and one training courses carried out	August - September, 1980
8.	Environmental management activities begin in four countries	July 1, 1980
9.	Contract staff stationed Abidjan	October 1, 1980

10.	Ten seminars, four medium length courses, and fifteen long-term training assignments carried out	October 1, 1980 - September 30, 1981

Implementation Notes

1. SECID will take initiative for negotiation of contract.

2. The contractor will take initiative to prepare memos of understanding with participating African countries. Beginning as soon as possible after the signing of the contract, the contractor will send representatives to visit African countries to work out details for country specific activities. In the case of the environmental management countries, Clark University will provide such work; for environmental training countries, North Carolina will coordinate which individuals and institutions will work with each countries. Moreover, the contractor will be assisted by REDSO East Africa and REDSO West Africa environmental officers. The initial contact with each host country government will be the official Dakar delegate; key coordinator for AID mission will be the environmental officers for that mission. In the case of both the country representative and the AID environmental officer, these individuals are already known to the contractor.

3. Curriculum development at the appropriate U.S. universities will begin in order to prepare course syllabi for the subsequent training programs. Although each course will be tailored to particular countries and their specific needs and situations, basic work can begin as soon as the PP is approved.

C. Administrative Arrangements

1. Overall responsibility for project monitoring will be assigned to the Office of Regional Affairs, Africa Bureau.

2. Approval of memoranda of understandings for each activity by the Principal AID Officer will be required for country-specific training or resource management programs.

3. Upon request of AFR/RA or the Principal AID Country Officer, the Regional AID Environmental Officers will be responsible for:

   a. Reviewing and clearing country or regional programs;

   b. Evaluation of training programs (See Evaluation Plan);

   c. Monitoring of resource management programs on an Ad Hoc basis when other activities require their presence in a country where such programs are being undertaken.

4. Approval of the Project Paper will authorize the project and approve program activity and budget levels, subject to the availability of funds. Prior to June 30, 1981 the contractor will submit an annual program request for Year 3 to AFR/RA for Bureau review and approval. This same procedure will be followed in Years 4 and 5.

D. Posting of Personnel

1. Training

For the first year, a faculty member will be posted half-time in East Africa (Nairobi) to provide assistance in development of the training component. These services will include working with African institutions in the preparation of syllabi, country profile material, case studies, and basic environmental data to be included in the seminars. This person will also participate in as many of the East African seminars as possible, depending on topic and disciplinary specialization. The East African representative will spend the other half time working with Kenya on the Environmental Resource Management portion of the project.

No personnel will be posted in West Africa during the first year of the program. However, by October, 1980, a full-time person will be posted to Abidjan, West Africa to perform precisely the same duties for West African training activity as the East African representative. The East African representative will continue during the second year to be shared half-time for training and half-time for environmental resource management.

In years 3-5, plans call for continuation of the Eastern and Western African representatives. Because of the variety of disciplinary and technical dimensions involved in this project, these two representatives will be rotated on approximately 12-24 month cycles during the entire life of the project. Moreover, it may be possible to withdraw at least one of these representatives in the fourth or fifth year of the project.

2. Environmental Management

Once memos of understanding are agreed upon, management activity will begin in Sudan, Kenya, Tanzania, and Botswana. Assignment of personnel will be limited to short-term postings in Botswana, Tanzania, and Sudan for the first two years. In Kenya, a half-time professional will work with the National Environment Secretariat (now in Ministry of Environment and Natural Resources) and the Regional Remote Sensing Facility. The person will coordinate the environmental district profiles as well as incorporating remote sensing techniques from the Remote Sensing Facility into the development of district profile data. The individual will spend the other half-time on training activities, both in developing individual training modules and in coordinating the Regional Remote Sensing Facility activities directly into the environmental training.

3. Coordination and Supervision

The two regional contract representatives stationed in Africa will be responsible to and receive guidance from the Project Board, which is described in detail on page 51 (also see Organizational Chart on page 52). Their primary point of contact with AID will be the Regional REDSO Environmental Officer, or whomever the REDSO Director designates as their Environmental Liaison Officer. The regional contract officer will keep the designated REDSO official informed of contract activities and provide them with copies of any required reports which are furnished to the Project Board on a regular basis. In addition, at the request of REDSO, the regional contract representative will provide REDSO with the necessary information to enable REDSO to exercise its review, approval, and evaluation functions noted in Paragraph C (3) on page 54.

VI. Evaluation Plan

Evaluation of the quality and impact of training and resource management activities is essential to the success of the program. Because the activities deal in a number of sectors and operate in several countries, traditional quantifiable measures of success are not possible. However, at least three modes or levels are plausible and will be used in the course of the project.

Mode 1 - Evaluations from direct participants

Individual training activity and particular resource management efforts set out to achieve particular goals. Evaluation techniques to measure, in the judgement of participants, whether these goals have been achieved will be a part of every activity. Accordingly, as each seminar and short course is mounted, an evaluation team will be established. Members of the evaluation team will be drawn from professionals in the host country, staff of the contractor (as appropriate), AID, and/or independent professionals known for their expertise in environmental management and conditions within the host country. A small item for evaluation has been included in the budget of each of the short and medium term seminars and courses. While the evaluation team will be provided with goals for each of the training efforts as well as with general criteria for use in conducting the evaluation, the evaluation team will be encouraged to introduce its own additional criteria. The results of each evaluation will be made available to the staff conducting the particular seminar or short course and disseminate it to all staff and institutions (both US and in Africa) dealing with design of future efforts in the area.

In conjunction with the resource management activities, similar sets of evaluative efforts will take place in conjunction with development of district profiles, drought surveillance, desertification monitoring, etc.

Mode 2 - Institutional follow-up

Another dimension of evaluation is to measure the degree to which participating institutions in host countries pick up, from their own resources, portions of the training and resource management activities sponsored directly by the project. In the training realm, the degree to which local institutions use case study material, approaches, methodologies, field trip techniques, technologies, or other aspects of the training will be a good measure of the degree to which the training activity has been pertinent to the local needs.

In like manner, in conjunction with resource management work, the degree to which local institutions carry forward with various monitoring, surveillance, district profile, and health assessment work will be another measure of effectiveness.

Mode 3 - Level of institutional impact

Ultimately, the project will need to be measured in terms of its impact on national policy with reference to resource use and management. One way is to interview a small sample of those trained perhaps one or two years after the training and find out the extent to which they are engaged in activities related to environmental management policy. A second is to look at formal documentation in five year plans, terms of reference within project activity, etc. to measure the degree to which resource management is addressed.

However, a more specific and probably effective way to measure long range institutional impact is to determine whether any new institutions have been created with specific resource management responsibilities within the government; or whether existing institutions have had responsibilities broadened or expanded to incorporate greater attention to resource management issues; or whether previously existing institutions charged with environmental responsibility have increased their level of activity or increased their level of jurisdiction and responsibility. Examples of these measures would include organizational structures showing the responsibilities for environmental management institutions; new procedures such as environmental assessment requirements; legislation or operating codes which pay attention to environmental impact; and guidelines used within development-related ministries in various project in water, health, agriculture, forestry, etc.

A final and highly impressionistic measure of institutional impact of such projects is to talk with farmers, pastoralists, urban residents, and other "users" of the environment. Methodologies are only in their infant stages for such work in Africa. Yet institutions such as the Pan African Institute for Development with whom we have had very preliminary conversations indicate their interest in the possibility of such survey work. Upon completion of the contract, the contractor will initiate conversations on this question, if not with PAID, then with one or more other institutions, preferably based in Africa, which AID designates appropriate.

In order to ensure adequate evaluation benchmarks for institutional development, the contractor will access and record the institutional capability of each of the primary institutions being directly affected by the project activities. This should be in the form of a short institutional analysis, undertaken prior to initiation of project activities, that would include among other things such quantitative indicators as the number and educational level of the professional staff organizational budget, and the type and magnitude of programs currently being supported by the organization.

VII. INITIAL ENVIRONMENTAL EXAMINATION

Project Country: Africa-wide

Project Title: Environmental Training and Management

Funding: FY(s) 1980-1984 $8,500

Period of Project: Five Years

IEE Prepared by: Jack Nixon, AFR/DR/SDP

Environmental Action Recommended: Negative Determination

Concurrence:

E. Dennis Conroy
Director
Office of Regional Affairs, AFR/RA

Assistant Administrator Decision:

APPROVED _____

DISAPPROVED _____

DATE _____

I. Description of Project

This proposed regional project is concentrated primarily on environmental concerns in Africa. It will be designed to encourage the governments of participating African countries to focus on the environmental issues inherent in development efforts, and to help them to organize a structure for collaboration in environmental training between African and U.S. institutions, and plan and carry out country-specific as well as regional environmental training and institution-building programs. Some major environmental topics which the project will cover and work on through interrelated methods are problems of land and soil productivity, problems in the management and use of forestry and water resources, and problems in health and environmental planning. In keeping with AID policy, field missions in Africa seek to build an environmental dimension into their bilateral projects in rural development, resources management, etc. This regional project, being specifically oriented towards safeguarding and improving the environment, will provide African field missions with an additional and discrete means of reaching policymakers, planners and finance ministry officials at the decision-making level in African governments and sensitizing them to the pressing relevance of environmental issues.

The project comprises two major components.

(1) Improving environmental planning and management

In this area an AID grantee has been working with local institutions in seven African countries for the past two years. Field missions in Sudan, Kenya, Tanzania, Botswana, Malawi and Ethiopia have found this work helpful and by cables to AID/W have endorsed the continuation of efforts in this direction through a five-year project. Local institutions in each of these countries strongly concur in this endorsement. Because of domestic uncertainties in Zambia, the AID mission there has not yet informed AID/W whether Clark's preliminary activities have sufficient priority to be continued. In all of these countries activities in institution building and environmental management have been based on joint agreements between U.S. institutions and host countries. In the proposed project the move, under such agreements, would be towards the joint monitoring of key environmental trends, the development through local institutions of information systems to feed environmental information into development planning, and the enhancement of institutional capacities. Under the project, assistance in the formulation of the environmental components of CDSSs and in handling the environmental aspects of project development in several sectors will be provided directly to other AID activities.

(2) Environmental training

In this area the project provides for the furtherance of outlocks derived from a series of seminars in industrial pollution which an AID contractor has conducted for several years. In December 1977 AID/W sent a circular cable to field missions in Africa requesting an indication of their interest in this type of activity. Positive responses to this cable led a contract under which the contractor prepared plans for organizing training seminars in environmental matters. Specific proposals for training programs have been formulated as a result of a collaborative process involving AID field missions, personnel from African institutions and representatives from U.S. institutions (AID/W and the contractor). This process included site visits to a dozen African countries in January 1979 and a working meeting in Dakar in March 1979 attended by fifteen African representatives from twelve countries, several regional and international institutions concerned with the environment, the two REDSOs and AID/W. The following activities would receive priority: (a) short-term seminars varying from two to five days in length and including between 25 and 50 participants drawn from the middle or higher levels of government institutions; (b) seminars of medium length (two to six weeks) for middle level practitioners and trainers of environmental personnel focused on environmental management and on topic-specific environmental problems; (c) individual training and internships. The short-term and medium length seminars would be conducted in Africa. The individual training and internships would be carried out primarily in African institutions, but, depending on the topic and the length, could be provided in U.S. institutions as well.

Over a five-year period the proposed project would provide training for 2,775 people. The project would include development and support for thirty or forty national institutions and as many as six African institutions. It would bring about much improvement in the flow of information on natural resources and environmental concerns to field missions and to other organizations involved in development activities.

II. Examination of the Nature, Scope and Magnitude of the Project's Environmental Impacts

It is hoped that ultimately and indirectly this project will have a beneficial impact on the environment in all African countries participating in it. It is essentially an education and training program not designed to result in activities directly affecting the environment and does not require the preparation of an Environmental Assessment.

III. Recommended Environmental Action

In the light of the information provided under I, and II, above, a Negative Determination is recommended.

ANNEXES

Project Paper

ENVIRONMENTAL TRAINING AND RESOURCE

MANAGEMENT IN AFRICA

March, 1980

LIST OF ANNEXES

Attached to

VOLUME I:

Annex A - Project Design Summary Logical Framework

Annex B - Budget Explanations for FY 1980-81

Short-Term Seminars
Medium-Term Courses
Long-Term Training
Resource Management

Input Schedules, FY 1980-84

Annex C - Logical Framework and Expected Outputs

A. Environmental Training
B. Resource Management

Annex D - 1. Itemized Project Budget by Fiscal Year and Category (AID Funded Activity)

2. Itemized Project Budget by Fiscal Year and Category (Host Country Funded Activities)

VOLUME II: (on file (AFR/RA)

Annex E - Environmental Context of Development; Environmental Strategy Plan

Annex F - Background Information: The Process

Annex G - Site Visit Reports: Summary Charts

Annex H - Draft Position Paper, March, 1979

Annex I - Summaries of Country Statements by Dakar Representatives

Annex J - Steering Committee Report and Checklist for Preparation of Memoranda of Understanding

Annex K - Working Agreement Between Clark University and the Kenya National Environment Secretariat as example of format for Memorandum of Understanding.

ANNEX A

PROJECT DESIGN SUMMARY

LOGICAL FRAMEWORK

ENVIRONMENTAL TRAINING IN AFRICA (ETIA)

AND

ENVIRONMENTAL MANAGEMENT IN DEVELOPMENT (EMID)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ENVIRONMENTAL TRAINING IN AFRICA (ETIA)
AND
ENVIRONMENTAL MANAGEMENT IN DEVELOPMENT (EMID)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
GOAL: To improve African capacity to deal with major environmental problems, particularly desertification, deforestation, soil erosion, water supply and environmental health.	MEASURES OF ACHIEVEMENT: Increase in the number and strength of African developmental agencies which are incorporating environmental considerations in their plans and programs.	Periodic review of written policy statements and organizational changes; increase in budgetary support for agencies and programs beneficial to addressing GOAL problems.	Governments and the public at large will increasingly recognize the importance of the environmental dimension to development and will take actions and commit resources to deal with environmental problems.
PROJECT PURPOSE (EMID): To strengthen capabilities of institutions in African countries to improve their environmental information base, to identify environmental pressure points, to monitor environmental trends, and to have qualified personnel capable of providing this information to planners and policy makers in usable form.	INDICATIONS OF ACHIEVED GOAL: Degree to which resource management units, profiles, maps, information systems, and personnel are used by host country planners and USAID project planners in policy and project implementation.	Discussions with planners, managers, and technicians to determine the usefulness of the information, of the personnel available to assist in environmental planning and analysis, and of linkages established between management and training.	Institutions exist in most countries to engage in this work but do not have sufficient information systems nor access to integrated ways in which the infromation can be put in the hands of planners and policy makers. With better information, projects will be planned with sounder resource management.
PROJECT PURPOSE (ETIA): To establish African Environmental Training Programs on themes related to environmental management and on themes related to	CONDITIONS THAT WILL INDICATE ACHIEVEMENT OF STATED GOALS: ability of individuals and institutions to address environmental issues and to decrease environmental pressures in critical areas.	Evaluation of training programs.	Short term needs can be met by immediate training (in the next 5 years) and longer run needs can be met by strengthening the capacity of existing African training institutions

PROJECT DESIGN SUMMARY - page 2.

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
environmental constraints; to strengthen the capacity of African training on their own.			
OUTPUTS			
See annex C See also pp. 12-14, 19-26 in PP.	See annex C	Extend of participation and degree to which those trained return to positions of responsibility and use their training in future work.	Provision of formally trained personnel will increase the degree to which environmental and resource data are used in project planning and evaluation.
INPUTS			
See annex B See also pp. 11-12, 15-18, 19-26 in PP.	See annex B	Approval of budget by participating institutions and degree of local support.	Strengthened local institutions will provide sector-wide integration of training.

A-2

ANNEX B

BUDGET EXPLANATIONS FOR FY 1980-81

Short-Term Seminars

Medium-Term Courses

Long-Term Training

Resource Management

Input Schedules, FY 1980-84

*Budget notes for annexes B, C, and D are contained at the end of Annex B.

ANNEX B

Costs for short-term seminars and medium-term courses are calculated on the basis of four categories. These categories are as follows:

1st = Cost for first country seminar to be held.
2nd = Cost for second country seminar to be held.
2nd Same Time = Cost for second country seminar to held immediately following first country seminar (travel cost savings).
Regional = Cost for regional seminar.

For the first two years of training activities, budget costs were calculated according to the following series of seminars and courses.

	1st	2nd	2nd Same Trip	Regional
Short-term Seminars				
FY 80	3			
FY 81	6	4		
FY 82		4		2
FY 83				2
FY 84				2
Medium-term Courses				
FY 80	1			
FY 81	2	2		
FY 82	5	4		
FY 83	4	4		
FY 84	2	5		

The following pages serve as budget explanations for these four categories of seminars and courses. FY 82-84 are budget estimations.

INPUTS
ENVIRONMENTAL TRAINING IN AFRICA
ETAMP PROJECT No. 698-0427

BUDGET EXPLANATION FOR SHORT-TERM SEMINARS (3-5 days)

	1st time	2nd time	2nd same trip	Regional 32/
I. Initial Country/Regional Seminars				
A. Planning				
1. Personnel 33/				
a. Preparation of review of environmental issues- One faculty month per seminar	6,000	6,000	6,000	6,000
b. Preparation of training syllabus One-half faculty month per seminar	3,000	2,000	2,000	2,000
c. Preparation of draft strategy papers for planning and management of national resources One-half faculty month per seminar	3,000	3,000	3,000	3,000
d. Research assistance	950	900	900	900
e. Clerical	1,300	1,100	1,100	1,100
2. Logistical Support				
a. cartography	500	250	250	250
b. editing	750	500	500	500
c. printing	250	250	250	250
d. travel	2,500	2,500	2,500	2,500
e. communications	500	250	250	250
f. supplies for preparation	250	250	250	250

B-2.8

	1st time	2nd time	2nd same trip	Regional
B. Implementation				
1. Personnel				
a. Instructional time for each seminar- One-quarter faculty month per seminar	1,500	1,500	1,500	1,500
b. Research assistance	950	950	950	950
c. Clerical	1,300	1,300	1,300	1,300
2. Logistical Support	(7,500)	(7,500)	(5,000)	(7,500)
a. cartography	750	750	750	750
b. editing	750	750	750	750
c. printing	500	500	500	500
d. travel	2,500	2,500	-	2,500
e. communications	500	500	500	500
f. supplies for preparation	250	250	250	250
3. Regional Participant Travel	-	-	-	5,000
C. Evaluation and Followup	2,000	2,000	1,500	2,000
TOTAL	30,000	28,000	25,000	33,000 34/

	1st time	2nd	2nd same trip	Regional
II. Follow-up Country/Regional Seminars				
A. Planning				
1. Personnel				
a. Preparation of training syllabus and draft strategy papers for planning and management of national resources - One faculty month per seminar.				
b. Preparation of draft organizational scheme- One faculty month per seminar	6,000	5,000	5,000	5,000
2. Logistical Support	(7,000)	(6,000)	(6,000)	(6,000)
a. cartography	500	250	250	250
b. editing	750	500	500	500
c. research assistance	950	900	900	900
d. clerical	1,300	1,100	1,100	1,100
e. printing	250	250	250	250
f. travel	2,500	2,500	2,500	2,500
g. communications	500	250	250	250
h. supplies for preparation	250	250	250	250
B. Implementation				
1. Personnel				
Instructional time for each seminar- One-quarter faculty month per seminar	1,500	1,500	1,500	1,500
2. Logistical Support	(7,500)	(7,500)	(5,000)	(7,500)
a. cartography	750	750	750	750
b. editing	750	750	750	750
c. research assistance	950	950	950	950
d. clerical	1,300	1,300	1,300	1,300
e. printing	500	500	500	500
f. travel	2,500	2,500	-	2,500
g. communication	500	500	500	500
h. supplies for preparation	250	250	250	250

	1st time	2nd	2nd same trip	Regional
3. Regional Participant travel	-	-	-	5,000
C. Evaluation and Follow-up	2,000	2,000	1,500	2,000
TOTAL	24,000	22,000	19,000	27,000

INPUTS	BUDGET YEARS Estimated Obligations 1	2
I. Short-Term Seminar Inputs		
A. Planning and Preparation Stage	3 seminars	10 seminars
1. Personnel		
Initial seminars: a. Preparation of Review of environmental issues - One faculty month per initial country seminar ($6,000 per faculty month)	12,000	30,000
Initial seminars: b. Preparation of training syllabus - One-half faculty month per initial country seminar	4,000	13,000
Initial seminars: c. Preparation of country specific strategy paper- One-half faculty month per initial country seminar	6,000	15,000
Follow-up seminars: d. Preparation of draft strategy papers for planning and Management of national resources -	6,000	28,000
Follow-up seminars: e. Preparation of draft organizational scheme - One faculty month per follow-up country seminar	6,000	30,000
2. Logistical Support		
Cartography, editing research assistance, clerical printing, materials, travel, communications, supplies for preparation (approximately $7,000 per seminar)	19,000	66,000
B. Implementation Stage		
1. Personnel		
Instructional time for each seminar - local instruction supplied at no cost to this budget; non-local computed at an average of $1,500 per seminar	4,500	15,000

INPUTS

	BUDGET YEARS Estimated Obligations	
	1	2
	(6) seminars	10 seminars
2. Logistical Support International and local travel, teaching materials, reproduction of final reports and recommendations, trainee travel and per diem (where necessary), field trips (where necessary) (approximately $7,500 per seminar.	25,000	75,000
C Evaluation and Follow-up Logistical and staff time computed @ $2,000 per seminar	12,000	20,000
TOTALS	177,000	292,000

Note that the six seminars in the first year include:
...3 first time @ 30,000 = $90,000

During the second year, the breakdown of seminars will be:

..6 first time @ 30,000 = 180,000
...4 second time @ 28,000 = 112,000
$ 292,000

INPUTS	BUDGET YEARS Estimated Obligations 3	4	5	Total
I. Short-Term Seminar Inputs	4 seminars	2 seminars	2 seminars	
A. Planning and Preparation Stag				
1. Personnel				
a. Preparation of Review of environmental issues - One faculty month per initial country seminar ($6,000 per faculty month)	12,000			
Initial seminars: b. Preparation of training syllabus - One-half faculty month per initial country seminar	6,000			
c. Preparation country specific strategy paper- One-half fa y month per initial country seminar	6,000			
d. Preparation draft strategy papers for planning and Manag t of national resources -	12,000	12,000	12,000	
follow-up seminars: e. Preparation draft organizational scheme - One faculty th per follow-up country seminar	12,000	12,000	12,000	
2. Logistical Sup				
Cartography iting research assistance, clerical printing, m ials, travel, communications, supplies for prepara (approximately $7,000 per seminar)	28,000	14,000	14,000	
II. Implementation ge				
1. Personnel				
Instructional time for each seminar - local instruction supplied at no cost to this budget; non-local computed at an average of $1,500 per seminar	6,000	3,000	3,000	

INPUTS

	BUDGET YEARS Estimated Obligations			
	3	4	5	TOTAL
2. Logistical Support				
International and local travel, teaching materials, reproduction of final reports and recommendations, trainee travel and per diem (where necessary), field trips (where necessary) (approximately $7,500 per seminar.	30,000	15,000	15,000	
C Evaluation and Follow-up				
Logistical and staff time computed @ $2,000 per seminar	8,000	4,000	4,000	

BUDGET EXPLANATION FOR MEDIUM-TERM COURSES (4 to 6 weeks)

	1st time	2nd time
I. Planning		
A. Personnel		
1. Preparation of country specific case studies and lectures-one faculty month per short course(@ $6,000)	6,000	6,000
2. Preparation of training syllabus -- one-half faculty month per short course	3,000	-
3. Review of country environmental procedures, institutions, and policy actions -- one-half faculty month per short course	3,000	3,000
4. Research Assistance	1,500	1,500
5. Clerical	2,000	2,000
B. Logistical Support		
1. cartography	500	500
2. editing	1,000	1,000
3. printing	500	500
4. travel	2,500	2,500
5. communications	500	500
6. supplies	500	500
II. Instruction		
A. Personnel		
a. Instructional time for each course-three faculty months per short course	18,000	17,000
b. clerical	1,500	1,500
c. research	1,500	1,500
d. administrative	2,000	1,000

	1st time	2nd time
B. Logistical Support	(21,700)	(19,200)
1. Travel -- 3 trips x $2,000 per trip	6,000	6,000
per diem -- 30 days x 3 days x $80	7,200	7,200
local field trips.	3,000	3,000
2. materials for course	2,000	1,000
3. Cartography	500	500
III. Evaluation and Follow-up	3,000	1,500
	65,700	58,200

INPUTS - Project Purpose

	BUDGET YEARS Estimated Obligation	
	1	2
	1 course	4 courses
II. Medium-Term Course Inputs		
A. Planning and Preparation Stage		
1. Personnel		
a. Preparation of country specific case studies and lectures One faculty month per short course @ ($6,000 per month)	6,000	24,000
b. Preparation of training syllabus- One-half faculty month per short course	3,000	6,000
c. Preparation of country specific draft of procedures and policy actions- One-half faculty month per short course,	3,000	12,000
2. Logistical Support		
Cartography, edition research assistance, clerical printing materials, travel, communications, supplies for preparation of course materials	9,000	36,000
B. Implementation Stage		
1. Personnel		
Instructional time for each course Three faculty months per short course @ $6,000 permonth)	18,000	70,000
2. Logistical Support		
International and local travel, teaching materials, reproduction of final reports and recommendations, trainee travel and per diem (where necessary), field visits (where necessary).	23,700	90,800

B-12

INPUTS - Project Purpose

	BUDGET YEARS Estimated Obligation	
	1	2
C. Evaluation and Follow-up		
Logistical and staff time computed @ one faculty month per short course	3,000	9,000
TOTALS	65,700	247,800

The total of $247,800 for the second year consists of two courses offered for the first time (65,700 X 2 = 131,400) plus 2 courses offered for the second time (58,200 X 2 = $116,400) for a total of 247,800.

	BUDGET YEARS Estimated Obligations			
	3	4	5	Total
II. Medium-Term Course Inputs	8 courses	8 courses	7 courses	
A. Planning and Preparation Stage				
1. Personnel				
a. Preparation of country specific case studies and lectures One faculty month per short course @ ($6,000 per month)	48,000	48,000	42,000	
b. Preparation of training syllabus- One-half faculty month per short course	24.000	24,000	21,000	
c. Preparation of country specific draft of procedures and policy actions- One-half faculty month per short course.	24,000	24,000	21,000	
2. Logistical Support	72,000	72,000	63,000	
Cartography, edition research assistance, clerical printing materials, travel, communications, supplies for preparation of course materials				
B. Implementation Stage				
1. Personnel				
Instructional time for each course Three faculty months per short course @ $6,000 permonth)	144,000	144,000	126,000	
2. Logistical Support				
International and local travel, teaching materials, reproduction of final reports and recommendations, trainee travel and per diem (where necessary), field visits (where necessary).	480,000	480,000	420,000	

INPUTS - Project Purpose

C. Evaluation and Follow-up	BUDGET YEARS ESTIMATED OBLIGATIONS			
	3	4	5	Total
Logistical and staff time computed @ one faculty month per short course	48,000	48,000	42,000	

BUDGET EXPLANATION FOR LONG-TERM TRAINING

INPUTS - Project Purpose	BUDGET YEARS Estimated Obligations 1	2	3	4	5	Total
III. Long-term and Individual Training Inputs 35/	00	90,000	180,00	180,000	180,000	
		15	30	30	30	
		trainees	trainees	trainees	trainees	
A. Planning and Preparation Stage						
1. Personnel						
a. Faculty time for preparation of core courses in environmental management-						
b. Faculty time for preparation of courses in technologies of environmental assessment and analysis-						
c. Faculty time for preparation of recruitment and selection procedures, and identification document of intern exchange institutions-						
2. Logistical Support						
Support staff for research, editing and clerical work-						
B. Implementation Stage						
C. Evaluation and Follow-up						

INPUTS
ETAM Project (698-0427)

Project Coordination

	Budget Years 1	2
Field Staff 12/		
Abidjan - Training(12 mos. x 10,000)	—	120,000
Nairobi		
- one-half x 2 mos. x 10,000	10,000	
- one-half x 12 mos. x 10,000		60,000
Coordination: Short-Term Training 13/		
University of North Carolina		
-one-half x 4 mos. x 10,000	20,000	
-one-half x 12 mos. x 10,000		60,000
SECID - Project Management 30/		
-4 mos. x 2,000	8,000	
-12 mos. x 2,000		24,000
Washington - Project Administration 30/		
- 4 mos. x 2,000	2,000	
- 12 mos. x 2,000		24,000
Project Coordination		
A. Travel (US)		
SECID - 2 trips x 4 mos. x 250	2,000	
- 2 trips x 12 mos. x 300		7,200
University of North Carolina		
- 1 trip x 3 mos. x 200	600	
- 1 trip x 12 mos. x 200		2,400
Clark University		
- 2 trips x 4 mos. x 150	1,200	
- 2 trips x 12 mos. x 200		4,800

PROJECT COORDINATION (cont.)

	Budget Years 1	Budget Years 2
B. Supplies/Communications/ Telephone		
SECID - 4 mos. x 375	1,400	
- 12 mos. x 500		6,000
University of North Carolina		
- 4 mos. x 250	1,000	
- 12 mos. x 400		4,800
C. International Travel		
Training - for planning and implementation		
- 1.5 trips x 3,000 31/	4,500	9,000
Steering Committee		
- 5 trips x 1,000	5,000	5,000
TOTAL	$121,200	$327,200

BOTSWANA

($ 000)

Activity	BUDGET YEARS 1	2
U.S. Personnel (one month) 7/	10	6 months x 10 = 60
Travel	2.5	5
Short-term staff assistance 36/	---	20
Local district data systems 15/	6	32
National resource inventory		---
Clerical Services		2
Logistical Support	1	6
TOTAL	19.5	125

BOTSWANA

	BUDGET YEARS ESTIMATED OBLIGATIONS			
	3	4	5	TOTAL
A. Staff				
1. Core staff person to work in disaster relief unit, to coordinate drought watch system, and assist in contingency planning. Also be available to AID mission for help in environmental assessment and planning activities. (note #7)	75	75	0	
Long-term, $75,000 per year				
2. Botswana counterpart to work with core staff person above	no charge to this budget			
3. Short-term U.S. staff person at $6,000 per month for assistance in establishing disaster relief unit, drought watch, and contingency plan. Where possible,, Botswana personnel will share in the effort, in part supported by Government of Botswana resources, and in part by this short-term account. Rates for GOB personnel would be less per month than U.S. personnel. (note #36)	36	36	6	
4. Research, technical coordination, and support in Botswana to provide photo interpretations, cartography staff, typing, etc. (note #37)	30	30	25	
B. Other costs, including field studies, remote sensed imagery, data processing.	25	29	9	
C. Travel.	5	5	5	
TOTAL	175	175	45	

KENYA

($ 000)

Activity	BUDGET YEARS 1	2
U.S. Personnel 8/	2 months x 10 = 20	6 months x 10 = 60
Travel	2 trips x 2.5 = 5	3 trips x 2.5 = 7.5
Local and short-term staff for district profiles (note #20)	10	20
Materials, including maps and landsat imagery.	10	12.5
Reproduction of reports and logistical support	10	10
Material for soil analysis		5
Analysis of soil erosion in central province (note #16)	---	10
TOTAL	55	125

KENYA

	BUDGET YEARS ESTIMATED OBLIGATIONS			
	3	4	5	TOTAL
A. Staff				
1. Core staff person, working half-time, to direct program to monitor environmental trends at district and national levels. This person also to act as liaison between AID environmental activities and the National Environmental Secretariat, as well as with other relevant local resource management institutions. Person to be housed in the National Environmental Secretariat. (note #8)	40	40	0	
Long-term, $40,000 per year.				
2. Short-term U.S. staff person at $6,000 per month for assistance in work in completing environmental profiles of 25 districts in Kenya, in cooperation with the AID mission and the Government of Kenya. (note #20)	18	18	18	
3. Kenyan counterpart person to work with core staff person and short-term staff person for research support. (note #20)	30	30	20	
B. Other costs, including cartography, data processing, supplies, communication, and domestic and international travel.	37	37	32	
	125	125	70	

B-22

SUDAN

($ 000)

Activity	BUDGET YEARS 1	2
U.S. Faculty Time 11/	1 month x 10	1/2 x 100 = 50
Production of National Environmental Report	2	---
Detailed Assessment of Kordofan and South Darfur 18/	---	10
Travel in Sudan as well as international		10
Technical support for field work (note #18)	2.5	10
Materials, Cartography, Production, etc.	---	10
Administrative Support	---	10
TOTAL	14.5	100

SUDAN

	BUDGET YEARS ESTIMATED OBLIGATIONS			
	3	4	5	TOTAL
A. Staff				
1. Core staff person, half-time, to be housed in the environmental studies unit at the University of Khartoum, to coordinate analyses of environmental conditions and trends in Darfur and Kordofan, and to place monitoring system to gather data on key environmental indicators related to desertification. (note 11)	40	40	40	
Long-term, estimated at $40,000 per year.				
2. Short-term staff person to assist in environmental review and assessment, especially in Darfur and Kordofan, and to aid in establishing mechanism to update basic indicators on a systematic basis. (note 18)	36	24	18	
3. Sudanese research and technical assistance to aid in publication and presentation of information on desertification and analysis of same. (note 18)	30	20	20	
$2,000 per month				
B. Other costs, including travel field studies, cartography, data processing, supplies and communication.	44	41	22	
TOTAL	150	125	100	

TANZANIA

($ 000)

Activity	BUDGET YEARS 1	2
U.S. Personnel 10/	1 month for preparatory participation environmental conference = 6	1/2 x 100 = 50
Preparatory work for conference by local personnel (note #17)	5	---
Materials and map work	2	10
Conference case studies, including 2 internal prototypes of work for environmental unit (note #17)	5	---
Development of information system	---	15
Travel	---	5
Clerical Services		5
Materials		15
TOTAL	18	100

TANZANIA

	BUDGET YEARS ESTIMATED OBLIGATIONS			
	3	4	5	TOTAL
A. Staff				
1. Tanzanian member of the Bureau of Land Resource Assessment and Land Use Planning to head the environmental unit. Person will establish linkages between the AID mission and host country personnel. (note #9)	20	20	20	
2. Project director to design and implement village health program for the incorporation of environmental health design principles into village planning and village health operations. 10/	50	50	50	
Long-term, $50,000 per year				
3. Short-term staff person at $6,000 per month for assisting both the BRALUP environmental health unit and village health program project director. 17/	18	18	18	
B. Other costs, including field studies, supplies, resource materials, cartography, and domestic and international travel.	62	62	62	
TOTAL	150	150	150	

INSTITS
ETAM Project (696-0427)

Coordination - Resource Management

	Budget Years	
	1	2
Personnel 14/		
Professional - 4 mos. x 6,000	24,000	48,000
Administrative - 3 mos. x 1,500	4,500	
- 12 mos. x 1,500		18,000
Clerical	3,000	12,000
Research	3,000	9,000
International Travel		
- 1.5 trips x 3,000 (to arrange memos of understanding)	4,500	9,000
Supplies/Communication		
- xerox		2,000
- communications	500	1,500
- printing	1,000	1,500
TOTAL	$40,500	$101,000

ANNEX C

LOGICAL FRAMEWORK

AND EXPECTED OUTPUTS

A. Environmental Training

B. Resource Management

*Budget notes for annexes B, C, and D are contained at the end of Annex B.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Environmental Training in Africa

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
GOAL: To improve African capacity to deal with major environmental problems, particularly desertification, deforestation, soil erosion, water supply and environmental health.	MEASURES OF ACHIEVEMENT: Increase in the number and strength of African developmental agencies which are incorporating environmental considerations in their plans and programs.	Periodic review of written policy statements and organizational changes; increase in budgetary support for agencies and programs beneficial to addressing GOAL problems.	Governments and the public at large will increasingly recognize the importance of the environmental dimension to development and will take actions and commit resources to deal with environmental problems.
PROJECT PURPOSE: To establish African Environmental Training Programs on themes related to environmental management and on themes related to environmental constraints; to strengthen the capacity of African training institutions to continue environmental training on their own.	CONDITIONS THAT WILL INDICATE ACHIEVEMENT OF STATED GOALS: ability of individuals and institutions to address environmental issues and to decrease environmental pressures in critical areas.	Evaluation of training programs.	Short term needs can be met by immediate training (in the next 5 years) and longer run needs can be met by strengthening the capacity of existing African training institutions.
OUTPUTS			
see attachments	see attachments	extent of participation and degree to which those trained return to positions of responsibility and use their training in future work.	provision of formally trained personnel will increase the degree to which environmental and resource data are used in project planning and evaluation.
INPUTS			
see attachments	see attachments	approval of budget by participating institutions and degree of local support	strengthened local institutions will provide sector-wide integration of training

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Environmental Management in Development

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
GOAL: To improve African capacity to deal with major environmental problems, particularly desertification, deforestation, soil erosion, water supply and environmental health.	MEASURES OF ACHIEVEMENT: Increase in the number and strength of African developmental agencies which are incorporating environmental considerations in their plans and programs.	Periodic review of written policy statements and organizational changes; increase in budgetary support for agencies and programs beneficial to addressing GOAL problems.	Governments and the public at large will increasingly recognize the importance of the environmental dimension to development and will take actions and commit resources to deal with environmental problems
PROJECT PURPOSE: to strengthen capabilities of institutions in African countries to improve their environmental information base, to identify environmental pressure points, to monitor environmental trends, and to have qualified personnel capable of providing this information to planners and policy makers in usable form.	INDICATIONS OF ACHIEVED GOAL: Degree to which resource management units, profiles, maps, information systems, and personnel are used by host country planners and USAID project planners in policy and project implementation.	discussions with planners, managers, and technicians to determine the usefulness of the information, of the personnel available to assist in environmental planning and analysis, and of linkages established between management and training.	Institutions exist in most countries to engage in this work but do not have sufficient information systems nor access to integrated ways in which the information can be put in the hands of planners and policy makers. With better information, projects will be planned with sounder resource management.

OUTPUT

see attachments

INPUT

OUTPUTS-Project Purpose 1/	BUDGET YEARS 1	2	3	4	5
I. Short-Term Seminar Outputs					
A. Planning and Preparation Stage					
1. Completed review of environmental issues in each country to be used as training material for seminars, including preparation of visual illustrative materials.	3	5	2		
2. Completed training syllabus for assessing national and regional priorities of environmental issues.	3	5	2		
3. Completed country specific draft strategy paper for techniques of increasing public environmental awareness, including community participation in environmental assessment and planning	3	5	2		
4. Completed draft strategy papers for planning and management of national resources and manpower training		5	2	2	2
5. Completed draft organizational scheme for institutional responses to environmental planning and information needs		5	2	2	2
B. Implementation Stage					
1. Completed seminars of two to five days duration in participating African countries on environmental planning and natural resource management appropriate to each country.	3	10	4	2	2
2. Approximately [illegible] (30 trainees x 2 seminars) planners and policy makers returning to departmental/ministerial positions in participating countries	90	300	120	60	60
3. Refined strategy and organizational statements, prepared in seminar, which will serve as guidelines for future planning	3	10	4	2	2

OUTPUTS - Project Purpose

	BUDGET YEARS				
	1	2	3	4	5
C. Evaluation and Follow-up					
1. Completed follow-up paper based on seminar statements containing a plan of action for training	3	3			
2. Completed evaluation of effectiveness of training materials and their appropriateness for use in project planning and policy formulation.	3	10	4	2	2
II. Medium-Term Course Outputs					
A. Planning and Preparation Stage					
1. Completed country specific case studies and lectures on point specific topics dealing with environmental problems and constraints, including preparation of visual illustrative materials.	1	4	8	8	7
2. Training syllabus for 3 to 6 week national and regional short courses to provide skills in environmental management and the technology of environmental control.	1	4	8	8	7
3. Completed country specific draft of procedures and policy actions for dealing with specific environmental issues.	1	4	8	8	7

OUTPUTS - Project Purpose

	BUDGET YEARS				
	1	2	3	4	5
B. Implementation Stage					
1. Completed courses of 3 to 6 weeks duration in participating African countries on environmental strategies and skills appropriate to each country	1	4	8	8	7
2. Approximately 900 (30 trainees x 30 courses) planners and policy makers returning to departmental/ministerial positions in participating countries.	30	120	240	240	210
3. Increased skill in environmental analysis, assessment, and evaluation, dependent on themes of short courses.					
4. Increased understanding of integrated approach to environmental planning and resource man gement					
5. Strengthened experience and capability of existing local training institutions to conduct future courses independently	1	4	8	8	7
C. Evaluation and Follow-up					
1. Completed evaluation of effectiveness of course materials and their appropriateness for use in project planning and policy formulation	1	6	8	8	7
2. Completed plan for utilization of newly trained personnel in their positions within relevant agencies	1	6	8	8	7
3. Plan for existing local training institutions to incorporate portions of training syllabus into continuing curriculum	1	6	8	8	7

OUTPUTS - Project Purpose

	BUDGET YEARS				
	1	2	3	4	5
III. Long-term and Individual Training Outputs					
A. Planning and Preparation Stage					
1. Core courses in environmental management development	1	3	4		
2. Courses in the technologies of environmental assessemtn and analysis development	1	3	4		
3. Plan for faculty and training institution identification established	1				
4. Trainee recruitment and selection strategy developed and initiated	1				
5. Institutions identified for faculty exchange and also for possible placement of interns		1			
B. Implementation Stage					
1. Attendance, participation and presentation of training programs completed		15	30	30	30
2. Completed diploma, degree training or a combination of training and internships conducted in Africa (or possibly in the US) at local or regional education and training institutions		15	30	30	30
C. Evaluation and Follow-up					
1. Trainees returning to jobs in positions on ministerial/ departmental level for environmental planning and natural resource management		15	30	30	30

OUTPUTS - Project Purpose

	BUDGET YEARS				
	1	2	3	4	5
2. Assessment and survey of trainee employment positions and scope of influence on national/regional level in environmental planning and natural resource management completed				1	1
3. Completed evaluation of long-term and individual training program, materials, and facilities, and their individual capacity for future utilization by local training institutions					1

1/ These are preliminary budget estimates and are basedoon averages. The actual design of individual seminars will be tailored to the specific need of each country and designed in collaboration with local institutions.

SUDAN OUTPUTS	YEAR 1	2	3	4	5
1. A completed analysis of environmental conditions and trends in Darfur and Kordofan, the two provinces where USAID has a major agricultural research and development project underway.					1
2. A monitoring system in place to gather data on key indicators related to desertification. with a mechanism to update the basic indicators on a periodic and systematic basis.				1	
3. Presentation of the information on desertification in usable planning forms, including maps.			1		
4. An established and continuing relationship with USAID in which host country personnel in the Sudanese Environmental Unit can be called upon to provide environmental expertise in project planning and impact analysis.			1		
5. Strengthen capability of the Environmental Studies Unit at the University of Khartoum in applied aspects of environmental analysis and evaulation.			1		

TANZANIA - OUTPUTS	YEAR 1	2	3	4	5
1. A functioning environmental unit with the Bureau of Resource Assessment and Land Use Planning which would allow this important national institution to better focus its resources on environmental issues.				1	
2. Maps, field guides for project planning, and evaluation, all prepared by the BRALUP environmental unit, which synthesize environmental circumstances as they relate to the use of water, land, woodlands, and other natural resources in specific districts in Tanzania.		3	3	3	
3. A tested program for the incorporation of environmental health design principles into village planning and village health operation					
Planning version		1			
Pilot version				1	
Operational version					1
4. An established and continuing relationship with USAID in which host country personnel in BRALUP's environmental unit can be called upon to provide expertise in the areas of environmental health.			1		
5. An established link with the AID mission whereby BRALUP environmental unit personnel can be called upon in the broader work of environmental planning and resource management.			1		

KENYA - OUTPUTS	YEAR 1	2	3	4	5
1. An operational program to monitor environmental trends at district and national levels.					
Planning version		1			
Pilot version				1	
Operational version					1
2. Completed environmental profiles of 25 districts in Kenya, the districts to be identified in cooperation with the AID mission and Government of Kenya.	2	6	6	6	4
3. An established and continuing relationship with USAID in which host country personnel in the Kenya Environmental Secretariat, the Ministry of Agriculture, the University, and other relevant local resource management institutions can be called upon to provide expertise in project planning and impact analysis.			1		
4. An established working relationship between the Kenyan National Environment Secretariat and other ministries incorporating natural resource and environmental planning data into district and regional project plans.			1		

BOTSWANA - OUTPUTS	YEAR 1	2	3	4	5
1. A functioning disaster relief unit established with capabilities to monitor and respond to natural disasters, especially drought.					1
2. As part of the disaster relief unit, a functioning drought monitoring system integrated into the existing government institutional framework, making use of current government monitoring systems, remotely sensed imagery, and local information systems.					
Planning version		1			
Pilot version				1	
Operational version					1
3. A contingency plan to deal with drought and other natural disasters with special emphasis on resource impact of disasters.					
Planning version		1			
Pilot version				1	
Operational version					1
4. An established and continuing relationship with USAID in which host country personnel in the disaster related unit, the university, and other relevant local resource management institutions can be called upon to provide expertise in project planning and impact analysis.			1		
5. A national policy on management of natural resources, derived from information located in the drought monitoring system.					1

ANNEX D-1

Budget Supplement to Table I

ITEMIZED PROJECT BUDGET BY

FISCAL YEAR AND CATEGORY (AID FUNDED ACTIVITY)

*Budget notes for annexes B, C, and D are contained at the end of Annex B.

Budget Supplement to Table I

AID Funded Activities

ITEMIZED PROJECT BUDGET BY FISCAL YEAR AND CATEGORY

(LOP $8488.48) (expressed in $ 000)

Category	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)
I. PROJECT DEVELOPMENT AND SUPPORT COSTS						
A. United States 28/						
1. Technical Contract Personnel						
a. Training 13/ 30/	38	114	122	120	117	511 (85 mo.)
b. Management 14/	34.5	87	125	100	70	416.5 (70 mo.)
2. Support Contract Personnel						
a. Training	10.8	39.2	41.1	32.5	29.3	153.2
b. Management	.75	.5	1.5	1.5	1.5	5.75
3. Other						
a. Travel	3.8	14.4	14.4	14.4	14.4	61.4
b. Supplies/Communications/Telephone	4	15.8	15.8	15.8	15.8	67.2
B. Africa						
1. Technical Contract Personnel						
Nairobi/Abidjan 12/	10	180	200	200	200	790 (79 mo.)
2. Support Contract Personnel						
3. Other						
a. Steering Committee 31/	5	5	5	5	5	25
b. International Travel.	9	18	18	18	18	81

	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)	
II. PROJECT PROGRAM COSTS							
A. Training							
1. Short Seminars[6/] (1 week)	(3)	(10)	(4)	(2)	(2)	(21)	
a. Faculty Preparation[1/ 33/]	36	116	48	22	22 [2/]	244	(40 mo.
b. Faculty Instruction [2/]	4.5	15	6	3	3	31.5	(5 mo.
c. Cartography [44/]	3.25	11.5	4	2	2	22.7	
d. Editing	4	14	5	2.5	2.5	28	
e. Printing	2.25	7.5	3	1.5	1.5	15.75	
f. Travel[25/]	15	50	20	10	10	105	
g. Communication	2.5	9	3.5	1.75	1.75	18.5	
h. Supplies for preparation	1.5	5	2	1	1	10.5	
i. Research Assistance[22/]	5.6 [23/]	18.8	7.4	3.7	3.7	39.2	(30 mo.
j. Evaluation	6	20	8	4	4	42	
2. Medium Courses	(1)	(4)	(8)	(8)	(7)	(28)	
a. Faculty Preparation[4/]	12	42	96	84	69	303	(50 mo
b. Faculty Instruction[5/]	18	70	158	140	121	507	(48 mo
c. Per Diem	7.2	28.8	64.8	57.6	50.4	208.8	
d. Local Field Trips	3	12	27	24	21	87	
e. Cartography[24/]	1	4	9	8	7	29	
f. Editing	1	4	9	8	7	29	
g. Printing	.5	2	4.5	4	3.5	14.5	
h. Travel[25/]	8.5	34	76.5	68	59.5	246.5	
i. Communication	.5	2	4.5	4	3.5	14.5	
j. Supplies for Preparation	2.5	8	18.5	16	12.5	57.5	
k. Research Assistance[22/]	3 [23/]	12	27	24	21	87	(60 mo
l. Evaluation	3	9	21	18	10.5	61.5	
3. Long Term[27/ 35/]	0	90	180	180	180	630	
4. Evaluation (Program Wide).	0	20	100	20	100	240.0	

Category	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)
B. Resource Management						
1. Botswana						
a. US Personnel						
1. Core Staff[7/] Person	10	60	75	75	0	220 (22 mo.)
2. Local District[15/] Data Systems	6	32	0	0	0	38 (6 mo.)
3. National Resource[15/] Inventory						
4. Research and Co-ordination[37/]	0	0	28.5	28.5	23.5	80.5(8 mo.)
5. Short-Term Local[36/] Logistical Assistance	0	20	36	36	6	98 (10 mo.)
b. Other						
1. Botswana Counterpart[19/]						
2, Cartography, LANDSAT Imagery, Data Processing, Communications. Field Studies	1	6	29	29	9	74
3. Travel.	2.5	5	5	5	5	22.5
2. Kenya						
a. US Personnel						
1. Core Staff[8/] Person	20	60	40	40	0	160 (16 mo.)
2. Soil Erosion[16/] Analysis	0	10	0	0	0	10 (1 mo.)
3. Short-Term Local[20/] and US Staff Assistance for District Profiles	10	20	18	18	18	84 (8 mo.)

Category	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)	
2. Kenya (Continued)							
b. Other							
1. Counterpart Staff and NES for Research Support 20/	0	0	30	30	20	80	
2. Cartography, LANDSAT Imagery Materials	10	17.5	0	0	0	27.5	
3. Travel	5	7.5	0	0	0	12.5	
4. Other Costs, i.e. Data Processing, Communications, Field Studies, and Editing	10	10	37	37	32	126	
3. Tanzania							
a. US Personnel							
1. Project Director 10/	6	50	50	50	50	206	(20 mo
2. Development of Information System 17/	0	10	0	0	0	10	(1 mo.
3. Environmental Monitoring 17/	0	15	0	0	0	15	(2 mo
4. Short-Term Local Logistical Assistance 17/	0	0	18	18	18	54	(5 mo
b. Other							
1. Tanzania BRALUP Staff Person 9/	0	0	20	20	20	60	
2. Preparatory Work for Conference 17/	5	0	0	0	0	5	
3. Conference Case Studies 17/	5	0	0	0	0	5	
4. Cartography, LANDSAT Imagery	2	15	0	0	0	17	
5. Travel	0	5	0	0	0	5	
6. Other Costs Including Data Processing Communications, Field Studies, and Editing	0	0	62	62	62	186	

Category	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)	
4. Sudan							
a. US Personnel							
1. Core Staff 11/ Person	10	50	40	40	40	180	(18 mo.)
2. Assessment 18/ Kordofan & Darfur	0	10	36	24	18	88	(9 mo.)
3. Technical Support 18/ for Field Work	0	10	30	20	20	80	(8 mo.)
b. Other							
1. Production of 19/ National Environment Report	2	0	0	0	0	2	
2. Administrative 21/ Support	0	10	0	0	0	10	
3. Cartography, LANDSAT	0	10	0	0	0	10	
4. Travel	2.5	10	0	0	0	12.5	
5. Other Costs Including Data Processing, Communications, Field Study, and Editing.	0	0	44	41	22	107	

III. CONTINGENCY FOR INCLUSION OF TWO ADDITIONAL EAST AFRICAN COUNTRIES AND MANAGEMENT ACTIVITIES IN FINAL THREE YEARS 42/

	0	0	110	120	80	310
Sub-Totals	364	1522	2154	1908	1632	7580
Plus 12% factor for Inflation	44	183	259	229	196	911
Grand Total	408	1705	2413	2137	1828	8491

Budget Supplement to Table I
Host Country Funded Activities

ITEMIZED PROJECT BUDGET BY FISCAL YEAR AND CATEGORY

(expressed in $ 000)

Category	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)
I. PROJECT PROGRAM COSTS						
A. Training						
1. Short Seminars (1 Week)	(3)	(10)	(4)	(2)	(2)	(21)
a. Faculty Preparation 38/	15	50	20	10	10	105
b. Faculty Instruction	9	30	12	6	6	63
c. Cartography						
d. Editing	6	20	8	4	4	42
e. Printing						
f. Travel and Per Diem 39/	3	10	4	2	2	21
g. Communication						
h. Supplies for preparation						
i. Research Assistance	6	20	8	4	4	42
j. Evaluation						
2. Medium Courses	(1)	(4)	(8)	(8)	(7)	(28)
a. Faculty Preparation 40/	7	28	56	56	49	196
b. Faculty Instruction	8	32	64	64	56	224
c. Travel and Per Diem 41/	4	16	32	32	28	112
d. Local Field Trips						
e. Cartography						
f. Editing	4	16	32	32	28	112
g. Printing						
h. Salary of Participants 42/	8	32	64	64	56	224
i. Communication						
j. Supplies for Preparation						
k. Research Assistance	3	12	24	24	21	84
l. Evaluation						
3. Long Term 43/	-	(15) 18	(30) 36	(30) 36	(30) 36	(105) 126
4. Evaluation (Program Wide)						

Category	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)
B. Research Management						
1. Botswana						
a. US Personnel						
1. Core Staff Person						
2. Local District Data Systems						
3. National Resource Inventory						
4. Research and Co-ordination						
5. Short-Term Local Logistical Assistance						
b. Other						
1. Botswana Counterpart	24	24	24	24	24	120
2. Cartography, LANDSAT Imagery, Data Processing, Communications. Field Studies	6	6	6	6	6	30
3. Proj. Plan. & Co-od.	8	4	4	4	4	24
2. Kenya						
a. US Personnel						
1. Core Staff Person						
2. Soil Erosion Analysis						
3. Short-Term Local and US Staff Assistance for District Profiles						

Category	FY 80	FY 81	FY 82	FY 83	FY 48	Total (80-84)
2. Kenya (Continued)						
b. Other						
1. Counterpart Staff and NES for Research Support	30	30	30	30	30	150
2. Cartography, LANDSAT Imagery Materials						
3. Proj. Plan & Co-od.	8	4	4	4	4	24
4. Other Costs, i.e. Data Processing, Communications, Field Studies, and Editing	6	6	6	6	6	30
3. Tanzania						
a. US Personnel						
1. Project Director						
2. Development of Information System						
3. Environmental Monitoring						
4. Short-Term Local Logistical Assistance						
b. Other						
1. Tanzania BRALUP Staff Person	18	18	18	18	18	90
2. Preparatory Work for Conference						
3. Conference Case Studies						
4. Cartography, LANDSAT Imagery						
5. Proj. Plan. & Co-od	4	2	2	2	2	12
6. Other Costs Including Data Processing Communications, Field Studies, and Editing	10	10	10	10	10	50

Category	FY 80	FY 81	FY 82	FY 83	FY 84	Total (80-84)
4. Sudan						
a. US Personnel						
1. Core Staff Person						
2. Assessment Kordofan & Darfur						
3. Technical Support for Field Work						
b. Other						
1. Production of National Environment Report						
2. Administrative Support	24	24	24	24	24	120
3. Cartography, LANDSAT						
4. Proj. Plan. & Co-od.	4	4	4	2	2	16
5. Other Costs including Data Processing, Communications, Field Study, and Editing.	12	12	12	12	12	60
II CONTINGENCY FOR INCLUSION OF TWO ADDITIONAL EAST AFRICAN COUNTRIES AND MANAGEMENT ACTIVITIES IN FINAL THREE YEARS						
III Space, Meeting Rooms, Equip.	50	100	100	100	75	425
Sub-totals	277	528	604	576	517	2502
Contingency (12%)	33	62	72	69	62	298
Totals	310	590	676	645	579	2800

EXPLANATORY NOTES

For Annexes B, C, and D

1. Preparation time for short-term seminars is based on $6,000 per faculty month. $6,000 is an average salary plus fringe benefits and overhead for one month. Two faculty months will be required for each initial seminar for preparation of reviews of environmental issues for that country or region, preparation of the training syllabus, and/or preparation of draft strategy paper. Follow-up seminar will require one faculty month for preparation.

2. For instruction for short seminars, instructional time is determined as equivalent of one quarter faculty month, using the same figure of $6,000 a month. Thus, each seminar is costed at $1,500 of teaching time per seminar.

3. Estimates are drawn from Appendix B, budget explanation for short-term seminars and medium-term courses.

4. The figure of $6,000 per faculty month is also used in determining cost of medium-term courses. As with the short-term seminars, the figure is an average of salary plus fringe benefits plus overhead. An estimate of two months preparation time for the medium-term courses (same preparatory time as for the short-term seminar) is based on amount of time U.S. faculty personnel will invest in preparation. Additional host country time will also go into preparation at no cost to this contract. Time will be involved to prepare case studies which are specific to the country or region, a training syllabus, and a review of country environmental procedures, institutions, policy actions, etc. depending on the theme of the medium-course.

5. Instructional time is also based on the figure of $6,000 per faculty month. Instruction for the medium-term courses will consume three faculty months or $18,000 as an average for each of the medium-term courses.

6. There will be two types of short-term seminars: (A) initial short seminars for countries/regions which have not previously addressed basic environmental issues; and (B) a follow-up country/regional seminar (also one week) for countries where initial discussions about environmental issues have already taken place. In the case of type "A"(initial seminars) faculty preparations will include review of environmental issues for the countries/region; training syllabi and a draft strategy paper. Type "B" seminars (follow-up seminars) will include faculty preparation of a draft strategy paper for planning and management of natural resources and draft organizational schema for dealing with environmental issues or a particular environmental task. Instructional time for both A and B

will be the same — the equivalent of one week. Preparational time for the initial seminars will be two faculty months; for the follow-up seminar, one faculty month.

7. Program Manager - Botswana: A core staff person to work in association with Botswana personnel to coordinate drought watch system and assist in contingency planning and training for drought watch as well as planning. The individual will also be available to AID for help in environmental assessment and planning activities. The program manager would be assigned to the project in Fiscal Year '80 (perhaps by September), and would then be available for a variety of roles, as indicated in the program activities in Botswana for the following three years.

8. Program Director - Kenya: A core staff person will be assigned to Kenya t direct the environmental management activities in Kenya, including assistance in preparing district and environmental profiles, soil erosion assessment, and longe range environmental planning. These duties will consume half time for the individual. The other half time will be to serve as liaison between AID environmental activities, environmental training, the AID environmental officer for REDSO East Africa. Responsibility will include longer-range planning for environemntal training in the participating eastern African countries. Salary is determined as $100,000 (including fringe, overhead, support, etc.) a formula determined by AID, to be shared roughly 50 - 50 between the environmental management and environmental training segments of the project.

9. Local staff person- Tanzania: The person will be a Tanzanian member of the sponsoring Tanzanian agency, whether it be ERALDP or another local institution. Work will not begin until the third year of the project and an individual will also serve as coordinator of the environmental monitoring activity.

10. Project Director - Tanzania: Individual will be responsible for design and implementation of village health assessment program in order to incorporate environmental health design principles into village health planning. Project director would be assigned to the project sometime during the second year of the project and be in Tanzania for approximatel five months for each of the four final years of the project. Cost is computed on basis of $10,000 per month, an AID short-term formula.

11. Environmental specialist and Program Coordinator - Sudan: This person would be a core staff individual, to be housed in the Environmental Studies Unit at the University of Khartoum, who would coordinate the analysis of environmental trends in Darfur and Kordofan as well as assis in monitoring and gathering of key environmental indicators related to desertification. Salary is determined on AID formula of $10,000 per month. The individual would be in Sudan 4 to 5 months per year.

12. Two faculty members would be posted to Africa to coordinate environmental training activities. One would be half time in Nairobi, to be shared with Kenya environmental management activity (see #8 above) and would provide assistance in development of training component. These responsibilities would include working with African institutions in preparation of syllabi, country profile material, case studies, and basic environmental data to be included in the seminars. This person will also participate in as many of the East African seminars as possible, depending on the topic and disciplinary specialization. In the case of West Africa, the individual would be posted to Abidjan, beginning in fiscal year '81.

    In budget years 3 through 5, plans call for continuation of both the Eastern and Western African representatives. Because of the variety of disciplinary and technical dimensions involved in the environmental training project, these two posts would be rotated on approximately 6 month cycles during the entire duration of the project. Moreover, it maybe feasible to withdraw one of these representatives in budget year 4 or 5, depending on the rate at which responsibilities are assumed by local institutions.

13. The University of North Carolina, which has already developed and conducted environmental training courses in Africa, will manage the organization and administration of the short-term seminars and the medium-term courses. A senior faculty member will devote half-time to the management of the seminar for the first two years of the project. Percentage of time for budget years 3 through 5 will be determined on the basis of the level of activity of training.

14. Clark University will be responsible for coordination of the resource management activities and for integrating training and resource management activities in the 4 countries initially involved in management. In each of the resource management countries, local steering committees or managing committees have been or will be identified. Details for individual countries are provided in Appendix E of this project paper. The equivalent of half of a senior faculty person will perform coordination. Also, budget items have been left open in the 3rd through 5th year of the project in the possibility that additional countries may enter into the resource management activity, especially in light of the West Africa/ REDSO cable (Abidjan 0877).

15. Environmental Technical Specialist, will be available for work in Botswana, including assistance in cartography, rainfall analysis, remote sensing interpretation, etc. If necessary, individual could also work on the National Resource Inventory which was included in the earlier version of the project paper but eliminated in budget reduction for this version.

16. Technical Assistance - Kenya: Person will be a specialist in soil erosion analysis and will devote the equivalent of one month during the second year of the project.

17. Local and U.S. Technical and Logistical Support - Tanzania: Three types of support are planned in Tanzania. One is to spend the equivalent of one month of a technical person to prepare logistics as well as case studies for the environmental conference which will take place during fiscal year 1980. The second support will be the equivalent of 24 months technical assistance in the second year of the project to assist in the development of an environmental information system and in techniques of environmental monitoring. The third form will be the 3rd, 4th, and 5th years of the project, with three months technical assistance each (computed at $6,000 per month) for assistance in carrying forward with the work in the village health environmental monitoring.

18. Research Assistance - Sudan: A local or U.S. research assistant will assist in preparation of the National Environmental Report.

19. Botswana Counterpart: In the original budget submission, funds were included for a Botswana counterpart. Funds for support of the person have been deleted in this budget revision exercise.

20. Local and short-term U.S. research assistance - Kenya: Support for assistance in completing environmental profiles of upwards of 20 districts in Kenya, incorporation with AID mission and National Environmental Secretariat.

21. Administrative/Clerical Support - Sudan: Assistance would take the form of editing, production, and research help in support of the final stage of production for the National Environmental Report and other publications related to analysis of desertification.

22. Local and United States research assistance to support faculty preparation for short-term seminars and medium-term courses.

23. Budget estimates for research assistance vary from first time only to repeated offering of short seminars and medium courses. These figures are projections for estimated needs and may vary by the third or fourth year of the project arrives.

24. Seminar logisitical costs are estimated on the basis of first, second, and regional seminars and courses. Appendix B provides detail for costs per seminar and per course as well as variations from 1st to 2nd to regional offering of them.

25. Cost savings for travel for 2nd and repeated offerings of seminars is not figured into projections for 3rd, 4th, and 5th years of the program. There will be some savings in this category but the precise amount is not clear as the number of repeated seminars is not yet known.

26. Refer to pages 57 and 58 of the project paper for explanation of evaluation expenses.

27. Long-term and individual training will be coordinated by SECID and will involve in uts from a number of different individuals such as the eastern and western African regional representatives (Based in Nairobi and Abidjan respectively), individual seminar and course staff, and some of the environmental management components. Those support costs are not figured in the budget items listed under IV. The only items which appear here are estimates of $6,000 travel, tuition, fees, board and lodging, and related expenses. Insofar as possible, long-term and individual training will take place at third country institutions in Africa.

28. Refer to pages 48+ for explanations of Program Coordination.

29. Several countries have expressed tentative interest in participating in both training and management aspects of the project. Funds have been set aside for the 3rd, 4th, and 5th fiscal years of the project in the possibility that countries not now participating may wish to join in with one or another aspect of project work.

30. SECID will provide central coordination for the project, serve as prime contractor, be responsible for preparation of subcontracts, and coordinate long-term, individual training.

31. The Steering Committee consists of representatives of Africa-wide institutions (ENDA), regional institutions (Institut du Sahel), international institutions (UNEP), English-speaking Africa (R. Ojikutu), and French-speaking Africa (L. Tam). U.S. universities are also represented as well as AID REDSO/EA and WA. Steering Committee will meet once a year to review plans, discuss priorities, coordinate training, etc.

32. An effort has been made to project costs of seminars for first two years. Costs will vary from country to country and from region to region. These estimates are based on offerings of first time, second time, second time same trip, and regional, all during the first two years of the program. Because much of the first two years will involve first seminars for participating countries (12 seminars projected with 12 participating countries), these initial costs will be high. It is assumed that costs for follow-up seminars offered in the third, fourth, and fifth years of the project will be substantially reduced. However, in terms of projecting costs for years 3 through 5, we have used averages of about $30,000 — the cost of the seminars estimated for the first two years. We assume third to fifth years costs to be much lower by at least $6,000 but will wait until the third year to compute these costs.

33. Faculty salaries for the training are estimated at $6,000 per month. Two faculty months are anticipated for the initial seminars; one faculty month for follow-up seminars. See that notes one and six (above) also speak to this issue.

34. Budget estimates here do not include anticipation of costs of inflation.

35. Long-term training is estimated at $6,000 per individual, a figure used by AID in projecting costs. Note #27 (above) speaks to some of the costs. It is assumed that most of these expenditures will fall into the "local costs" category, as computed in Table I, found on page 41 in the main body of the Project Paper.

36. Short-term staff assistance - Botswana: Logistical and research support to assist in training, work with university staff in institutionalizing the undergraduate training course in environmental monitoring, and assist in monitoring and drought watch system.

37. Research assistance - Botswana: Research assistance to either the government or the drought system in the third through fifth year of the project.

38. Includes one month of host country faculty time for faculty preparation of syllabi plus 2,000 basic start up costs per seminar.

39. Travel and per diem estimated at $100 per person for 1/3 or 10 participants per seminar. The average of 1/3 of participants is derived from (1) fact that AID funds will pay travel and per diem costs for participants in regional seminars (roughly 5 of the projected 21 seminars will be regional) and (2) that probably only half of national participants will incur travel and per diem costs.

40. Includes one month at 3,000 per short seminar for faculty preparation of syllabi plus 4,000 basic start up costs per course.

41. Travel and per diem estimated at $100 per person per week for 1/3 or 10 participants per course. The average of 1/3 is determined as a rough estimate of those who will need such support. Estimate per course is 10 people x $100 x 4 weeks = $4,000.

42. Salary for participants in medium length courses is determined by estimate that 2/3 or 20 individuals per course will be on release time from government responsibilities for which they will continue to be on salary. Conservative estimate of $100 per person per week or $100 x 4 weeks x 20 persons = $8,000 per course.

43. Host country support for long-term training takes two forms: continued salary and transport support. Continued salary as estimated at 20 weeks x $100 for half the participants or an average of $,000 per participant. Travel support is estimated at $400 per participant except for RLDC countries where AID will pay full travel. RLDC trainees estimated as half trainees or average of $200 per trainee is needed for this chart. 1,000 (salary) plus $200 (travel) = 1,200 per participants.